

(Re) defining the essentials: Examining the challenges of promoting meaningful art education within a result oriented and competitive educational paradigm in Singapore public schools

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Abstract: Since independence in 1965, within a relative short span of four decades, Singapore has evolved from a resource scarce nation into a prominent economic center of the world. Much of this success can be attributed to the effective and focused implementation of centralized public school educational policies that are pragmatic and efficient. Of late, as Singapore attempts to consolidate its economic position by capitalizing on the country's arts and cultural resources, the public school system's ability to realize the national vision is once again brought to the surface of public consciousness. This paper examines how the Singapore education system evolved to where it is today and the challenges facing Singapore's educators and policymakers in promoting art education reforms in schools. The main thesis of this research focuses on the feasibility of negotiating meaningful art education practices within a competitive and result-oriented 'high-stake' education paradigm. Analysis of reactive data (semi-structured interviews) and non-reactive data (policy documents and visual texts) are methodological tools used for this inquiry.

Keywords: art, education, policy, culture, economy

Background and Context

This research is sparked by the educational and social crossroads Singapore society currently faces. Since independence in 1965, and in the pursuit of economic and social survival, the Singapore government has diligently engineered Singapore society to embrace a pragmatic and competitive national paradigm that is grounded in economic rationalism (K. Y. Lee, 1966; C-Y. Lim, 1983; Wong, 2000). The development of a competitive national mindset can be traced to two factors—the bitter historical lessons Singapore experienced along the road to independence and Singapore's vulnerability as a resource scarce, minute island nation (B. C. Cooper, 2001; K. Y. Lee, 1998a; C-Y. Lim, 1983; Quah, 1990). This consuming fear of being left behind politically and economically by the world at large affected government policymaking at numerous levels.

As schools are microcosms of the society, Singapore's public school education system was also affected by this paradigm and since the '60s, public school education was consciously and purposefully employed to facilitate such socialization.¹ The single-minded pursuit of economic rationalism and pragmatism in public school policymaking resulted in the marginalization of academic areas such as the arts as these areas of knowledge were deemed not directly related to national agendas of that time (T. Tan, 1986). Over time, however, this neglect in the area of the arts took its toll on Singapore's cultural vibrancy and social dynamism. Interestingly, it took an economic recession in the '80s to spark the re-evaluation of the nation's socio-cultural policies. As the world economy gradually moved toward the 21st century and into an information- and knowledge-based economy where human ingenuity and dexterity became central to generate economic growth, Singapore's

¹Public school policies, such as *School Ranking*, *Streaming*, *Standardized Examinations*, and the practice of *Subject Specialization*, are reflections of such competitive and pragmatic ideology (Ho, 2000; Yip & Sim, 1990).

current cultural deficiency seemed even more pronounced. Therefore, unless something is done, Singapore risks being sidelined economically and politically by the world at large (*Renaissance city report: Culture and the arts in renaissance Singapore*, 2000).

With this in mind, the Singapore government actively sought ways to re-inject the arts into the society. Over the past decades, various cultural initiatives were implemented to help foster a resurgence of the arts in the nation. In the public school domain, such awareness translated into revision of the art curriculum and the implementation of various public schools art programs to give students greater exposure to the arts and to train and nurture artistic talents (Chen, 1998; Tong, 2001).

These efforts to give public school art education the attention it required were sorely needed and timely. However, from a detailed analysis of government and education policy documents, it became apparent that the government might have overlooked a subtle and yet critical pedagogical paradox (Ang, 2004). Analysis revealed that on one hand the Ministry of Education proactively revamped and promoted the arts in public schools, emphasizing creativity, exploration, and process-centered pedagogy. On the other hand, by retaining the incumbent education framework that focuses on “competitive selection,” the Ministry also set in place a system of competitive learning that favored a result-oriented and linear form of pedagogy. This incongruence between art learning and a competitive education paradigm poses a potential pedagogical dilemma. Simply, worded, can artistic maturity and cultural sensibilities be prescriptively engineered within the current a high-stake educational paradigm? If so, how is it possible and if not, should there be a rethink of policy direction.

Research into relevant literature on art learning, specifically in the areas of curriculum (Kelly, 1977; Klein, 1991; Lewy, 1988; Miller & Seller, 1985; Posner & Rudnitsky, 1994; Tyler, 1950), aesthetics and art pedagogy (Dewey, 1980; Efland, 1990, 2002; Eisner, 1997; Gaitskell, Hurwitz, & Day, 1982; Kaufman, 1965), and human development (Booth, 1997; Gardner, 1982, 1990, 1994; Goleman, 1995; Gombrich, 1971; Lowenfeld & Brittain, 1987; Matthews, 1999), suggests that art learning is exploratory, learner-centered, intuitive, and experienced-based. Additionally, the process of art making is dialogic and non-linear. Literature and research into competition, specifically in the areas of character and identity formation (Ames & Felker, 1979; Blake & Mouton, 1961; Kleiber & Roberts, 1981), classroom dynamics (D. W. Johnson & R. T. Johnson, 1989; Rosenholtz & Rosenholtz, 1981; Rosenholtz & Simpson, 1984; Rosenholtz & Wilson, 1980), and pedagogical and learning theory (Atkinson, 1974; Bryant, 1977; Pepitone, 1972), suggest that competitive education is rule-bound, result-oriented, and clinical. In addition, competition encourages deductive thinking, in turn fostering a linear and dualistic mindset. These characteristics are described in Table 1.

Table 1: *Contrasting goals of art learning and competition.*

Nature of Art learning	Nature of Competition
Exploratory and experimental	Formula- and rule-bound
Learner-centered	Result-centered
Intuitive and experience-based	Pragmatic and linear
Deliberative and dialogic	Precise and clinical

Considering that in a competitive high-stake learning structure (i.e., streaming and ranking), students tend to take the shortest possible route in achieving a given end,

circumventing the process of exploration and mistake making (D. W. Johnson & R. T. Johnson, 1975), such a mindset runs counter to effective learning of the arts and becomes potentially detrimental to children's artistic maturation (Swanwick, 1988).

Consequently, given the above disjuncture, it seems plausible to argue that Singapore's current education emphasis on superimposing art education onto a competitive education paradigm is paradoxical and potentially problematic. The chief aim of this research is therefore to examine the above paradox affect school culture and classroom practices in Singapore and rationalize the implication it has on the national vision of nurturing a dynamic and creative citizenry?

Research Questions

From the description of the theoretical framework, ideas and methods inform and uniquely identify problems that need to be addressed. Consequently, the following questions were defined.

1. Historical questions grounding this research.
 - What are the pertinent historical antecedents that influenced the evolution of Singapore education in general, and art education in particular?
 - What are some key paradigms (social and educational) influencing practices in Singapore public schools?
2. Question pertaining to art teaching and learning.
 - To what extent do art teachers and students in the Singapore high school system experience tension between art learning and the demands imposed on them by a streamlined and competitive Singapore public school education structure?
 - Given that a perceived tension exists between the nature of art learning and that of a competitive institutional framework, how do art teachers and students negotiate art teaching and learning strategies?
 - Is "competitive selection" an effective instrument in assessing students' talents and potentials? Are there other plausible alternatives?

Overview of Study and Methodology


As this research attempts to understand how teachers and students in Singapore public schools make academic and personal choices within the constraints of a competitive public school educational structure, a qualitative "basic interpretive" approach set upon an "inductive" and "descriptive" framework of analysis was chosen.

Through the analysis of the research question and sub-questions, three research "contexts"—*Historical*, *Human*, and *Policy*—became evident. These three areas were explored through a "nested" and "integrated" approach. The following combination of four methodologies—*Historical Analysis*, *Policy Analysis*, *Visual Analysis*, and *Interview Analysis* were employed and a brief relational for their inclusion is argued below.

First, an examination of historical antecedents, *Historical Analysis*, provides this investigation with a theoretical and contextual framework to understand the genesis and evolution of social-cultural trends in Singapore. Second, by looking at documents, text, and speeches, *Policy Analysis* inform this research by providing a systemic view of policymaking mechanisms in Singapore. Third, because this research attempts to understand the meaningfulness of art education within the public school environment, information gathered through interviews (*Interview Analysis*) grounds this research in the pedagogical reality of the school level by shedding light on the challenges faced by students in the classrooms. Finally,

to further contextualize this research within the reality of the “field,” visual data in the form of images taken in and around selected public schools in Singapore were also analyzed (*Visual Analysis*). Because images contain visual and textual cues that reflect certain ideologies and ethos, examination of visual images thus allows researchers to gain deeper insight into Singapore’s public school culture (Rose, 2001; Van Leeuwen & Jewitt, 2001). The relationships between research methods, contexts, and rationales are listed in Table 2.

Table 2: *Overall research framework*

Research Methods	Research Context	→ Rationale	
Historical Analysis	Theoretical and historical	 Constant Comparative	To frame research in a theoretical and ‘local’ context
Interview Analysis	Human and Classroom		To reveal perspectives of teachers and students
Policy Analysis	System and Structure		To identify and understand systemic development
Visual Analysis	‘Visible’ School Culture		To provide another data angle for triangulate of systemic trend

Through a systematic and reflexive analysis of data presented in each of the above areas and by way of constant comparison and triangulation, issues uncovered from this synthesis are combined for discussion and theorizing. The relationship between research methods and data collection design is illustrated in Figure 1.

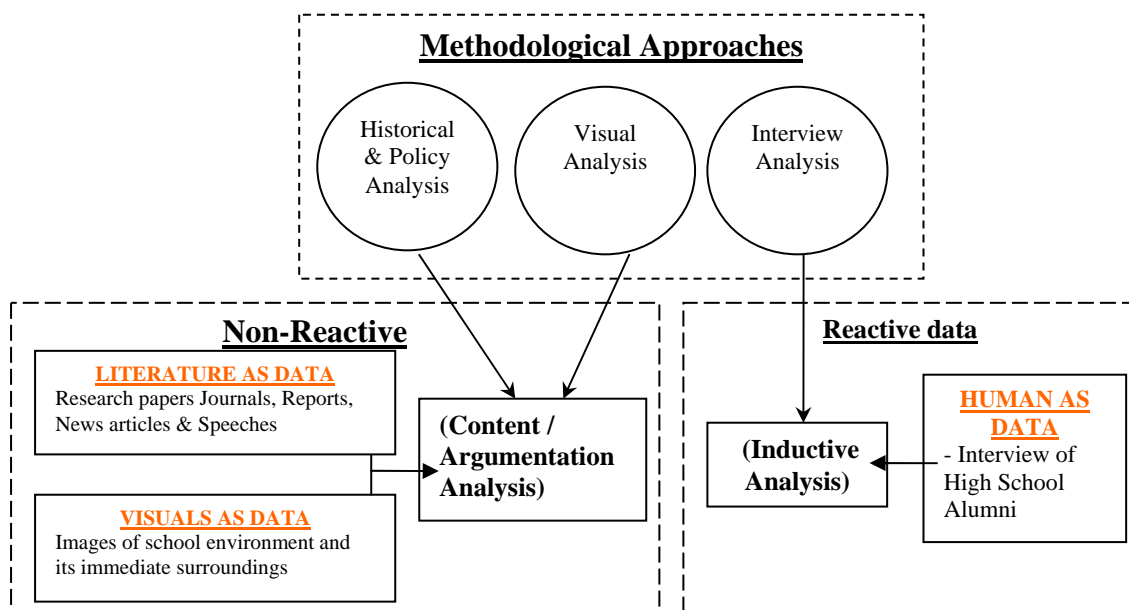


Figure 1: Relationship between research methods and data source

Data characteristics of this research

Textual Data Collation

Government communiqués in the form of transcribed public speeches are submitted as data for this investigation. In the Singapore context, government officials often make use of public speaking engagement opportunities as platforms to highlight, validate, or reiterate governmental positions. Hence, examining transcribed speeches potentially provides researchers a valuable tool to uncover the Singapore government’s ideological premises for implementing socio-educational policies. A sampling of these texts can be found in appendix A.

Visual Data Collection

Visual documentation in this investigation came from an active on-site journaling process. Images documented were of physical objects found within the public domain, specifically, banners, posters, signs, and art works displayed in and around the school compounds. The academic year in Singapore starts in January, and the initial months was a crucial period during which schools at all academic levels advertise, enroll, and finalize their new student cohorts. Following the release of the PSLE (Primary School Leaving Examination), GCE O-level (Cambridge Ordinary-Level) and GCE A-level (Cambridge Advanced-Level) examination results, numerous schools receive achievement awards from the Ministry of Education for their performance. It was within this context that these images were taken. As images are not value-free, these images prove potentially useful to understand the ethos and belief of institutions they represent. A sampling of these images can be found in appendix B.

Interview Data Collection

Interviews were designed in a semi-structured fashion. Transcribed interviews were entered as data in this research, and all transcribed interviews were organized into three distinct sub-groups directly corresponding to the type of interview questions asked. Three areas of concerns were: general academic experiences, art education experiences, socio-educational policies, and cultural issues. Participants chosen for interview were not selected

from random samples, but were invited to take part in this research based on criteria that were purposive and issue-driven. The selection of participants was based on a “chain-referral” Respondent-Driven Sampling (RDS) approach (Joan Jeffri, 2003). First, a core group of four ex-art students from a college was located. After gaining their approval to participate in this research, a request was then made to seek their help to refer other potential alumni to this investigation, and these alumni in turn referred others, and so on. Based on a “chain-referral” sampling method, was able to gain access to a “hidden population” of ex-art alumni, injecting this research with a diverse and robust pool of candidates. Sample interview questions can be found in appendix C.

Overview of Findings

Surveying the Issues

Singapore is currently undergoing cultural and educational policy reform in order that the nation can harness the dynamism and talent of its citizenry. On an educational level, this “renaissance” vision to enhance culture and the arts has been translated into various measures to “maximize the talents” of public school students. The overarching vision of maximizing human abilities by promoting art education in Singapore public schools is commendable and is not questioned in this investigation; however, the source of contention rests upon the congruency of using a competitive and prescriptive educational paradigm to address issues of art learning and human dynamism.

To set the stage for discussion, the complex relationship between ‘macro issues’ (policies envisioned) and ‘micro issues’ (practices enacted) are charted in Table 3.

Table 3: The relationship between vision, desired outcome, and data findings

Goals		Approaches →	
Singapore’s National vision	Educational Outcomes	Paradigm	Practices

<ul style="list-style-type: none"> • Renaissance City • Art Hub of Asia • Global Citizen 	<ul style="list-style-type: none"> • Well-rounded • Autonomous • Mindful • Resilient • Caring and Sharing 	<ul style="list-style-type: none"> • Economic and Academic biased merit system • Prescriptive ‘reward’ pedagogical paradigm • Instrumentalist and functionalist policy • Hierarchical educational reform framework • Positivistic and empirical worldview to socio-educational accountability (issue of transparency and objectivity) 	<ul style="list-style-type: none"> • Ranking of students, teachers and schools • Early Streaming/ Tracking • Momentary incentives for meeting / surpassing preset-national standards • Centralized curriculum and directive planning and policymaking • Overt display of success 	
<p>Policies Envisioned</p>		<p>Practices Enacted</p>		

Findings

Findings from this research can be grouped under two headings: *General academic concerns* and *Art education concerns*.

General Academic Concerns

First, data indicates the existence of a competitive education landscape that reflects a narrow definition of “merit,” “excellence,” and “accountability.” The data suggest that individuals and institutions place emphasis in doing well in local and national competitions, and, as such, the notion of accountability and excellence is performance-oriented, which largely occurs within competitive settings. In addition, the value attached to an individual’s academic efforts seems to be largely defined by the numerical placing one achieves. Given that merit is viewed in a quantifiable manner, coupled with the practice of awarding top performers, the promotion and internalization of a strong dualistic “win vs. lose” paradigm has students caught in the midst of these expectations, thereby raising crucial pedagogical concerns.

Second, the results show that students in the public school system are pressured to do consistently well in their studies. This pressure to do well academically comes largely from schools,² parents,³ and society.⁴ The data suggest that because of the above expectations,

²Interviewee C (Section 1, 10:02 -10:47), Interviewee D (Section 1, 20:34 -21:20), Interviewee E (Section 1, 4:55- 5:55), Interviewee I (Section 2, 6:32).

³Interviewee E (Section 1, 8:05), Interviewee C (Section 2:1:21).

⁴Interviewee C (Section 1, 10:55),Interviewee F (Section 1, 5:10-5:35), Interviewee G (Section 1, 6:30).

students resort to strategies in order to manage these overwhelming academic expectations. Unfortunately, such strategies, though helpful, run counter to the grain of effective knowledge acquisition and the development of lifelong learning. Placed in an art education perspective, art students were less willing to explore and take risks beyond what was deemed “necessary” to achieve a good grade.

Third, from a policy perspective, ideological tensions exist in the way educational policies were envisioned and implemented. Evidence suggests that socio-educational policymaking and implementation are highly centralized and hierarchical and that the measurement and definition of pedagogical excellence and accountability seems to be determined by a preset “system” rather than around the needs of individuals within the system. This leads to one question. Are present educational policies/ curricula, which are centrally designed and administered responsive to the classroom environment?

Forth, results from this study reveals that in the current mode of top-down curriculum planning, teachers are highly preoccupied with the need to meet structural demands and are less conscience of individual student’s proclivities. Specifically, when teachers perceive that they have to teach to curriculum in order to meet examination mandated, they tend to devote much time and energy in ‘sprucing’ up curriculums to make it “palatable” to students instead of organically (re)designing their pedagogical and curricula goals around individual students unique talents and proclivities. Although merit should be given to such efforts, by simply adding ‘trimmings’ to capture student’s interest to learn can only do so much, as such most of such method, in of itself is insufficient in addressing student’s motivation for learning in an organic and sustained manner. Hence the manner in which schools can develop life long learners is another issue of concern.

Art Education Concerns

Triangulated issues under arts education are as follows. First, evidence suggests that although the Singapore government publicly extols the benefits and importance of art and art education on national platforms, on the practice level, there is still an incumbent tendency to treat art and art learning as among the “finer things in life” that can take a back seat to other nationalistic agendas. Translated to the public school setting, this hierarchy of “needs” is clearly evident in the way art education is given much lower importance than other areas of studies in public schools.

Second, the data suggest that the degree to which students develop their passion for art learning is directly dependent upon their initial art experiences in public schools especially at the elementary level. The student interviews suggest a lack of well-trained and dynamic art teachers in the current education system. As such, the opportunity to nurture talents at a young age and to fan the flame for lifelong passion for the arts may be lost.

Third, from a systemic viewpoint, the data also suggest that part of the difficulty with improving art education in school lies with systemic rigidity. As the Ministry of Education preplans art syllabi, which include pre-determined social and educational “outcomes” in mind, teachers’ and students’ sense of ownership of the curriculum is diminished. Coupled with the stress to meet pre-set examination standards, meaningful teaching and classroom learning become an issue.

Finally, art making is highly personal and experiential, and the data show that students who had taken art attest that it made them more adaptable, resilient, and allowed them to experience life from multiple vantage points. They found art making to be highly meaningful, cathartic, and personal. All interviewees said that they had not regretted taking up art in school and acknowledged that the arts had become permanent part of their lives.

A quick glance of findings reveals that the issues to be discussed can be summed up along four themes:

- Theme 1: Challenges of a competitive education paradigm
- Theme 2: Compounding theoretical and policy issues
- Theme 3: Art education perspectives
- Theme 4: Crystallizing the debate and envisioning alternatives

Theme 1: Challenges of a competitive education paradigm examines the foundations of a competitive educational paradigm, with specific attention given to the definitions of merit and accountability and their implications for classroom pedagogy and public school culture. The constraints of using a competitive paradigm for the learning of art in public schools are also discussed. *Theme 2: Compounding theoretical and policy issues* examines policy and structural constraints that foster competition in public schools. In particular, issues surrounding the use of streaming and ranking, centralized curriculum planning, and educational functionalism are examined. Through examination of students' voices and art education literature, *Theme 3: Art education perspectives* examines certain "characteristics" of art learning that can inform the debate of human dynamism and resiliency. Finally, in view of discussions and findings in themes 1-3, *Theme 4: Crystallizing the debate and envisioning alternatives* provides a platform for discussing alternative ways to "maximize" talents, yet deemphasize a prescriptive, high-stakes and competitive paradigm in accessing talents.

Theme 1: Challenges of a Competitive Education Paradigm

Merit and Accountability. Comparative analysis indicates that competition in Singapore public schools can be traced to the narrow definition of "merit." The data suggest that individuals and institutions in Singapore place much emphasis on doing well in local and national competitions, and, as such, the notion of merit seems to be performance- and competition-oriented. Why is the definition of merit so prescriptive? A comparative analysis of the local literature seems to suggest that merit within the Singapore education context is tagged to a positivistic policy mindset, giving rise to the following premises.

- Quantitative evaluation is an objective mode of determining merit.
- Merit has to be actively demonstrated and sustained in order to be acknowledged and rewarded.
- Merit can and is best ascertained through competitive means of testing, ranking, and examination.

The first assumption that merit has to be measurable (quantitatively) can be understood from a perspective of "public accountability" (K. L. Ho, 2000, p. 208). Because of Singapore's multicultural and multiethnic demographics, political leaders walk a tight rope in implementing meritocratic public policies. In an attempt to preserve a "sustainability of [socio-education] policy," public policies were intentionally made transparent and quantifiable to ensure a "clean and honest government" (H. P. Teo, 2003, p. 97). This mindset was best articulated by the Minister for Information and the Arts in a comment made

at the Singapore International Foundation and Africa Leadership Forum: “Not only must government be firm, fair and honest, it must be seen to be so ... the rationale for public policies then become clear to everybody ... to be impartial and free from corruption” (Y-B. Yeo, 1993, ¶19). Accordingly, the Civil Service (Educational Services included) sought to reduce “subjectivity” in their practices by adopting a more quantitative mode of merit assessment, leading to the use of positivistic and empirical evaluative measures to assess students’ talents and academic potentials.⁵

Besides the tendency to quantify success, evidence from the findings also suggests that there is a tendency to limit and withhold praise, acknowledgments, and rewards within the Singapore educational mindset. This scarcity of recognition generates a pressure on students to constantly maintain high levels of academic achievement in order to be acknowledged.⁶ That merit has to be actively demonstrated and sustained in order to be acknowledged and rewarded further fuels competition in public school. To understand the basis of such educational practices, one has to examine the ideological foundations of a meritocratic educational system. According to Young (1994), in a meritocratic social system, the privilege to earn social status is chiefly dependent on two entities—talent and effort; therefore, individuals have to “proactively” demonstrate their worth to remain in their social positions. In line with this paradigm, Prime Minister Lee (2003) echoed: “We [Singaporeans] must uphold the fundamental principle of meritocracy ... so whoever is prepared to work hard ... has a shot at becoming successful ... [and] the society respects him for what he has achieved” (¶43).

The final assumption—that merit is best ascertained through competitive environments of testing and examination—is the direct derivative of the first two beliefs. This coupling of an emphasis on quantitative evaluation with a need for competitive selection led to the use of standardized testing and numerical ranking in the school system. Consequently, the practices of streaming, ranking, and standardized national examinations are seen to be the appropriate platform to determine students’ potential and assess schools’ accountability.

From an academic achievement perspective, as argued by the Minister of Education, the paradigm of merit assessment seemed to produce exceptional successes (Peebles & Wilson, 2002, p. 143). So why is a competitive and positivistic definition of merit of central concern to this research? The answer lies in the angle one takes when assessing success. Statistically, Singapore schools, through a competitive and highly prescriptive education system, have produced students that are academically capable. From a developmental and pedagogical perspective, however, the current system appears ineffective at nurturing dynamic and well-rounded students due to the drawbacks of a competitive paradigm.

Drawbacks of a Competitive Learning Paradigm.

Competition, Classroom Dynamics, and Value Formation. Findings from this research noted that under constant competitive pressure to produce results, meaningful teaching and learning can be adversely affected (Atkinson, 1974; Holt, 1969; D. W. Johnson & R. T.

⁵The results indicate that in government speeches, public officials tended to overuse descriptive statistics to infer the causes of educational success.

⁶This reality is clearly reflected in the visual analysis section, where award and praise were only portioned to top performers who had achieved results, and the majority that had made efforts were not mentioned on school achievement banners (Appendix B)

Johnson, 1975). The most unfortunate consequence of the use of competitive goal structures is that within a competitive environment students tend to see learning in a limited way. “I want to get ‘A.’ That’s their [the students’] main aim. It doesn’t matter how they get it ... it’s more the need to continue to get the results slips with all ‘A’s” (Interviewee A, Section 2, 24:10).

As the pressure for students to demonstrate their “excellence” through examination and ranking practices increases, the tendency for them to resort to routine and proven test-taking strategies increases as well. Consequently, to ensure that individuals are well-prepared for competition, it is not uncommon for teachers and students to employ exam-wise or assessment-driven strategies, such as mock examinations and the practice of question spotting to beat the examination system, instead of focusing on the meaningfulness of learning or the conceptual understandings embedded in the curriculum. Given this focus, precious energies are diverted from meaning-making and exploration to activities that are deemed necessary for achieving good academic end-products. This pitfall is eloquently summed up by D. W. Johnson and R. T. Johnson (1975): “A highly competitive person does not learn for intrinsic reasons; learning is a means to an end, the end being ‘winning.’ Intellectual pursuit for itself becomes unheard of; knowledge that does not help one ‘win’ becomes a waste of time” (p. 43).

Given the presence of a product-centered mentality, it is clearly evident in this study that over time, students and teachers develop a dualistic and compartmentalized understanding of learning and are unable to see the relevance of “time-consuming” subjects to be useful to the goal of scoring straight A’s. Consequently, for those teachers and students who are truly interested in maximizing their talents and school learning experiences, teaching and learning become extremely dissatisfying. To put it another way, the intrinsic values of education are lost as students become less concerned with the process and the significance of the content of learning.

In terms of competition and its impact on classroom dynamics, this study indicates that given students’ perceived need to outperform one another for rewards, teamwork tends to breakdown. Students caught in the fear of losing to their peers are less generous with their ideas and resources: “I hear things like you better not share information. It is so sad you know ... in school, nobody wants to tell you about their work. Everybody takes it so seriously, it’s scary” (Interviewee F, Section 1, 18:06). The literature suggests that in a classroom setting, establishing positive interpersonal relationships with peers is beneficial for students, but in a classroom characterized by competition, students tend to build walls between each other, leading to isolation. Brought to the extreme, the pressure to protect self-interests might further lead “students [to develop] hostile and angry feelings toward each other, their teachers or their school” (Johnson & Johnson, 1975, p.42), and as a result friendships among students and trust between children and teachers suffers.

You feel bad ... you feel quite down ... quite sad. Like between me and Jane, we had a horrible relationship last time because initially we were good friends you know but because there were so much competition in the art room, then both of us started hating each other. (Interviewee H, Section 1, 7:26)

A classroom that feels safe to students is one in which they are free to admit when they do not understand something and are able to seek help. However, in a “performance goal oriented” classroom environment where students compete for grades and rewards, students are less likely to seek help publicly for fear of being embarrassed (Newman, 1991, p. 155).

Students immersed in such situations are shown to be more reliant on others to show them the correct answers rather than risking the chance of being embarrassed before their peers by having their voices heard.

In addition, the literature and research have shown that by attaching success and self-worth to one's actions, competition has the potential to hamper positive or healthy identity formation and skew a person's value system (T. Ng, 2003). The findings revealed that students placed less appreciation on their efforts and the meaningfulness of the learning process and more on the grades and end-results they achieved, and as such, they were easily devastated if their results did not reflect their expectations. "I have a friend who scored a C for her art exam ... she was so devastated because she was the only one in the whole class that got a C, and she went crying and crying" (Interviewee D, Section 1, 41:26).

To minimize their chances of failure and to keep ahead of the competition, students in this study have learned that it is important to get things right quickly. As students become fixated with "habits of precision and efficiency",⁷ they tend to value much more highly academic activities that are less subjective and find elements such as ambiguity, contemplation, and open-endedness to be problematic. As a result, students gravitate toward attempting subjects that provide concrete answers and away from those that are more interpretive.

One plus one can't be four. It has always [to] be two, once you have it all in memory ... you will get it correct ... proving your point through art which is harder for me coz' I don't think that way ... I'm quite a science student. (Section 1, 18:02)

In the long run, a compartmentalized and end-product worldview acquired during children's school life might impact their outlook on achievement in life in general. When the Remake Singapore committee in 2002 asked Singapore High School students what they would consider achievement in their future lives, their answer was clinical and sobering. "Success" in Singapore meant having at least the "Five 'C's—Condominium, Credit Card, Cash, Career, and Car" (T. Ng, 2003, p. 37). In other words, achievement is defined as wealth of a material kind, and the implication for education is that schooling is merely a means to such ends.

Emotional and Psychological Concerns. Besides the pedagogical drawbacks associated with a competitive paradigm, this study also indicates that subjecting growing children to the intense stress of competition can also inflict an emotional and psychological toll. Students in Singapore understand from an early age that under the current competitive streaming and school ranking system, there is little room for mistakes and failure. For those who do well academically, there are ample chances for progression and advancement,⁸ while a converse reality awaits those that fumble on their academic journey. This reality is best exemplified by News Article 1 (Appendix A), where Parliamentary Secretary Chen said that "it was unimaginable, unacceptable, and unforgivable" for a school such as his alma mater to slip in its academic ranking.

⁷ Interviewee G, Section 2, 29:05.

⁸"14-year-old Camillus Kang, whose PSLE aggregate of 270 gave him the pick of top secondary schools. He said: 'I know I could have gone to RI, but I wanted to stay here because this is where I spent my primary school years. The mentorship scheme made it all the more attractive'" (News 1, p. 1).

Faced with the pressure to keep abreast with academic expectations, data revealed that while schools jostle for a favorable annual ranking, parents, teachers, and children likewise feel tremendous pressure to “make the cut” or be left stranded by the public school system (Li, 2003, ¶11). In view of this reality, most parents and teachers feel it necessary to overprepare children to handle school expectations, rather than put their child’s academic prospects at risk.⁹ It is with such noble intentions that parents sent their children to after-school tuition classes and teachers conducted weekend remedial classes. Given a relentless regime of academic pressure and long school hours, it is inevitable that public school children are exhausted physically and emotionally (“Beat the stress: JC life is a whole new ball game,” 2004). A report published recently by the *Far Eastern Economic Review* found that among 2,491 young Singaporeans, half of the primary-schoolers surveyed had to seek psychiatric help at government clinics in the year 2000; twice the 1990 figure (S. Ng, 2002, p. 6).

This study also revealed that a prime motivation for children to compete in school has a lot to do with the fear of being assigned to a “slower stream.” Under the current streaming framework, students have to demonstrate their academic potential early in life (Ng, 2002b, p. 1). The literature revealed that streaming students at an early age does little to ascertain their true potential, and it can adversely hinder the development of a healthy self-concept; a crucial quality for lifelong learners (Oakes, 1985; Weelock, 1992). On more than one occasion, interviewees mentioned that they felt “inferior”,¹⁰ “stupid,” and “not that smart enough” in light of their peers’ academic achievements.

Somehow I thought if I were to get into combine science [arts stream], I think I will be inferior compared to the rest [of the cohort in pure-science stream].
(Interviewee D, Section 1, 8:40)

When I’m being compared to my other friends that do well, I would feel inferior. Basically, I struggle with an inferiority complex, especially “academic” wise.
(Interviewee E, Section 1, 8:00)

The above discussion mirrored a study conducted locally in 2002 at three primary schools in Singapore (Khong, Chew, & Goh, 2004). The study found that children that were streamed to a lower track had a poorer self-concept than those in the higher stream. It was found that “regardless of [whether] they were Chinese, Indian, or Malay, [children in the EM 3 & 4 stream] saw themselves as being ‘stupid’ and that their EM 1 & 2 peers were ‘proud’” (p. 186).

Given that a positive, meaningful and holistic environment is crucial for learning as it helps students “envision the possible” (Bruner, 2005), the above structural, pedagogical, and developmental disposition emerging from the competition model of schooling seems incongruent to the overall vision of promoting the dynamic and reflexive socio-educational

⁹“It’s scary for a child when she starts school, so I want her to be confident from day one. If she falls behind, it’ll be very hard to catch up” (News 4, p. 1).

¹⁰Although the Ministry of Education did not use the term “inferior” to denote “slow” learners, societal pressure plays a large part in attaching such stigmas to pupils that are streamed to these tracks.

climate the Singaporean Ministry of Education has envisioned as an intended educational outcome.¹¹

Impact of Competition on Art Learning. In light of the above drawbacks of a competitive educational paradigm within the general academic culture, how does a competitive public school culture affect the teaching and learning of art? Constant comparative analysis revealed that art learning in competitive school environments is similarly affected by the drawbacks presented above. On an institutional level, due to the emphasis on academic grades and ranking achievements, schools tended to develop cultures that were less hospitable to the development of art learning. Currently, students' academic results in the national examination contribute a large part of the school ranking assessment. As a result, it is common for schools to streamline administrative and pedagogical procedures to ensure that they can compete effectively in the annual ranking race. As a consequence of this emphasis, some schools prefer that their students not choose subjects that are considered to be interpretive. A subject such as art, which does not have clear-cut answers that can guarantee students a correct response during the examination, is best avoided.

Actually, art is quite a difficult subject ... because what you like might not be what the examiners like. Or might not be what they think is good ... so it's sort of "dangerous." (Interviewee H, Section 1, 10:27)

Public school students' liberty to take art is further aggravated by a rigid streaming structure. Under a competitive streaming framework, students who are channeled into specific classes based on their academic results are usually confined within preset combinations. These subject combinations are usually clearly defined as art or science and are often mutually exclusive. Given this reality, students who were talented in both areas were hard pressed to choose one over the other.¹² Faced with the prospect of doing well in the national examination environment, it was unfortunate that students caught in such dilemmas tended to forego art for subjects such as science and math. This scenario further resulted in a reduced enrollment rate for art classes in public schools. A low enrollment and funding constraints are frequent reasons cited as justification for closing art programs in schools.¹³ Therefore, unless this cycle is given due attention, public schools in Singapore are bound to lose cohorts of talented students.

Apart from being hampered by systemic rigidity and subject choice, effective art education can also be seriously affected by a "show and tell" school culture as seen in the way schools design their advisement banners (Appendix B). As indicated by advertisement banners and artworks within school compounds, art making is often used to promote non-art agendas, and as such, there is a problem of treating art making as a means to an end, thereby

¹¹"The social framework must value and encourage creativity. People should feel encouraged to venture, to try something new, and if they are unsuccessful, not to have their failure held against them" (Speech 3, p. 3).

¹²"They have only one particular combination.... Biology is one of my interests and definitely, I feel good about it. But then when I do art, it's also one of my other passion, but I could never get that two [both] to reconcile, so I'm stuck in-between" (Interviewee D, Section 1, 10:52).

¹³"I know some schools when your intake of art students interested art students is not enough, they will simply drop the course ... which is quite annoying because in my secondary school, that was exactly what happened. I was about to take O-level art, but since the intake was too small, they simply dropped the class ... I wanted to take, but it was not offered" (Interviewee G, Section 1, 12:49).

diluting the integrity of art education in public school.¹⁴ Moreover, this study showed that under a competitive school culture, winning in competitions and securing accolades become a prime concern for schools, and such a mindset undermines effective public school art education practices.

Art teachers every year actually set to look out for students whom they feel are capable in art, then they will pick out these students, force them to join the art club, and train them to join competitions. So much so that they really train them to draw, draw, draw, and draw and then the teachers would put together a composition for them. The sole purpose of this group of students was to win competitions for the school. (Section 2, 2:30)

As competition affects the way school administrators manage art education in public schools, it also inevitably affects children's art experiences at the classroom level (Giroux, 1988; Pope, 2001). All students interviewed said that competition did impede their ability to engage fully in effective and meaningful art learning. Interviewees further shared that due to the pace of learning fueled by demands to meet expected syllabus requirements for examinations, they were deprived of the chance to truly reflect on their art activities or enjoy the process of learning.

You know that you don't have time to play and I was very focused on studying and basically, no social life. Just study, study, study, and make sure I do well for my A-levels and make sure I go into the university (Interviewee B, Section 1, 2:45).

As a result of a demand for speed and precision, students admitted that they learned to restrict their tendency to play and explore and to make sure that such ventures in art making did not jeopardize their final examination results. Moreover, as the examination drew near, students would abandon their exploration altogether, preferring to rely on familiar techniques and art materials instead of risking the use of more challenging mediums and methods of art making.

There is always a tension, I always feel certain pressure to perform ... like how many months left to submit a project ... usually, students will usually use with what they are most comfortable with ... instead of trying to play with things like acrylic or what else ... but because of time, he will just rely on pencils because that's what he is best at and he does not have time to experiment with other things. (Interviewee G, Section 2, 31:11)

This finding mirrors a local study conducted by Dr. Chia in 1993. She concluded that under the strain of meeting examination requirements, art teachers in Singapore public schools have a tendency to resort to proven strategies for teaching art, and as a result, their students end up making "examination art" (Chia, 1993). For effective art learning to take root, students need to feel safe and be liberated to explore, play, and make mistakes, but given a looming fear to make mistakes, students' creative potential in the art room is seriously impeded (Russ, 1993).

¹⁴Efland (2002) noted that art is frequently perceived by the general public as 'a seasoning of life' and not as a subject of rigor, central to the school curriculum.

Theme 2: Compounding Issues of Theory and Practice

Based on the drawbacks of a competitive education system presented above, it is clear that a restricted policy framework and practices such as streaming, ranking, and national examinations play a central role in maintaining and fueling a competitive paradigm in public schools. The enactment of education policy is based on a certain educational premise and ideology. Therefore, it is paramount to examine how the systemic translation of policy influences school culture.

Issues with Accountability, National Standards, and the Practice of Streaming. In Singapore, public accountability of learning is often cited as a strength of the education system. The Minister of Education¹⁵ has claimed that public schools are held accountable to high standards for the learning that takes place under their care and have “nothing to hide” from public scrutiny (Speech 2, p. 4). The notion that educational accountability is a needed and healthy component in any public school education system is well presented in literature (Fuhrman & Lazerson, 2005; Glatthorn & Fontana, 2000; Sunderman, Kim, & Orfield, 2005) and is not the source of debate here. However, what is of pressing concern is how academic accountability is defined and practiced within the Singapore system. Literature suggests that a person’s understanding of merit affects the way one exercises accountability (Reeves, 2004). Insofar as merit is associated with empirical measurements under competitive scenarios, accountability for the “performances” is also seen as such. As a result, widespread public reporting of individual student performance in national examinations, school-wide performance in national rankings exercises, and a “show and tell” school public school culture are manifestations of such paradigms.

This raises concerns related to the issue of reflexivity. Under the current ranking practices, schools, teachers, and students are obliged to perform to predefined standards or risk being marginalized by the system.¹⁶ The issue is not with the ideals of standards per se, but rather, how standards are set and the meaningfulness of these proposed objectives. Under the current educational paradigm, the standards for academic achievement are prescriptively preset in reference to norms, national averages, and specific national agendas (Wone & Soh, 1990). Accordingly, students journeying through the education system are benchmarked against these national expectations. Ample literature indicates that students’ academic performance in school is facilitated or marginalized by the educational structure (Oakes, 1985; Eisner, 1995). Therefore, one would be inclined to postulate that a system built around a narrow definition of merit and accountability is potentially less likely to measure the true proclivities of students, compared to a framework that is learner- and learning-oriented crafted by students and teachers involved in the learning process (Sizer, 1992).

While examining the notion of standards and accountability, it is important to look at the meaningfulness of accountability measurements. Using school ranking standards as an example, the findings in this study indicate that schools that ranked well in the ranking table may not necessarily be effective at addressing the holistic needs of their students; likewise schools that are not in the top spectrum of the ranking chart are not necessarily schools with

¹⁵ Rdm Teo Chee Hean stepped down as Minister of Education in 2002, and relinquished the position to his ministerial colleague Mr Tharman Shanmugaratnam

¹⁶ On an intuitional level, schools are annually ranked and teachers graded for performance bonuses, and at the classroom level, it is common for schools to compare students’ O-level and A-level results against those of their peers and past cohorts.

inferior classroom practices. Hence, any public school's achievements on the ranking table and the meaningfulness of learning in its classrooms are not necessarily synonymous.

In this respect, if the Singapore education system is focused on the concept of talent maximization, it might do well to shift the accountability of merits from a system-based approach to one that is built around the proclivities and maturation of the growing child. As this discussion moves in the direction of the translation of ideology into practice, it is likewise appropriate to highlight limitations in the way streaming is championed by the Ministry of Education as an effective way to address the issue of differentiated learning.

According to the Goh Report (1979), published by the Ministry of Education, streaming would "provide an opportunity for less capable pupils to develop at a pace slower than for the more capable pupils. In addition, it would allow a child every opportunity to go as far as he can" (cited in Yip & Sim, 1990, p. 16). In short, streaming, as claimed by policymakers, is pedagogically sound, as it addresses the need to differentiate curriculum for different students rather than insisting on a one-size-fits-all curriculum (Speech 2, p. 1)¹⁷.

On the surface of the argument, the practice of streaming does seem reliable; however, a deeper examination reveals a deeper concern. Given that differentiated learning advocates for a consideration of students' learning styles and abilities in the classroom, the practice of streaming therefore constitutes only a limited and functionalistic exemplification of this educational philosophy. The research indicates that given meaningful teaching strategies and comprehensive planning, differentiated learning can likewise be realized within a heterogeneous learning environment. Studies suggest that schools in the United States such as the Graham and Parks School (MA), Valley Junior High School (CA), and Holyoke Magnet Middle School for the Arts (MA) are successful at meeting the differentiated learning needs of their student cohorts without resorting to tracking practices (Wheelock, 1992). Thus, arguing that, unless students in the Singapore public school system are streamed into same-ability groupings, classroom "teaching has to be targeted at the average" (Speech 2, p. 1) demonstrates limited appreciation of a pedagogical premise.

How does a narrow understanding of differentiation learning theory affect educational outcome? For one, the use of a "funneling" approach to talent maximization prevents the Singapore educational system from truly harnessing the vast proclivities of all its students. Consider the primary school streaming structure as an example (refer to Figure 2): Despite the rhetoric and efforts by government officials at persuading parents to allow their children to develop holistically and "to leave some space for their children to develop their aptitudes, and excel at what they are naturally good at..." (Speech 3), at the end of the day, the primary school streaming structure does little to address such areas for academic progression and advancement. Instead, students are evaluated based on a narrow spectrum of subjects. Students at Primary 4 are streamed based on their math and language abilities, and later on in primary 6, math, science, and language are again the only subjects assessed for academic advancement. Students' proclivities in the areas of the arts and sports, for example, are not part of the mainstreaming framework; therefore, based on the current format, talent

¹⁷ This argument for the need to stream students is again reiterated by the Minister of Education Mr, Tharman Shanmugaratnam at the 2006 Ministry of Education Work Plan Seminar.

maximization through funneling seems counterproductive to the end goal of widening the nation's talent pool as envisioned in the "renaissance city" vision¹⁸.

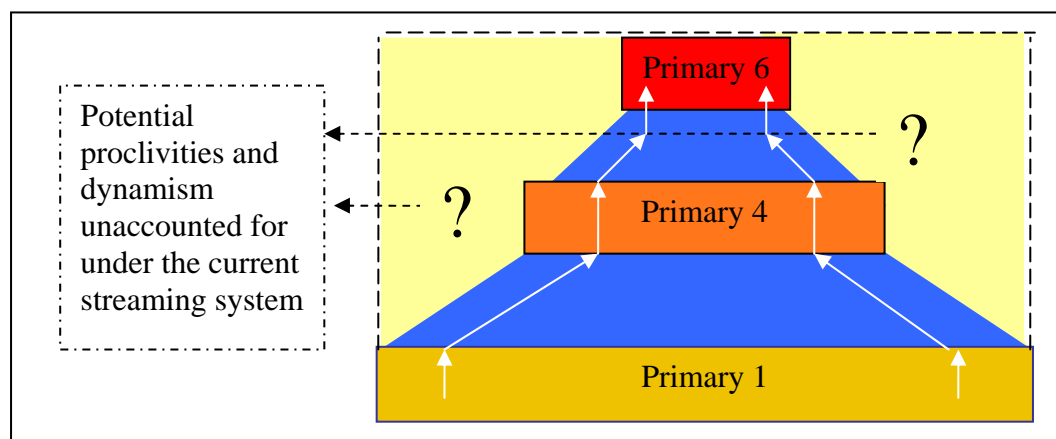


Figure 2: Promotion criterion of streaming only “assess” the academics and negate other “talents”.

The current mode of channeling students through batteries of high-stakes streaming, ranking, and standardized examinations to determine their merit, accountability, and excellence is not unlike the scientific management model championed by Taylor (1947). This model emphasizes consistency and conformity rather than championing autonomous exploration and creativity.¹⁹ If the purpose is to create passive workers for the economy, then a positivistic evaluative system such as a funneling framework may appear to work well; Yet, if the objective of the education system is to create dynamic and resilient individuals, a quality-control model may not be the best paradigm.²⁰

Centralized Syllabus and a Top-Down Approach to Policy Making. Under the incumbent system, syllabi and curricular packages are designed and assembled by curriculum specialists within the Ministry headquarters, and teachers in public schools are instructed on the use of these packages either through group meetings at the Ministry level or from their department heads at the school level.

From a classroom perspective, the advantage of a centralized national curriculum is that clear direction and uniformity to teaching and learning are present. In particular, there is a clear blueprint of the syllabus sequences to be taught in class, and the expected achievement standards are unambiguous. Teachers and students following the required syllabus are able to complete topical requirements in time for major national examinations. On an administrative

¹⁸ Similar sentiments with regard to the effectiveness of maximizing student's talents through high-stakes testing and funneling were raised by concerned school principals and researchers during a feedback session (group 36) at the 2006 Ministry of Education Work Plan Seminar.

¹⁹“No *efficient teacher* would think of giving a class of students an indefinite lesson to learn. Each day a definite, clear-cut task is set by the teacher before each scholar, stating that he must learn just so much of the subject; and it is only by this means that *proper, systematic progress can be made by the students*. [I]t is equally true that the average workman will work with the greatest satisfactions, both to himself and to his employer, when he is given each day a definite task which he is to perform in a given time, and which constitutes a proper day's work for a good workman” (Taylor, 1947, p.120, emphasis added).

²⁰It is of interest to highlight that findings from this study revealed that all students interviewed agreed that streaming restricts their academic choices and therefore should be abolished.

level, the advantage of using a centrally-designed syllabus is that there is academic uniformity across all schools in Singapore, which facilitates system-wide standardized assessment. Moreover, a standardized curriculum tends to be relatively “teacher-proof” and, as such, is less dependent on teacher dynamism or logistical constraints to ensure that students meet minimum academic benchmarks.

The concept of a national curriculum is logistically practical from an efficiency perspective, but pedagogically problematic because the actual process of teaching and learning is extremely dynamic; therefore, it is difficult, if not impossible, for anyone who is removed from the classroom situation to design an adequate program that can cater for individual classrooms needs (Gaitskell, Hurwitz, & Day, 1982, p.104). Currently, curriculum specialists in Singapore gathered at the Ministry HQ and are not required to hold teaching portfolios, as such; they are detached from the daily classroom experiences and their ever-changing dynamics. Literature indicates that teaching packages planned for mass audiences under centralized conditions detached from the classroom synergy are usually “clinical”, and are less reflexive to the needs and challenges at the grassroots level. Typically, such curriculum tends to be either overly prescribed, or too generalized to be meaningful and effective (Darling-Hammond, 1997; Guild and Garger, 1998).

An example can be seen in the revised art syllabus. The new secondary school art syllabus published in 2000 contains a “supplementary” National Education (NE) package detailing specific messages art teachers are to address with students in class by incorporating the “appropriate themes”.²¹ While the intention of instilling patriotism in public school students is not an area of contention, the rigid and prescribed way in which such intended themes were spelled out within the art education packages remained debatable. Suggested themes for art activities included “design war monuments,” “make models of aeroplanes/battleships/ tanks used to defend the country,” “paint an impression of national servicemen,” and “design a costume that would allow the soldiers to camouflage themselves in the jungle” (M.O.E., 2002). In cases such as this where teachers are told what should be covered and how it is best done, compounded by the fact that teachers’ compliance is closely monitored,²² research found that under such scenarios, teachers tended to conform to preset expectations rather than to seek alternatives (Chia, 1993).

From a developmental perspective, the main danger to having classroom expectations centrally designed is that it robs teachers and students of the chance to construct a learning environment that is more responsive to local needs. As teachers perceive such curricula as an “instructional mandate” to be dutifully delivered, there is a reduced urge to engage their students and fellow teachers in collaborative and dialogic partnership. As a result of a reduced involvement, meaningfulness and responsibility for learning are diminished

²¹National Education Messages :

- M1 Singapore is our homeland, this is where we belong.
- M2 We must preserve racial and religious harmony.
- M3 We much uphold meritocracy and incorruptibility.
- M4 No one owes Singapore a living.
- M5 We must ourselves defend Singapore.
- M6 We have confidence in our future.

²²“Teachers are graded. Every year the teachers are graded and their bonus will depend on the teacher’s grade... the whole of Singapore. Every teacher will get a grade at the end of the year and their bonus will be dependent on their grade.” (Interviewee C, Section 2, 11:26)

(Darling-Hammond, 1997). From the student's perspective, regardless of their merit, a centralized curriculum that is not sensitive to nuances of the classroom risks sending a message that students' preferences do not matter.

You are pushed because you have [the] syllabus to complete,... you will have to finish 3 books a semester, "by hook or by crook" you will have to understand this [those] chapters by this week, next week the next chapter. (Section 2: 23:06)

Translated into reality, a reduced opportunity to make meaningful and personal choice in class led to the student apathy evident in this study. Students described their learning experiences as "trapped," "no choice," and "boring". Mentality such as that expressed below inevitably hinders the cultivation of life-long learners.

In terms of academic ... many students will walk the same path in Singapore. From primary school to secondary school to Junior College ... and it is also quite predictive, as you are assured that you are on the correct path as everybody is doing it. Meaningful? Err ... I would not call it meaningful; I would describe it as something that everybody had to go through in Singapore. (Interviewee E, Section 1, 4:00)

Consequently, for teaching to be effective and meaningful for learners, classroom teachers should have a say in how curricula are structured, "for only they know the needs and capabilities of the students who will benefit from the program" (Gaitskell, Hurwitz, & Day, 1982, p. 104). If the aim of public school education is to harness the potential of individuals rather than engineering a mass of homogeneous students, one would reexamine the current approach in policy implementation.

Theme 3: Art Education Perspectives

A Silver Lining. Having examined how the current competitive educational paradigm impacts art learning, and how certain structural issues compound the dilemmas faced by teachers and students in schools, it is, however, heartening to uncover that, despite such constraints, all students interviewed were in agreement that art learning had profoundly benefited them and that they had no regrets taking the subject. It was noted that when students were given the liberty and room to truly engage in art learning under a safe, inclusive learning environment, they appeared happier, more proactive, autonomous, and generous in sharing their discoveries with peers and were open to constructive criticism from teachers. What made art experiences different from other learning experiences, and in what ways did they benefit the learners?

First, art experiences provide students with a safe haven for expression and exploration. Throughout the interview, students noted that their art learning was a "very different kind of experience"²³ compared to their experiences with other areas of study. Art making is highly personal and cathartic, providing them with a safe and relaxing atmosphere to learn. According to Interviewee A, "the feeling is like you are going there to play and have fun."²⁴ As a result, students look forward to their art lessons and expressed that the art room became a "home away from home," an oasis where they are sheltered from the pressures of a regimented school day. The finding that art making is therapeutic, cathartic, and that students prefer art to other areas of learning is not surprising given the drawbacks of a competitive

²³Interviewee A, Section 2, 22:40.

²⁴Interviewee A, Section 3, 2:30.

environment presented in the earlier part of the discussion. In a competitive and results-oriented education system where students must constantly be on their toes academically-speaking, art making's "open-endedness" gives learners much needed space to make mistakes and experiment. In essence, art making under the right conditions is very "human oriented" and "forgiving," providing a reprieve from the harsh reality of competition (Ang, 2003).

Second, all of the interviewees noted that art making had allowed them to be "more flexible, creative, and original,"²⁵ and art making taught them to "look at things in [and from] different perspectives,"²⁶ thereby sensitizing them to appreciate nuances in their learning experiences that otherwise would have eluded them. Through the practice of examining issues from multiple perspectives and the suspension of judgment, students found that it encouraged them to investigate a given issue more deeply and comprehensively. Overall, as students became more reflective and thoughtful, they found themselves more "receptive to changes" and able to accept the alternate viewpoints of others. This study found that students' capacity to be creative and to entertain alternative solutions apart from the norm owes largely to the "open-endedness" and non-judgmental nature of art making.

The connection between creativity and an open-ended mode of inquiry is well established. Efland (2002) argued that because the process of art creation is fluid, engaging in art requires learners to negotiate and "reconstruct or organize [their] personal knowledge and understanding" in light of multiple perspectives and by so doing, engenders the creation of new knowledge (p. 73). Likewise, Burton (2000) states that "creative thinking abilities ... are all strongly represented among young people who have been exposed to arts education for considerable periods of their education" (p. 341).

Third, the ability to withhold judgment and to entertain multiple perspectives does not only promote creativity, it also benefits children's interpersonal development. In this study, students revealed that art making had made them more receptive and appreciative of differences in opinion, which in turn helped them "accept people as they are" rather than expecting them to conform to expected norms.²⁷ This finding is not surprising, as "the process of creation involves incorporating the self into the activity, [hence, it] provides understanding of the process that others go through in facing their own experiences" (Lowenfeld, 1987, p. 18). As students gain confidence in sharing and exchanging ideas and learning to see things from the perspective of "the other," they tend to be more receptive to peer learning and review (Cyr, 2000). The end result is a safe and synergetic learning environment that is conducive to the creation of new possibilities (Bruner, 2005). This stands in stark contrast to the tendency toward seclusion and isolation symptomatic of a competitive environment presented in Theme 1.

Fourth, this study found that under the current system of streaming and ranking, where autonomy to make personal choices is limited by structural pressures, art making returns a sense of control and independence to the learner. The interviewees shared that because they are the authors of the art creation process, they therefore retain control of the pace and direction of their learning. Through the dialogic process of negotiating self with material,

²⁵Interviewee F, Section 1, 3:00.

²⁶Interviewee E, Section 1, 22:24.

²⁷Interviewee H, Section 2, 11:17.

learners gradually develop a capacity to monitor their own progress and the confidence to defend their decisions and standpoints. Translated to a developmental perspective, students who are given the autonomy to make meaningful choices are more resilient in adversity, and less likely to place the blame on others or to abandon their fortitude in times of difficulty (Newman, 1991; Oakes, 1985). Such benefits are clearly demonstrated in the following quote.

It's definitely more meaningful ... because I felt a sense of achievement where I am allowed to make a choice [to take art] and be fully engaged in it and at the end of it, whatever grades I get, I am satisfied with myself. I feel responsible for what I've done, and I've no regrets. If I've taken another subject, which I really hated and I was being forced to take, and my grades did not turn out well, I might take other people as scapegoats or to blame others like my parents ... or others who might have put some pressure on me to take up some other subjects.
(Section 1, 18:10)

The ability to appreciate one's strengths and weaknesses not only enables students to develop a positive outlook toward life's challenges; it also helps them reexamine what is meaningful and important to them in view of the current social climate. In short, the act of choosing allows students to become "masters" of their destiny, not mere recipients of another's agenda.

Last but importantly, this study found that "art taught under the proper conditions promote[s] values that transcend the boundaries of art lessons" (Gaitskell, Hurwitz, & Day, 1982, p. 39). Students reported that because art making required them to incorporate knowledge from various fields into their artwork, it had taught them to see meaning making as layered and interrelated.²⁸ The research noted that the ability for one to solve issues divergently helps promote creativity. By applying multidisciplinary knowledge in problem-solving, the shortcomings of one discipline can be compensated by another subject's strengths, which heightens the chances for serendipitous discoveries and breakthroughs (Gardner, 1982/1999; Swanwick, 1988). On a grander scale, this ability to see the relevance of all areas of learning becomes profoundly significant considering the current climate, where students are streamed into clearly demarcated art or science streams. The chance to use multidisciplinary ways of knowing in art making demonstrates to students the relevance of all they have learned in school, encouraging them to see life itself as a canvas of possibilities (Bruner, 2005), which in turn fuels their passion for lifelong inquiry and learning.

In summary, despite the constraints of learning art in a competitive and structured public school system, this study revealed that under the right conditions, the benefits of art learning are seen to be profound. These benefits of art learning can be summed up as follows. First, effective art education places the individual at the center of the learning process, and the artwork is an expression of this process. Second, art making provides a safe haven for play and exploration that facilitates sharing and the creation of new knowledge. Third, art making helps children make connections between all aspects of learning, which in turn fuels creativity and serendipitous discovery. Finally, effective art education empowers children to make choices that are personal and meaningful and nurtures children's self-esteem through a positive feedback loop (Csikszentmihalyi, 1996).

²⁸Interviewee A, Section 2, 32:59.

Theme 4: Crystallizing the Debate and Envisioning Alternatives

We need to equip young Singaporeans with the necessary skills to compete in the global marketplace.... Our educational endeavours must develop our students' imagination and creativity. Arts Education has a significant role to play in fostering and nurturing these qualities in our students. (Speech 4, p. 1)

As the above quote indicates, the desire to maintain economic competitiveness through harnessing Singapore's cultural capital and the dynamism of its people remains an underlying concern of the Singapore government. Arts education in schools is seen as a catalyst for this vision. The overarching vision to raise public schoolchildren's dynamism through arts education is sound and appropriate. This study indicates, however, that the current paradigm of competitive education, which is framed by the practices of streaming, ranking, and high-stakes standardized national examinations, works against the grain of nurturing dynamic individuals because both art-learning and competitive learning promote conflicting end goals (refer to Table 1). While on one hand a competitive paradigm promotes qualities such as efficiency, precision, and risk management, art learning on the other hand requires learners to suspend judgment, take risks, venture, and make mistakes if need be. Such conflicting goals have resulted in tension within Singapore public schools, as discussed in the earlier pages. Among the concerns are the following are four areas.

- What are some structures for addressing a learner and process-centered framework?
- How can we best honor differentiated learning needs?
- What are some possible ways of championing a more collaborative and interdisciplinary learning environment?
- How can we develop a school culture that best honor the 'voices' and sentiments of the students?

In light of the above quests and along with the national vision of the development of well-rounded, dynamic, and resilient individuals, there is a need to envision an alternative paradigm of public school pedagogy, in particular, in the areas of merit evaluation and assessment.

While findings from this study showed that a competitive educational paradigm is limited at addressing the needs and proclivities of students, the data strongly suggest that the attributes and qualities students gained through engaging with art experiences seemed to reflect the exact qualities sought after by the national vision. Given these findings, it is my belief that characteristics found within the field of art and art education can greatly inform the current debate of talent maximization and help policymakers conceive meaningful alternatives. To demonstrate this potential, the following example of an "exhibitive pedagogy" framework that evolved from this research is one instance of how inspiration from the field of art and art education may help both educator and policymaker re-envision current pedagogical dilemmas.

Alternative Framework: "Exhibitive" Model of Pedagogy. Competition as an educational policy platform is not effective at addressing the dynamism of individuals largely because it promotes a "race-to-the-bottom" mentality (Woo, 2003). Given this limitation, I feel that a mode of learning framed around the notion of sharing and exhibiting might be able to achieve the same end high level of motivation but in a more humanistic and encompassing way. The following theoretical framework is built upon an eclectic "multi-directional"

evaluative concept championed by Cornbach (1963),²⁹ coupled with the notion of “exhibition” as an alternate mode for school restructuring proposed by TheodoreSizer (1992). Fusing insights from both authors with my own experiences as an artist and art educator, the concept of “exhibitive pedagogy” aided by the art gallery metaphor expands the benefit of an “exhibitive” pedagogical paradigm. The rationale is best presented by Sizer: “Why an *Exhibition*? The word clearly states its purpose: the student must Exhibit the products of his learning. If he does well, he can convince himself that he can use knowledge and he can so convince others” (p. 25). In other words, the key concept of an exhibitive mode of pedagogy rests upon demonstrating, sharing, and negotiating insights as opposed to the verification of “deservedness” currently emphasized under a competitive paradigm. The following are four explanations why an exhibitive mode of learning is superior to a competitive “carrot and stick” framework in engaging students’ interest in learning and developing to their full potential.

First, literature revealed that students given the liberty to demonstrate their abilities in a safe environment are more motivated to seek new knowledge (Kohn, 1993; Smith, 1988). Given this understanding, I would argue that an ‘exhibitive’ paradigm aptly addresses this concern. In an exhibition, the focus and intent of curators tends to be on demonstrating, sharing, and celebrating the unique insights and abilities of the artists rather than pitting one exhibit or artist against another. Likened to a gallery environment, an exhibitive mode of assessment offers children a common platform to exhibit and demonstrate their uniqueness alongside their peers rather than striving to mimic or outdo others in order to achieve recognition. In an exhibitive mode of learning, each child’s differences are therefore seen as strengths and celebrated and recognized as such.

Second, as opposed to the current competitive environment of streaming and ranking where students are evaluated on a hierarchal and linier model³⁰, an exhibitive mode of evaluation provides an option for collaborative negotiation of ‘student’s excellence and merit. In an exhibitive mode of evaluation, where teachers are encouraged to enter into the meaning-making process of each child, in order to access their merit, children hence become negotiators of their learning and co-authors of the evaluative framework.³¹ In order to truly understand exhibits, the audience (teachers, instructors, parents, peers) must enter the world of the exhibiter through their works, and in so doing bring themselves one level closer to the child’s intent and thought processes. By employing an exhibitive mode of assessment, the teacher places the student at the center of the evaluative process, and this evaluative framework originates from the student. “Merit” can therefore be re-defined and negotiated

²⁹Cornbach (1963) posits that that because teaching and learning deal with a considerable level of “unpredictability,” the evaluative process should likewise take into consideration such concern and accommodate this reality and for any framework “to agglomerate many types of post-core performances into a single scope is a mistake, because frailer to achieve one objective is masked by success in another direction” (p. 675).

³⁰It is not the act of setting educational goals to facilitate learning that is questioned; rather, it is the meaningfulness of expecting all students in Singapore to meet national standards that are not sensitive to the classroom reality that is in question.

³¹This issue concern meaningfulness of learning is best articulated in a research study conducted by the National Institute of Education research unit CRPP. In a longitudinal study conducted over 3 years with 30,000 Singapore students, it was noted that “children [within the Singapore public school system] only have limited opportunity to make meaning in classroom that is existentially meaningful to them (by no means all, but many) tend to focus on knowledge transmission and memorization...” (Hogan, 2006).

around a student's unique contributions. In this sense, the exhibitivite system is organically structured around the child's maturation, not the reverse.

Third, finding revealed that under the stress of competition, as there is a tendency for unidirectional teaching. When students look to teachers for the answers, and teachers feel the urge to expound rather than facilitate the creation of new knowledge is potentially disrupted. To circumvent this predicament, an organic evaluative structure that is open to multiple sources of feedback seemed to be one potential solution to address this issue. In a gallery exhibition, displayed artworks are appreciated by a pool of diverse audiences and avenues for comments, responses are provided through sign-in comments and artist feedback sessions, curatorial suggestions, press reviews, etc. In an 'exhibitivite' pedagogical framework, likewise, the understanding and appreciation of student's creation is highly fluid and dynamic; thriving on the input of a peer jury of teachers, peers, parents, and public.

Fourth, this research revealed that the Singapore education system is seeking ways to nurture life long learners. This research indicates that rewarding students for academic successes is only one avenue to motivate students to learn. For the continual pursuit of knowledge to take place, students have to enjoy the meaning making process. The exhibitivite pedagogical framework can address this need by giving children a chance to showcase their potential and uniqueness in a safe and supportive environment and in response, returning the onus and enjoyment of meaning making onto the students. As students negotiate expectations and are affirmed about their uniqueness, their intrinsic impetus for learning develops. Moreover, through involving students in and through the evaluative process by giving them an in-depth appreciation of their weaknesses as well as their strengths, students eventually gain the capacity to self-regulate, reflect, and appreciate their efforts through multiple lenses — qualities found in independent lifelong learners.

In conclusion, the exhibitivite mode of pedagogy is not new; it already exists in various forms under various titles, but common to all is the concern of placing students at the center of the meaning-making journey.

IMPLICATIONS

Given that public schools are "national investments" (Kelly, 1977, p. 12); and because "young people [tend to] fashion complex relationships with their cultural environment" (Burton, 1994, p. 477), the role of effective art education in shaping the overall cultural vitality of a nation cannot be ignored. On this premise, despite this research being grounded in the Singapore context, the following summation of issues, and concerns can potentially inform education and public policymaking on a wider scope.

Coming Full Circle: From Teaching to Educating

Much of Singapore's current socio-educational dilemma is a direct result of policies formulated during the early years of nation-building. Faced with the daunting task of economic and social survival, national policies and practices enacted were highly functionalistic and results-driven. Public schools are microcosms of society, and as such, practices such as streaming, ranking, and national testing mirror the wider social stance. While a functionalistic and competitive educational framework did help meet Singapore's objectives of rapid industrialization and nation-building, it was also deficient at nurturing well-balanced and autonomous students that the nation required for long-term socio-cultural vibrancy. Key findings that emerged from the areas of policymaking and art education support this assessment.

In the area of policymaking, this research illuminated the need for critical and meaningful contextualization and examination of national level educational policies. Often when a national policymaking framework is “top-down” and is influenced by national agendas, the sentiments of students and teachers in the classroom are over shadowed in the policymaking process. By championing a learner-centered school culture, this research highlights the need for public school administrators and classroom teachers to develop a healthy sense of critical judgment toward policy translation and implementation.

Additionally, meaningful learning is contingent upon intrinsic and extrinsic motivation that propels students to want to learn. This study indicates that an over-dependence upon a competitive “win or lose” reward paradigm for motivating children endangers children’s capacity to regulate learning intrinsically and taints their perception of the value and purpose of education. If the end goal of schooling is to develop in students a passion for lifelong learning, then it is paramount that public schools reduced the emphasis on high-stakes measures in assessing students’ merit and achievements, because they externalize the process and reduce the role of the student, and often the teacher, in the learning encounter.

Moreover, as this study advocates a ground-up and learner-centered approach to structuring classroom pedagogy, it also places the onus for cultivating a safe, reflexive, and meaningful learning environment on the shoulders of teachers at the classroom level. Given this emphasis, it is not only necessary to provide students with teachers that can “teach” the content of a discipline; it is also critical that teachers be well-trained and understands the benefit of a ground-up, learner-centered pedagogy. This paradigm shift has direct implications for teacher training and development, as it implies that pre-service training programs for public school teachers have to reflect such progressive ideals. Therefore, unless teachers during their pre-service experiences, are themselves are given the liberty to make meaningful academic decisions and are exposed to the benefits of exploratory learning, mistake-making, play, and scholastic autonomy, it would be difficult and unrealistic for these teachers to promote such a culture within their public school classrooms when they are posted to schools.

In the area of art pedagogy, this research argues that art-making is a profound way of learning and its role in the public school cannot be ignored. Findings from this study indicated that when students were placed under pressure to compete, they tended to gravitate toward tried and tested modes of learning and were less willing to make mistakes and take risks. Given that experimentation and mistake-making are essential elements that scaffold the creative art process, the impact of a dualistic mindset greatly thwarts effective public school art education. Given the incumbent climate that exists in public schools, it is hence important for art educators to take an active role in making meaningful art education possible. Four sub-issues emerge.

First, this study indicated that children that had encountered meaningful art learning in schools are more dynamic, adaptable, and resilient to changes. Considering how effective art education at the classroom level can potentially influence a society’s cultural fabric, such a realization is particularly profound in reminding public school art teachers of the importance of their role in promoting meaningful art education in their schools.

Second, this study clearly identified that meaningful art education is still possible within a competitive education structure if art teachers take upon themselves the responsibility of

creating a buffer for students to experience art-making in a non-high-stakes learning environment. To effectively create a safe haven for the meaningful learning of art implies that art teachers have to be able to articulately defend their positions; this requires art educators to maintain a scholastic edge and to keep abreast with the latest research and development within the art and education field.

Third, art-making is an experiential endeavor, and its benefits can only be felt in profound ways through firsthand experiences with the art-learning process. Given that the majority of Singapore children journey through the public school system and that public school art education in Singapore was largely neglected until recent years, it is therefore plausible that the current batch of policymakers and school administrators may have lacked firsthand experience of the benefit of art-making during their school days. As a consequence of an “experimental gap,” they might find it challenging to champion meaningful art education within their schools³². Hence, to facilitate the continued development of a hospitable school culture for art learning in public schools, it would be wise for art teachers to make art experiences available to their colleagues in public schools. Perhaps only when school administrators and policymakers experience art-making in a personal and meaningful manner can they make decisions that benefit art education in their schools.³³

Finally, this study revealed the need for alternate view points and sources (both foreign and local) while at the same time arguing for critical and their meaningful adaptation and translation. As the Singapore education system is currently revamping its policy direction and takes onboard theories and paradigms from numeral sources, care has to be taken to ensure that they are adapted meaningfully into the appropriate context. This reflection and adaptation process can be collapsed under the concepts of ‘mirrors and tools’. Akin to mirror reflections, external influences if used meaningfully can provide educators with a comparative “tool” to interrogate and evaluate incumbent practices. Therefore In so much as on a macro level, curriculum planners at the Ministry have to meaningfully translate “foreign” pedagogical concepts into the Singaporean context, likewise, teachers in the classroom level has to develop critical judgment in translating centralized curricular directives from the Ministry to best benefit their classroom circumstance.

Artful Listening: Practice Informing Policy

This study demonstrated the interrelated nature of educational policy and practices and advocates for a need for practice to inform policymaking. The needs and challenges of teaching and learning are unique, dynamic, and fluid; therefore, developing educational policies based on sound educational theories and proven practices represent only a fraction of the policymaking consideration. It is of critical importance also to listen to the sentiments and needs down at the classroom level and allow these “voices” to enlighten policy directions. In

³² I keep reading about how we [Singapore society] are at the 3rd stage of the renaissance city vision ... come on. If you want to give a step by step [formula based approach to enliven the arts ... forget it, seriously forget it's doomed to fail. Yesterday, they invited a struggling artist to give a talk [at our school] and they also invited the Ministers. You should see the Ministers' facial expressions ... they couldn't appreciate what was being presented” (Interviewee F, Section 1, 39:17).

³³ “If I'm the Minister of education, I would have compulsory training in art education for all principals” (Interviewee B, Section 2, 23:30).

line with this perspective, this study advocates for greater collaboration among school, community, and the government. With greater collaboration and input from schools and the community, policymakers at the national level will then be better able to chart an educational direction that places greater emphasis on local growth and development and refrains from a one-size-fits-all paradigm. To facilitate the development of a practice-centered policy culture, greater involvement and autonomy should be given to public school (art) teachers to construct their own curriculum around the needs and challenges of individual classroom environments. This is important particularly for art pedagogy, as meaningful learning of art best exists in an experiential, negotiative, and reflective learning atmosphere.

In short, the relationship between policy and practice is never unidirectional. By “listening” to grassroots nuances and allowing practice to (re)inform policy, a school system will then be able to make sound educational policy that is comprehensive and meaningful to classroom pedagogy that benefits the public school system at large.

Epilogue

Endo-Skeletal Resiliency and Growing Pains

To conclude this paper, allow me to illustrate the paradigmatic challenges presented in this research, and the possibilities ahead with the aid of a metaphor drawn from a marine biological perspective. In general, marine creatures are categorized into three overarching categories based on their skeletal structure: exo-, endo-, and non-skeletal creatures. Among all these creatures, only the endo-skeletal creature has the highest level of mobility, intelligence, and autonomy. While a jellyfish is dependent on the wind and tide to dictate much of its survival, and a crustacean its protective shell and the mercy of predators, a fish on the other hand has a wider range of environmental options. Without pressing the metaphor too far, it is profound to recognize that the level of resiliency and adaptability to challenges and change is highly associated with the skeletal framework of a creature.

Placed in the socio-pedagogical context of this research, the notion of a sound and reflective “framework” is profound, and the parallel lessons can be summed up in one sentence: the ability to nurture resilient, autonomous, and creative citizenry is highly dependent on the type of pedagogical scaffolding at work in schools. An educational framework that demands individuals and institutions to constantly “prove” their excellence in high-stakes environments in order to be acknowledged results in anxiety and stress, which in turn encourages children to build emotional “shells.” If left unchecked, these “shells” might, over time, harden into impenetrable emotional fortresses, suffocating children’s innate tendency to play, explore, and enjoy learning.

Conversely, an educational framework that is non-threatening, discretionary, and organically framed around the intrinsic needs of students and their proclivities sends a message to children that their uniqueness is worth celebrating and that their contribution does matter in the classroom. In a supportive, safe, and learner-centered classroom environment, such as that proposed within the “exhibitive” pedagogical framework, children develop an understanding of their strengths and weaknesses and hone their intrinsic capacity for self-regulation. In the long run, children who are intrinsically motivated to learn are more autonomous, resilient, and dynamic.

References

- Ames, C., & Felker, D. (1979). An examination of children's attributions and achievement-related evaluations in competitive, cooperative, and individualistic reward structures. *Journal of Educational Psychology, 71*, 413-420.
- Ang, W. (2003). Art learning and the Singapore society: Examining the benefits of art learning and the role of the arts in fostering a dynamic society. Unpublished Master of Education thesis, Teachers College, Columbia University.
- Ang, W. (2004). From policy to practice: A critical analysis of the revised Lower-Secondary School Art Education Syllabus in Singapore. Unpublished doctoral certification paper, Teachers College, Columbia University.
- Atkinson, J. W. (1974). The mind spring of achievement-oriented activity. In J. W. Atkinson & J. O. Raynor (Eds.), *Motivation and achievement*. New York: Wiley.
- Bardach, E. (2000). A practical guide for policy analysis: The eightfold path to more effective problem solving. New York: Chatham House.
- Beat the stress: JC life is a whole new ball game. (2004). Retrieved 2 March, 2004, from <http://straitstimes.asia1.com.sg/storyprinterfriendly/0,1887,237757,00.html?>
- Booth, E. (1997). *The everyday work of art: How artistic experience can transform your life*. Naperville, IL: Sourcebooks.
- Bruner, J. S. (2005). Educating a sense of the possible *11th annual Marx lecture*. Teachers College, Columbia University.
- Bryant, B. (1977). The effects of the interpersonal context of evaluation on self and other enhancement behavior. *Child Development, 48*, 885-892.
- Burton, J. M. (1981). Developing minds: Ideas in search of forms. *School Arts*.
- Burton, J. M. (Ed.). (1994). The arts in school reform: Other conversations. *Teachers College Record, 95*, 477-493.
- Burton, J. M. (2000). The configuration of meaning: Learner-centered art education revisited. *NAEA-Studies in Art Education, 41*(4), 330-345.
- Burton, J., Horowitz, R., & Abeles, H. (2000). Learning in and through the arts: The question of transfer. *Studies in Arts Education, 41*(3), 228-257.
- Chen, P. (1998). Speech by Minister of State for Education at the Nanyang Polytechnic Creativity Award Ceremony (Vol. 2004): Singapore: Ministry of Information and the Arts.
- Chia, J. (1993). *Art education in Singapore: An overview*. Unpublished manuscript.
- Cornbach (1963)
- Cooper, B. C. (2001). *Decade of change: Malaya & the Straits Settlements 1936-1945*. Singapore: Graham Brash.
- Crames, A. (1990). Surrealism and linguistic complexity in ad messages: Viewers' interpretations of and responses to "difficult ads." Unpublished M.A. thesis, University of Pennsylvania.
- Cronbach, L. J. (1963). Evaluation for course improvement. *Teachers College Record, 672-683*.
- Creative industries development strategy. (2002). Singapore: Economic Review Committee.
- Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention*. New York.
- Cyr, L-P. (2000). *A conversation between sculptor and stone*. Unpublished doctoral dissertation, Teachers College, Columbia University.
- Darling-Hammond, L. (1997). *The right to learn : A blueprint for creating schools that work*. San Francisco: Jossey-Bass.
- Desired outcomes of education*. (Vol. 2005): The Ministry of Education.
- Dewey, J. (1980). *Art as experience*. New York: Perigee Books.

- Efland, A. D. (1990). *A history of art education: Intellectual and social currents in teaching the visual arts*. New York: Teachers College Press
- Efland, A. D. (2002). *Art and cognition*. New York: Teachers College Press.
- Eisner, E. W. (1995). Why the arts are marginalized in our schools: One more time [Electronic Version]. *On Common Ground: Partnerships and the Arts* Number 5 from <http://www.yale.edu/ynhti/pubs/A18/eisner.html>.
- Eisner, E. W. (1997). *Educating artistic vision*. California: Macmillan.
- Fuhrman, S., & Lazerson, M (2005). *The public schools*. Oxford, UK: Oxford University Press.
- Gaitskell, C. D., Hurwitz, A., & Day, M. (1982). *Children and their art: Methods for the elementary school* (4th ed.). New York: Harcourt Brace Jovanovich.
- Gardner, H. (1982). *Art, mind and brain: A cognitive approach to creativity*. New York: Basic Books.
- Gardner, H. (1994). *The arts and human development*. New York: Basic Books.
- Gardner, H., & Getty Center for Education in the Arts. (1990). *Art education and human development*. Los Angeles: Getty Center for Education in the Arts.
- Giroux, H. A. (1988). *Teachers as intellectuals: Toward a critical pedagogy of learning*. Granby, MA: Bergin & Garvey.
- Glatthorn, A. A., & Fontana, J. (2000). *Coping with standards, tests, and accountability: Voices from the classroom*. Washington, DC: NEA Teaching and Learning Division.
- Goleman, D. (1995). *Emotional intelligence*. New York: Bantam Books.
- Gombrich, E. H. (1971). *Meditations on a hobby horse and other essays on the theory of art* (2nd ed.). London: Phaidon.
- Guild, P. B., & Garger, S. (1998). *Marching to different drummers* (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.
- Ho, K. L. (2000). *The politics of policy-making in Singapore*. Oxford, UK: Oxford University Press.
- Hogan, D. (2006). *NIE Research and intervention funding proposal* (Funding Report). Singapore: NIE-CRPP.
- Holt, J. C. (1969). *How children learn*. New York: Pitman.
- Jeffri, J. (2003). *Changing the beat: A study of the worklife of jazz musicians* (Vol 1: Executive Summary).
- Johnson, D. W., & Johnson, R. T. (1975). *Learning together and alone: Cooperation, competition and individualization*. Englewood Cliffs, NJ: Prentice-Hall.
- Johnson, D. W., & Johnson, R. T. (1989). *Cooperation and competition: Theory and research*. Edina, MN: Interaction Book Co.
- Kaufman, I. (1965). *Report of the Commission on Art Education* (Report). Washington, DC: National Arts Education Association.
- Kelly, A. V. (1977). *The curriculum: Theory and practice* (3rd ed.). London: Paul Chapman.
- Khong, L., Chew, J., & Goh, J. (2004). How now, NE?: An exploratory study of ethnic relations in three Singapore schools. In A. E. Lai (Ed.), *Beyond rituals and riots: Ethnic pluralism and social cohesion in Singapore*. Singapore: Eastern University Press.
- Kleiber, D., & Roberts, G. (1981). The effects of experience in the development of social character: An exploratory investigation. *Journal of Sport Psychology*, 3, 114-122.
- Klein, M. F. (1991). *The Politics of curriculum decision-making: Issues in centralizing the curriculum*. Albany: State University of New York Press.
- Kohn, A. (1993). *Punished by rewards: The trouble with gold stars, incentive plans, A's, praise, and other bribes*. Boston: Houghton Mifflin.
- Lee, H. L. (2003). S'pore must relearn how to be "fast." *Straits Times*.

- Lee, K. Y. (1966). *New bearings in our education system*. Singapore.
- Lee, K. Y. (1998a). *The Singapore story*. Singapore: Singapore Press Holdings.
- Lewy, A. (1988). *Issues in curriculum evaluation*. Jerusalem: Israel Curriculum Center.
- Li, X. (2003). *Rat race a reason for birth dearth*. Retrieved 28 March, 2003, from <http://straitstimes.asia1.com.sg/storyprintfriendly/0,1887,237638,00.html>.
- Lim, C.-Y. (1983). *Education and national development*. Singapore: Federal Publications.
- Lowenfeld, V., & Brittain, W. L. (1987). *Creative and mental growth*. (8th ed.). New York, London: Collier Macmillan.
- Matthews, J. (1999). *The art of childhood and adolescence: The construction of meaning*. London: Falmer Press.
- Miller, J. P., & Seller, W. (1985). *Curriculum perspectives and practice*. New York: Longman.
- M.O.E. (2002). *Visual Art: lower secondary syllabus*. Singapore: Curriculum Planning and Development Division.
- Newman, R. S. (Ed.). (1991). *Goals and self-regulated learning: What motivates children to seek academic help?* (Vol. 7). Greenwich, CT: JAI Press.
- Ng, T. (2003). Changes in political participation of citizens and civil society: Rebuilding trust for social engagement. In M. T. Yap (Ed.), *Singapore perspectives 2003*. Singapore: Eastern University Press.
- Oakes, J. (1985). *Keeping track how schools structure inequality*. New Haven, CT: Yale University Press.
- Peebles, G., & Wilson, P. (2002). *Economic growth and development in Singapore: Past and future*. UK: Edward Elgera.
- Pepitone, E. (1972). Comparison behavior in elementary school children. *American Educational Research Journal*, 9, 45-63
- Pope, D. C. (2001). "Doing school": How we are creating a generation of stressed out, materialistic, and miseducated students. New Haven, CT: Yale University Press.
- Quah, J. S. T. (Ed.). (1990). *In search of Singapore's national values*. Singapore: Times Academic Press.
- Reeves, D. B. (2004). *Accountability for learning how teachers and school leaders can take charge*. Alexandria, VA: Association for Supervision & Curriculum Development.
- Renaissance City report: Culture and the arts in renaissance Singapore. (Report) (2000). Singapore: Ministry of Information and the Arts.
- Rose, G. (2001). *Visual methodologies: An introduction to the interpretation of visual materials*. London: Sage.
- Rosenholtz, S., & Rosenholtz, S. (1981). Classroom organization and the perception of ability. *Sociology of Education*, 54, 132-140.
- Rosenholtz, S., & Simpson, C. (1984). The formation of ability conceptions: Developmental trend or social construction? *Review of Educational Research*, 54, 31-64.
- Rosenholtz, S. R., & Wilson, B. (1980). The effect of classroom structure on shared perceptions of ability. *American Educational Research Journal*, 17, 75-82.
- Russ, S. W. (1993). *Affect and creativity: The role of affect and play in the creative process*. London: Erlbaum.
- Shanmugaratnam, T. (2006). Speech by Mr, Tharman Shanmugaratnam, Minister for Education, at the MOE Work Plan Seminar 2006, on Thursday, 28 September 2006 at 10.00am at the Ngee Ann Polytechnic Convention Centre. Ministry of Education Work Plan Seminar 2005.
- Singapore: Journey into nationhood*. (1998). Singapore: National Heritage Board: Landmark Books.

- Sizer, T. R. (1992). *Horace's school: Redesigning the American high school*. Boston: Houghton Mifflin.
- Smith, F. (1988). *Insult to intelligence: The bureaucratic invasion of our classrooms*. Portsmouth, NH: Heinemann.
- Sunderman, G. L., Kim, J. S., & Orfield, G. (2005). *NCLB meets school realities: Lessons from the field*. Thousand Oaks, CA: Corwin Press.
- Swanwick, K. (1988). *Music, mind, and education*. London: Routledge.
- Tan, T. (1986). Economic change and the formulation of education policy. Unpublished manuscript, Singapore.
- Taylor, F. W. (1947). *Scientific management, comprising shop management, the principles of scientific management [and] testimony before the special House committee*. New York: Harper.
- Teo, H. P. (2003). The changing role of the state. In Y. M. Teng (Ed.), *Singapore perspectives 2003*. Singapore: Times Academic Press.
- Tong, G. C. (2001). *Speech given at the Singapore Innovation Award 2001 presentation ceremony*. Retrieved 23 May, 2003, from <http://stars.nhb.gov.sg/public/index.html>.
- Tyler, R. (1950). *Basic principles of curriculum and instruction*. Chicago: University of Chicago Press.
- Van Leeuwen, T., & Jewitt, C. (2001). *Handbook of visual analysis*. London: Sage.
- Wheelock, A. (1992). *Crossing the tracks: How "untracking" can save America's schools*. New York: New Press: Distributed by Norton.
- Wone, K. K., & Soh, K. C. (1990). 25 years of research and testing. In J. S. K. Yip & W. K. Sim (Eds.), *Evolution of educational excellence: 25 years of education in the Republic of Singapore*.
- Wong, A. (2000). Singapore, at the International Baccalaureate (IB) Asia-Pacific Region Conference on Curriculum, Assessment and cultural Equity: Education in a multicultural setting—the Singapore experience. 2003, from <http://app.sprinter.gov.sg/data/pr/2000112401.htm>.
- Woo, J.Y.Y (2003). Conversation about her experience as an educator in the Singapore public school system. (Personal communication)
- Yeo, Y.-B. (1993). Singapore International Foundation and African Leadership Forum.
- Yip, J. S. K., & Sim, W. K. (Eds.). (1990). *Evolution of educational excellence: 25 years of education in the Republic of Singapore*. Singapore: Longman.
- Young, M. (1994). *The rise of the meritocracy*. New Brunswick, NJ: Transaction

Appendix A: *An overview of document data.*

<u>Comments</u>		<u>Document Title</u>		<u>Author</u>	<u>Year</u>	
Speeches	<u>Macro-Government Perspective</u> (Education, ideology and policies)	<u>General</u>	1	World-class high schools	Minister of Education	1999
			2	Parliamentary debate: FY2002 Committee of Supply Debate	Minister for Education	2002
		<u>Arts</u>	3	Our future depends on creative minds	Deputy Prime Minister	1996
			4	National Arts Education Conference	Minister for Education	2002
			5	The Importance of Arts Education	Parliamentary Secretary	2004
News Articles	<u>Micro-Community Perspective</u> (School culture and practices)	<u>General</u>	1	Catholic High makes comeback	The Straits Times	2002
			2	Bukit Batok shoots up school rankings	The Straits Times	2002
			3	Some primary schools offer gift packs ...to woo Pri. 1 pupils	The Straits Times	2003
			4	Starting Primary 1? Head for prep school first	The Straits Times	2003
		<u>Arts</u>	5	No place in sports school	The Straits Times	2003
			6	Talent alone not enough for arts school	The Straits Times	2004
			7	Music off-key, art draws no interest in schools	The Straits Times	2004

(Appendix A: continued)

Sample Speech 1— World-Class High Schools

SPEECH BY RADM (NS) TEO CHEE HEAN, MINISTER FOR EDUCATION AND SECOND MINISTER FOR DEFENCE, AT THE CHINESE HIGH LECTURE 1999 ON FRI 16 JULY 1999 AT 10.15 AM AT THE CHINESE HIGH SCHOOL

World-class High Schools

The topic for today is World-class High Schools. This is a very broad topic; there are many facets to world-class schools. I would like today to focus on two important aspects of world-class schools:

- First, a world-class school must be world-class for its students, and
- Second, a world-class school must be world-class for the country.

World-class for the Individual

To begin, world-class schools should be world-class for the individual students. What does being world-class for the individual students mean?

A Good Education System

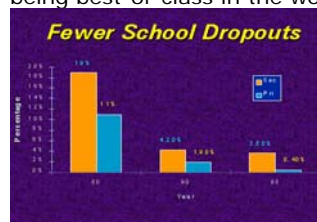
We have a sound and robust education system that is world-class in many ways. Singapore has done very well in terms of education. We can objectively say that Singapore has, over her short history since self-government in 1959, made very good progress in education. However, we should never be complacent. Indeed, we are often our own harshest critics. But we should also know our strengths so that in seeking to be better we do not inadvertently destroy that which is good.

Mass Education

Today, we take for granted that almost every child of school-going age attends school. Before the government took over responsibility for education in 1959, there were many children who had no school to go to. Indeed one of the motivations of the founders of your school was to provide education of a quality and type that would not otherwise have been available. The fact that we have a place in school for every single young Singaporean today is a significant achievement for our education system.

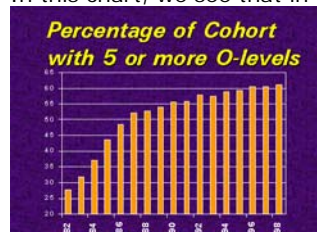
Higher Education Levels

The overall education levels of our students have also risen. It was amidst much heated public debate that streaming was introduced in 1980. Today the outcome speaks for itself. Streaming has achieved the objective of allowing our students to progress at a pace and in programmes more suited to themselves and to reach a higher level than they otherwise would have. Our education system as a whole and our schools have come closer to being best-of-class in the world in providing education and meeting the needs of their individual students.

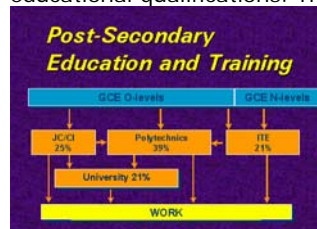


This chart shows the sharp decline in the percentage of school dropouts since streaming was introduced in 1980. Dropout rates for primary schools decreased from 11% in 1980 to a mere 0.4% in 1997. For secondary schools, the dropout rate decreased from 19% to 3.5% in the same period. Nearly every Singaporean today receives 10 years of education at a pace suited to him.

In this chart, we see that in 1980, only 20% of the age cohort had 5 'O' levels or more.



Today, this figure is more than 60%. Education is enabling successive cohorts to attain higher levels of educational qualifications. This slide shows the cohort participation rate at each stage of education.



About 85% of each cohort receives post-secondary education, while almost 60% receive higher education in the polytechnics or the universities. This is very high even by international standards and is comparable to, if not better than, statistics in developed countries.

A System of High Averages

We have no failing schools in Singapore, only good schools, and very good schools. We often think of the best schools and universities in Britain and the United States and compare ourselves unfavourably against them. The truth is our top schools are not far behind and even comparable to top schools abroad. What is more important is that our average schools are far better than average schools in most countries. High quality education is not reserved for the brightest or richest pupils; it is delivered to all.

In 1994, the Third International Mathematics and Science Study, or TIMSS, was conducted. More than half a million pupils from 41 countries participated in the study, including nearly all the developed countries (like UK, US, Japan, Australia, Canada and France, amongst others) and newly developed East Asian economies (Hong Kong and Korea). The test questions were developed according to the curricula of each country so as not to favour anyone; they were also not the typical examination questions that our pupils are familiar with. They tested creative problem-solving skills and our pupils' response to open-ended questions. Our 9 and 13 year-olds took part and did extremely well. We came in first in Mathematics for 9 and 13 year-olds. For Science, our 9 year-olds were 7th. Now you may think that is not very good, but bear in mind that our primary pupils only begin studying science at Primary 34, and so children in other countries had a headstart on our pupils. But by the time we come to Secondary 1, we had more than made up the difference and overtook the children in those countries. Our 13 year-old pupils were top in Science.

The study did not pit the best pupils in Singapore against top pupils from other countries. The pupils participating in TIMSS were statistically representative of the student population at those age groups reflecting diverse abilities, ranging from the academically able to the weaker pupils – this was a requirement of the study. Our results are even more telling for that fact. It showed that our system has been successful in raising the achievement of pupils across a broad ability spectrum, and not just of the top pupils.

Our TIMSS performance has made other countries sit up and take notice of our education system. The well-respected British newspaper, the Times Educational Supplement, hailed Singapore as "the most academically successful nation in the world". California, where Silicon Valley lies, has also adopted Singapore as its benchmark for mathematics in their schools.

A Re-Definition of World-class

The point is, in Singapore, we cannot have world-class schools just for top students. The strength of Singapore's education system is that across the whole spectrum of schools catering to students of all abilities and aptitudes, our schools do a better job of educating our students than schools in other countries, while our top schools are comparable to the best in the world. We believe that every Singaporean has some talent and ability, and we should develop him to his fullest potential.

World-class schools are not just those at the top of the ranking tables. World-class schools are those which add value to their students, whatever their abilities, whatever their family background. Excellence in education does not mean producing the best absolute score in a common test. Excellence means providing each student the opportunity to be educated to be the best he can be, doing the best he can under all circumstances, according to his combination of talents and abilities. By this measure, potentially every student can excel, every school can be world-class.

Mass Customisation

To maximally develop the diverse talents and abilities of Singaporeans, we are adopting an ability-driven model of education. The Ministry of Education will increasingly adopt a mass customisation approach in the planning and delivery of education. At first sight, the term "mass customisation" looks like an oxymoron, that is, something that is inherently self-contradictory. But it is actually a very powerful concept indeed. Let me illustrate with a lunch menu analogy.

We used to have, before your time, one standard meal for everyone. There was the O-levels you had to take at the end of four years in secondary school. The choice of dishes as well as the amount of food was fixed, regardless of your taste or appetite. And you had to gobble it down within a certain amount of time – in Britain and elsewhere, the 'O' levels were done in five years, at the end of Form 5, not in four years. In our system, the food may not have been tasty, but it was definitely filling. Unfortunately, there were those who could not stomach the food and left the restaurant, unfulfilled. It was not ideal: to expect students of different aptitudes and abilities to study the same subjects and take the same examinations within the same number of years. But for the limited resources we could devote to education, that was the best we could do.

Then we developed three set lunches in the menu: the Express, Normal (Academic) and Normal (Technical) streams. This allowed some a limited choice to accommodate differences in taste and appetite – what you want to eat, how much to eat, and how fast you take to finish your meal. With this, many ate enough of the food they liked, and left the restaurant largely satisfied.

The next step for us is to develop an a la carte menu. We want to increase the number of choices. We want customers to choose freely the food they like and the quantity they want; but they can only choose from the menu. This, in essence, is mass customisation. Customisation caters to the talents and abilities of our students, but this is done within the resource constraints of mass education. The challenge for Education is to increase the number of options on the menu, add international cuisine, starters, desserts, hot and cold beverages, et cetera – bearing in mind what the kitchen can be able to produce.

Mass customisation can occur at three different levels. First, MOE can mass customise education at the education system level. Streaming is one example of mass customisation at the system-wide level. This is supplemented by specialised programmes like the Music and Art Elective Programmes, Gifted Education Programme. Even the recent changes to the teaching and learning of Chinese; these are efforts at mass customisation at a systems level were an effort at mass customisation.

We can further mass customise at the school level and in the classroom. I want to invite you to think how the concept of mass customisation can be applied to your school and in your classrooms. You may want to share some of your thoughts later at the Q&A session. I am sure your Principal would like to hear your views. Just as a world-class education system must adopt a mass customisation paradigm, so world-class schools must also think hard about how they can mass customise the education that is delivered to students.

Mass Customising Pre-University Education

One area of mass customisation which I will ask you to think about today is pre-university education. We have in Singapore a 6-4-2 education structure – 6 years of primary education, 4 years of secondary education and 2 years of pre-university education. It has not always been like this, in the days when we had vernacular schools in Singapore, the Chinese schools system had a 6-3-3 structure.

But we now follow the 6-4-2 structure. Each stage of education ends with national examinations, after which students are posted to different schools or institutions for the next stage of their education. Students are streamed by their results so that they learn as much as they can, at a pace suited to them. Flexibility in the structure allows for different routes which lead to three post-secondary education options; at the Institute of Technical Education or ITE, polytechnics or universities. O- and A-levels are no longer considered terminal qualifications today, much less the PSLE.

The O-levels serve mainly as general preparation for the next level of education. The 'O' levels also help to differentiate those who are better suited for the practical orientation of a polytechnic education from those who are more suited to the academic and theoretical orientation of the 'A' levels and subsequently a university education. The pre-university terminal examinations, currently the A-levels though changes were announced last week, identifies those who are able to benefit from a degree-level education and sorts out which students should do what course at which university. Both examinations are necessary from the systems viewpoint. And both examinations provide the impetus for students to stretch themselves and strive for a high level of achievement.

University-bound students require both the breadth of taking a range of O-level subjects, and the depth demanded by the A-levels in a smaller number of subjects, in order to prepare for university. Those who are more suited for the practical orientation of polytechnic education are better off going directly to the polytechnics from the broad-based O-levels. These students are unlikely to benefit from or cope well with spending another two years taking a narrow range of academic A-level subjects. Our secondary school system and the O-levels are well suited for the majority of our students as they go to polytechnic or ITE. But the question is whether our secondary plus JC system makes the best use of the time of those going on to university.

For individuals who have clear-cut aptitude and ability for university studies, two major examinations within such a short period of time results in much time wastage. Less than 2 years after their O levels, students have to re-start the cycle of Many schools spend up to 6 months preparing students for the O- and A-levels, covering the material in the syllabus, revising lessons taught before, and preparing for the A levels doing mock examinations, priming students for the major examination coming. Between these examinations, a further 3 months are spent waiting for O-level results. It is not clear that this makes best use of the time of. Thus a university-bound student actually "wastes" 15 months of his last three years in school.

Now I'm not saying that gearing up for an examination is not good. There is a certain value in students pushing themselves against their best, acquiring self-discipline and raising their threshold for taking pressure. What I am asking is whether for I am also not saying that the first 3 months spent in JCs is meaningless. students who are clearly suited for university, this time preparing for two examinations in close proximity can be better spent on more scholastic and non-scholastic development, and becoming more deeply engaged in moral, social and national education.

Some Overseas Models

I have visited some good pre-university schools in other countries in the past few years, and there are indeed some useful points we can learn. In particular, I would like to describe to you what I saw at the Thomas Jefferson High School for Science and Technology in Alexandria, Virginia, USA.

Thomas Jefferson High was established in 1985 to provide science, mathematics and technology education. It has an enrolment of about 1600 students from Grades 9 to 12 (roughly equivalent to our Secondary 3 to JC2) who have a particular bent towards biological, physical, mathematical, and computer sciences and who intend to pursue further studies in the hard sciences. The school is a model of innovation in curriculum development, teaching strategies and assessment modes. It has a unique partnership with business and industry, and companies like Boeing and Novell help to fund the school, mentor the students, and donate technology to the school.

Team-based projects are the norm, as are team-based assessments. Project work and portfolios account for about 30% of a student's final result. The curriculum has been trimmed to release time for the teaching of processes. There is also an emphasis on problem-finding rather than problem-solving, on project management, and on ethics. With such an all-rounded programme, it is no wonder that graduates from Thomas Jefferson High are well sought after by renown, world-class universities like MIT and CalTech.

Can We Adapt?

Now can we do some of that in our schools? I am not saying that every student, nor even every university-bound student will benefit from such a system or environment. Some will flourish, some will flounder. But what is preventing us from adapting these good features to our schools right now? I raise this issue here at The Chinese High because yours is a school known for innovation. As an Independent School, The Chinese High has led the way in innovative programmes and processes. Take the example of abolishing mid-year examinations. From when it was first mooted, it took a few years before parents were convinced that the move was beneficial for students; now, it is generally recognised as a good move. The principal, teachers, parents and students all gave the system a fair chance to succeed, and succeed it did. This is exactly what Independent Schools were set up for – to innovate, to try out new things; boldly, yet in a level-headed manner.

Now back to my earlier question: how can we allow those students who are suited to make better use of the last 4 of their 12 years of general education? Is it possible for us to have a programme which stretches from Secondary 3 to JC2, without the need to stop to take the O-levels and then the A-levels within a few years of each other? How do we manage it, while ensuring that the students continue to strive across a broad range of subjects before specialising in the final 2 years? Perhaps the principal, teachers or students here can give me some ideas. This is something worth thinking about. The challenge is to provide an education that makes the best use of the time available and prepares a student for university education while meeting other objectives

like ensuring broad-based education at the secondary level. We can discuss this during the Q&A session later on.

World-class for the Country

Let's move on. World-class schools are also world-class for the country.

Even as we attempt to mass customise education opportunities to help students achieve improve against their best and excel themselves, students must understand their responsibility towards society. World-class schools must be world-class for the country, they must inculcate in students a sense of commitment to society, a sense of belonging to the nation. A world-class school in Singapore must derive inspiration from its identity as a Singaporean institution; from that, they shape how young Singaporeans develop, and in doing so, they shape the future of the country.

This present generation of Singaporean students have s many more had much better opportunities than your parentsany previous generation. And this is only because preceding generations have unselfishly decided to set something aside for this generation. Only if every succeeding generation is prepared to put in something for the next generation will a country progress. If succeeding generations take out more than they put back in, the country will stagnate and decline.

Schools and Singapore 21

Singapore 21 is a collective vision of Singaporeans, on what they would like Singapore of the 21st century to be like. It is about Singapore's heartware. Schools are crucial to S21. The successive cohorts of students passing through our schools today will become citizen-players of S21. Indeed, from today's batches of students will come the movers, shakers and leaders of the future. The challenge is for continual renewal and regeneration of not just the leadership and citizenry, but of the vision and the values underlying the S21 vision.

I do not propose to go through each of the 5 principles of S21. No doubt you will have read about S21 in the newspapers, and your teachers may even have dealt with this as part of your National Education. I would just like to touch on three of the five key ideas and point out a few things to show that in many ways, what world-class Singapore schools must do is entirely consonant with Singapore 21.

Every Singaporean Matters

We believe that every Singaporean matters. We strive to develop every student to his fullest potential, because, as I said earlier, we believe that every student has some unique mix of talents and abilities. Schools give all their students due attention, and not just those in the top class. A world-class school must broaden notions of success beyond academic or other more visible forms of achievement. Too narrow a definition of success will leave many discouraged. It will also lead to undiscovered, under-explored, under-developed talent. World-class schools are able to create an environment which gives expression to the diversity of talents and abilities inherent in their student population. We want a potential first-rate astronomer to be an outstanding astronomer, and not a second rate doctor or third-rate engineer. By encouraging a diversity of talents on campus, world-class schools possess and build up a certain vibrance and dynamism in the school culture.

Active Citizens

On the other hand, eEvery Singaporean, including students, matters to Singapore, and should pull his full weight in contributing to the betterment of society. We want every student to feel and know that he has they have a contribution to make, to his their school, to society. This is important, because it is through such contributions that individuals carve out for themselves their own niche in society, and develop a sense of purpose, a sense of identity, a sense of belonging. Now you don't imbibe a sense of national identity just because teachers tell you to have one! World-class schools create the opportunities for students to be actively involved in the school and the community.

The Chinese High School is a beneficiary of many active citizens in the past. People like Mr Tan Kah Kee, Mr Lee Kong Chian, the brothers Mr Awu Boon Haw and Mr Awu Boon Par. These were true philanthropists, who did not simply make monetary donations, but were personally engaged in matters of society and had a genuine desire to serve others.

The Singapore Heartbeat

Lastly, world-class schools pulsate with the national heartbeat; in our case, the Singapore Heartbeat. National Education plays a major role in inculcating the Singapore Heartbeat in students early on in life. As Singapore becomes more international in outlook, we need our national bonds to be strong. World-class schools teach their students to cast their eye on the world, to step boldly into foreign shores of opportunity, but to have their hearts planted firmly in Singapore soil.

Perhaps we can discuss later also, how you think your school and you can contribute towards S21.

Conclusion

The location of a school is not incidental but central to its character. The Chinese High started as a beacon of Chinese culture in South-East Asia. Today, it is still a beacon, strongly rooted to Singapore. The Chinese High is a premier school in Singapore, where students are given many opportunities to develop themselves and undergo a variety of educational experiences. It has achieved much in both academic and non-academic fields.

But that alone does not make it a world-class high school. In the light of S21, the challenge for The Chinese High, and for all schools in Singapore, is not just to produce top results and talented people, but Singaporeans who are mindful of their obligations to society wen they leave the school, Singaporeans with sound moral values and a clear social conscience, who will each play an important part in realising our S21 vision.

I am sure The Chinese High School will continue to strive to be world-class – world-class for its students, world-class for Singapore. Thank you.

(Appendix A: continued)

Sample Speech 2 – Benefits of Streaming and Ranking (Parliamentary Debate)



Ministry of Education
moulding the future of our nation

<p>Ministry FY2002 21</p>	<p>Committee May</p>	<p>of of 2002</p>	<p>Supply 12.30</p>	<p>Education Debate p.m.</p>
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Speech by the Minister for Education (RAdm Teo Chee Hean)

INTRODUCTION

First, let me thank Members for contributing their views and suggestions to improve our education system. Allow me to start with a broad overview of the progress we have made, and where we are headed, in order to place this discussion on education within the larger context of what we are working to achieve.

OVERVIEW

Much has been done over the last five years. We have moved the school system forward in a number of critical areas, including major enhancements to the teaching service through EduPac, trimming the curriculum to allow more time to develop creativity and thinking skills, strengthening citizenship and values education, devolving more authority and responsibility to schools and school clusters, renewing our school buildings, and introducing IT into all our schools.

Mr Magad has just asked for an update on the IT Masterplan. The Ministry is completing its evaluation on the current Masterplan which is nearing completion - it has been 5-6 years. And will unveil its second IT Masterplan for the period 2003-2007 in a few months' time. So, I request Mr Magad to be just a little patient. When we wrap it all up, we will give him a full report.

Sir, we have made much progress, but the Ministry of Education is not resting on its laurels, and I am sure Members of this House would not allow the Ministry of Education to do so. Dr Wang has suggested that the Ministry should leave no stone unturned. Indeed, the previous improvements I have enumerated have merely been made within the existing structure of the education system. And going forward, our emphasis would be on structural issues. We will look at what structures in the education system may need to be changed. The major thrusts in the coming years would be, first, the review of the upper secondary and junior college sector; and second, the restructuring of the university sector.

We will consider a new JC curriculum, better integrated upper secondary and JC programmes, alternative qualifications, and private schools at the secondary and JC levels. We will also consider specialised schools in Science and Mathematics, and in the arts, like the sports school, which will cater to students with different aptitudes and interest, as Mr Low desires. At the tertiary level, the upgrading of the Nanyang Academy of Fine Arts and the La Salle-SIA College of the Arts, funded by the Ministry of Education, as well as the establishment of the Music Conservatory in NUS will provide more opportunities for those with the talent and interest in these areas. The polytechnics and ITE will continue to expand, and we will also provide more university places in the relevant fields, and also possibly allow private universities to be established.

Taken together, these initiatives will provide more opportunities and options to our students at the upper secondary and tertiary levels, building on a very strong foundation which we have today, providing a good solid basic education to our children in our primary and secondary schools.

SPECIFIC ISSUES

Let me now address some of the specific issues that Members have raised. First, streaming.

STREAMING

First of all, I would like to thank Members for agreeing with the principle of streaming.

Benefits of streaming

Streaming provides opportunities for educational advancement to all students according to their aptitudes and abilities. It is not that we have not tried a system without streaming before. That was a system I grew up in, and also many of the Members of this House. But that left many members of our society by the wayside, and that is why we have, today, such a large problem in the age group, 40-50, who have not completed their secondary education. Our streaming differentiates curriculum and the pace and method of learning, so that each student can proceed at his or her own pace and gain a sense of achievement and motivation to learn. Members have emphasised the need for the education system to maximise the potential of our students. This is precisely what streaming attempts to do. This is the strength our system has, and is a major reason for the high achievement levels of our students.

The alternative to streaming is mixed ability classes, where teaching has to be targeted at the average. In such classes, the more academically able will languish as they lose interest in the curriculum, while the less academically able students give up, as they cannot keep pace with the curriculum. This was what we found previously before streaming was introduced. There is a tendency for us to look back in history with rose tinted glasses. We should take an objective look and see whether we are doing better for the broad majority of our students today than we did in the past.

Mdm Halimah has asked how we address the issue of school dropouts. We do so by trying to make sure that as few of them do so as possible in the first place. Through streaming and giving those who need it a lighter curriculum or more time, we have reduced educational wastage and successfully raised the educational attainment of our students. In 1980, before streaming was introduced, only 58% of our Primary 1 cohort completed secondary school. By last year, the proportion had gone up to 93%. This is because we have been able to provide a differentiated curriculum for the students. Through streaming, we have, therefore, been able to sharply reduce dropout rates due to educational reasons. Students may still drop out for a variety of personal, family or social reasons. To address this, we work with the VWOs and MCDS.

Perhaps the best indicator of the success of streaming is how well it has served our less academically inclined

students. Prior to the streaming system, and the articulation of the EM3, normal technical stream and ITE, we really had very few educational opportunities for students like these. They would drop out of school and enter the workforce with no specific skills.

In 1994, we introduced the Normal (Technical) course in secondary schools. These students did not use to go to secondary schools. They would go to primary school, spent a few extra years in primary schools as oversized students, and then go on to VITB. Those pupils who will do better in a practical rather than academic setting, who previously went to VITB after Primary 6, now have a chance to shoot for secondary education, to develop the foundation for acquiring a higher level of skills at the post-secondary level. Simultaneously, we upgraded the VITB and restructured it to become a post-secondary institution, the ITE, to provide such students with further post-secondary opportunities for education. This has lifted the level of these students. With the expansion of places at junior colleges, polytechnics and ITEs, 8 out of 10 of our students now go on to post-secondary education compared to 1 out of 10 in those rosy days of 1965. This percentage is at least as high, if not higher than even those achieved by the most developed countries today.

Mdm Halimah asked how our less academically inclined students do after they leave school. They do very well. ITE graduates are sought after by employers who pay them very well. Even in the midst of the recession last year, 88% of ITE graduates found employment within three months of graduation. In comparison, there were university graduates who were still looking for jobs after half a year. In particular, the average monthly salary for fresh ITE graduates range from \$1,100-\$1,400 a month. This compares well with fresh polytechnic graduates, whose monthly salary ranges from \$1,500-\$1,900 a month.

Modifications to Streaming

Mr Singh, Mdm Halimah and others, said that streaming is done too early. Dr Ong asked if streaming could be done later to take into account late-developers. Sir, it is precisely because we have late-developers that we need streaming. Otherwise, what do we do with the late-developers? Whatever the reason for their poorer academic performance at that point in time, forcing them to learn at a pace that they cannot or are not ready to cope with will simply push them out of the system. Streaming allows them to continue to learn at a pace comfortable to them.

Even after students enter a particular stream, there is a well-structured progression route for them through to post-secondary education, and a net of "ladders and bridges", that allows students to go as far as they can, and even across streams. It is wrong to say that our education system provides no chance for late bloomers. It is our previous system, before streaming, that did not provide chances for late bloomers. That, as I said, is a major reason why so many of our 40 and 50-year olds today, people who went to school with you and me, have not completed secondary education. They had no opportunities and, after failing, staying back a few years, they left school, without any specific qualification or skill. In contrast, our system now provides students of all abilities, the opportunity to get a solid foundation of at least 10 years of primary and secondary education, with 8 out of 10 of them, going beyond that, to further education.

Late-developers still have opportunities for self-improvement. Those who do well, and can benefit from going on with their education, can do so. Every year, about 1,000 ITE graduates go on to the polytechnics, and 1,000 polytechnic graduates go on to our universities. Without streaming, late-developers would have been nipped in the bud instead.

I had a discussion with polytechnic students at a Poly Seminar three years ago. One student stood up and lamented that the system did not provide second chances. It turned out that he was 29 years old, and in the Polytechnic. He was in the process of getting his second chance. Last year, the Lee Kuan Yew Award winner in the ITE was a not so young man, called Simon Foo, from the Navy, I am proud to add. He was the top graduate of ITE for the year, and has been offered a place to study in the polytechnic. He is now 27 years old and married. Without the Normal programme and the ITE, he might never have qualified to go to the polytechnic.

Sir, the oldest student doing a full-time diploma in our polytechnics is now 50 years old. The oldest doing a part-time diploma is 68 years old. The ITE is the biggest provider of continuing education programmes in Singapore, with 34,000 students enrolled, and another 20,000 on ITE accredited courses conducted by industry training partners. We should applaud the chances and opportunities that ITE is, in fact, giving to many of our students, to many of our mature Singaporeans, opportunities which they might not otherwise have got.

Finally, a word on streaming. It is important to note that for streaming in schools, at primary level, there is a parental option when students are streamed at the end of Primary 4. Parents have the final say. Parents can choose not to put their child in the EM3 stream at Primary 5, or if they feel that they are too stressed, they can choose not to put their children in EM1. But very few parents opt their children out of EM1 and many parents opt their children from EM2 to EM1.

Mr Singh suggested that we have a hybrid system where children are kept in the same class in primary school, and break up for specific subjects to cater for children of differing abilities. The idea is not a bad one. The issue is one of practicality - whether it will, in practice, achieve the objectives that Mr Singh has stated. In the primary schools, there are basically 4 subjects being taught, mother tongue being one of them, with the children already split up. This means that if we split up children for other subjects, they would be breaking out of their classes, perhaps 75-100% of their time. This would have implications on resources, time-tabling, etc., and, of course, it will mean that the children do not get to spend most of their time together and just split up for some lessons, which is what Mr Singh's objective was. However, if schools wish to pilot or try this out, I have no objection to them trying.

Mr Singh also said that students of different abilities should interact with each other, and I agree that this is important. Students have opportunities to build bonds and friendships outside their classrooms. For instance, CCAs provide avenues for students from different backgrounds to engage in the same activities. The drum-major in the band, the basket ball captain, or the star in the football team may not come from the fastest stream in the school. And they learn to work together and appreciate each other's strength and weaknesses. It does not have to be, as Members of the House say, only in academic activities. And, in the process, they get to

know each other better and learn to support each other in common endeavours. I should add that it is because we have streaming that we pick students from three different queues to enter the same schools, that we have good mixing in our secondary schools. If we did not have streaming, and students were posted to schools based on one linear list, based on their PSLE t-scores, then all the academically weakest students would probably be grouped in say, 20 or so schools, rather than distributed among more than 120 secondary schools with students from other streams.

Labelling and Stigmatisation

Dr Khor mentioned that streaming is unpopular among teachers. I have frank discussions with teachers and principals regularly, several times a month, either during school visits or in dialogue sessions at the Ministry of Education headquarters, in groups of a dozen or so teachers. Teachers generally recognise children learn at different paces, and that it is not helpful for children to be given a curriculum that they cannot cope with. They are supportive of a stream, like the EM3, that caters for slower learners. Contrary to what Mr Singh says, they also do not dread taking on EM3 classes. Some of our most highly motivated teachers derive great satisfaction, and a sense of mission, from teaching less able kids. I think Dr Wang may well have interviewed some of them for the Outstanding Teacher and President's Teacher Awards. But they, like my colleagues in this House, do feel for these kids, and wonder how best to help the kids cope with the issues of labelling and stigmatisation, and to help them build up their self-esteem.

These concerns have been expressed by Dr Khor and Mr Singh. Such labelling is really a social phenomenon. From a purely educational standpoint, I think Members in this House would agree, that streaming is the correct approach, as it tries to maximise the potential of all students by providing them with programmes as well suited to the students as possible, so that as many of them as possible can be successful in their own right. I am not sure really which is more damaging to self-esteem - to consistently fail because the curriculum and pace is so fast, or to perform comfortably well, achieve success in small bites every year, make steady progress in a less demanding stream, and eventually attain a qualification that employers attach value to.

The Ministry has consistently sought to lift the level of all our students. Members, like Dr Ong and Mr Singh, have suggested that there should be additional support for weaker students, and this is being done. At the primary school level, the Ministry has a Learning Support Programme (LSP) and the Encouraging Achievement and Better Learning (ENABLE) programme to give additional support to pupils who are weak in literacy or numeracy skills. At the secondary level, the Normal (Technical) students were among the first to have access to computers in their schools, before students from any other streams, when computer laboratories were specially set up for the teaching of Normal (Technical) subject Computer Applications. At the post-secondary level, the Ministry has devoted great efforts to upgrade technical education. Sir, this is a segment of our education system that I am particularly proud of. Some Members of this House were able to accept my invitation to visit the ITE, after the debate on the President's Address, and I would like to extend an open invitation to other Members of this House, to see ITE for themselves, and how well the students are doing. Come and have a look.

Sir, I have visited many countries in the past five years, basically to study their education systems, to see how we can adapt the good things that they have done, to our system. They all have to deal with the issue of how to cater to the different educational needs of the whole spectrum of students.

The Singapore education system does this better than most. And what is the evidence? In the Third International Mathematics and Science Study (1999), 93% and 80% of our secondary 2 students were above the international average for Mathematics and Science, respectively, for students of that age group. Sir, I am not surprised that the US needs to come up with new initiatives like the one that Mr Inderjit Singh pointed out, because a large proportion of their students fall well behind.

The advantage of a good solid foundation carried through into post-secondary education, which benefits 8 out of 10 of our children, provides them further opportunities in life. And it places a vast majority of our students on the correct side of the knowledge divide that divides this world into the knowledge haves and the knowledge have-nots. And our education system has been able to provide a vast majority of Singaporeans with that leg up for the future, in engineering, bio-sciences and information technology, not just in the universities, but in the polytechnics and in the ITEs.

Sir, ultimately, it is better to recognise that different students have different needs, and to explicitly provide different streams and educational opportunities for them, than to work on the premise, the hope, that they are all the same and fail to provide for their different needs, or provide for them in an ad hoc way, and then lament later when they do not make it.

Parents and schools need to work together so that educational features like streaming and other forms of additional support that are meant to help pupils, do not become a cause of stigmatisation. Ironically, people who oppose streaming are often the same ones who perpetuate the labelling of our students - I do not call them failures, and I am not so sure why so many Members do - by viewing the provision of a more moderately paced curriculum and a sound technical education for students is something desirable, and we can encourage them to achieve their potential. This attitude of labelling and calling them names is something which we should change, and not streaming. I welcome suggestions from Members on how we can encourage these students, and discourage labelling.

RANKING

Dr Wang suggested that we should also review school ranking. The introduction of school ranking has had a salutary effect on our schools. It has raised standards and allowed parents to make more informed choices, especially as to which are value-added schools. We only rank the top 50 secondary schools, and not all the secondary schools, nor do we rank the primary schools.

Sir, school ranking is increasingly being adopted in the United States and in the UK, where often all the schools are ranked from top to bottom. And it is often in response to demands from parents to know how well schools are educating their children, because parents want to know. I have no doubt that if we did not have

school ranking and did not provide information on how schools are doing, there will be parents who will ask us, and I think it is their right to know. There is nothing to hide.

In the US and the UK, teachers do not like ranking - Dr Wang is quite right - because the teachers are now held accountable to standards when, previously, they were not. But should we hold our schools and teachers accountable for standards? I think the answer is yes. Sir, I am open to ideas on how ranking can be improved, and suggestions from Members of the House are welcome.

Two years ago, I informed Members of this House that we introduced a new appraisal system called the School Excellence Model, where schools do self-evaluation on not just their outputs but also their internal processes. I have given out awards for Best Practice and Sustained Achievements since 1999, to recognise schools for a wide range of areas, from CCA to staff development. However, these awards have not attracted nearly as much attention from the public and the media as school ranking. But I do hope that, over time, the public will learn to recognise that a good school is more than just an absolute ranking, and consists of a whole host of other things.

STRESS

Mr Yeo has suggested that our system is too stressful and puts too much pressure on students. It is true that our students study hard in school, and that our schools seek to ensure that students do their best. However, the strong foundation that our Singapore children have acquired from the hard work that they put in, and the strong work ethic, are important qualities that will help them to succeed in life.

Incidentally, Members who feel that our children are over loaded should be strong advocates of streaming, as it addresses precisely their concern by differentiating the pacing and content of curriculum according to ability. Mdm Halimah and others have said that children are more concerned about their examinations than they are about their parents dying. Frankly, Sir, I think we are fortunate to live in a country where children are focused on their studies and examinations, and not on their parents dying. I have no doubt that if we live in a war-torn country or a country which is rife with terrorism and so on, then children will be worried about their parents dying everyday, rather than their schools and examinations. I would not like to live in a country like that.

The problem of excessive pressure arises when there is a mismatch between expectations and achievement. Schools, parents and society need to understand that while we want the best for our children, we should not push them beyond their limits. One example is streaming at primary 4. There is really no point overloading children with higher mother tongue in EM1 if they are unable to cope. Yet, many parents opt in to EM1 stream for their children, and few opt out from it.

The movie, *I Not Stupid*, reflected quite starkly how some Singaporeans have chosen parochial definitions of success and imposed them on their children. Mr Yeo mentioned a serious moment in the movie where one of the characters wanted to commit suicide. Sir, I happen to think that this is an excellent movie. It provides a mirror for our society and for each of us, and allows each of us to see how we might actually be behaving and how this behaviour may even, with the best of intentions, have a negative effect on our children and on others. It is a useful movie for principals, parents and teachers to watch. I should point out, though, that in the movie, the student wanted to commit suicide, not because he could not cope with his school work, but because he could not live up to his mother's unrealistic expectations that he attain more than 90 marks in his test. We need a broader definition of success. Being all that we can be should be counted as success.

When Mr Singh said that the Ministry should set performance targets on the number of lateral transfers from what he calls a lower stream to a higher stream, he is, in fact, narrowing the definition of what it means to be successful, to whether a student is able to move from EM3 to EM2. The Ministry does not have targets for lateral transfers, because setting such targets means that we will be forcing students to learn at a pace that they cannot cope with. This is not the best thing for them. This may result in pushing them out of the system. It is more meaningful to provide an appropriate programme with adequate and proper support to weaker students to maximise their potential and provide them with avenues of progression. EM3 students can progress through the system. Nobody has given up on them, and this has been our approach.

COUNSELLING

On counselling, the Ministry has a programme for addressing the social and emotional needs of students. Counselling is available through the entire age range of students. All teachers are given basic training in counselling, and there are teacher counsellors of which there are two in each school, but they are part time. We also have trained some 30 retired education officers as counsellors. And by July this year, they will be deployed to schools and to clusters. But this is an area in which I will be the first to agree that we can do with more assistance. Schools work with VWOs, Family Service Centres and self-help groups. Incidentally, that is one of the reasons why since 1997-1998, the Ministry of Education, together with the Ministry of Health, has been promoting the support services such as those provided by the Institute of Mental Health, resulting in an increase in attendances.

While schools provide support for the pupils, the support from home is of paramount importance in helping students to cope with stress, and when they face distress. Mr Gan suggested that there might also be a need to counsel parents. Yes, that is so, and where there is a need for parents to be counselled, I suggest that they be referred to Family Service Centres for the necessary support. The Ministry and our schools will be happy to work with other agencies and organisations on this issue, as it is an issue which the Ministry itself is not particularly well equipped to undertake.

CONCLUSION - JC/UPPER SECONDARY REVIEW

Sir, education seeks to provide Singaporeans with the opportunity to fulfil their potential. Because the potential of our students is multi-faceted, our education system has to provide opportunities to different programmes and different types of institutions. The way forward is to provide greater diversity in the school system and allowing for more educational routes and models, not just to consider one route or one model as the success paradigm, as many in this House seem to have the orientation towards. Such an approach will allow us to more fully develop the different abilities of our students.

As mentioned earlier, the Ministry is currently carrying out a review of junior college and upper secondary education, and I will ask the Senior Minister of State, Mr Tharman Shanmugaratnam, to update Members on that.

(Appendix A: continued)

Sample News Article 1 – Catholic High makes Comeback

Catholic High makes comeback

FOUR years ago, Catholic High School made the news when old boy and then Parliamentary Secretary Chan Soo Sen rapped his alma mater for slipping in the annual school rankings.

Speaking at the school's 1998 speech and prize-giving ceremony, he noted that it had been ranked in the 29th position the previous year, compared to 11th in 1992. He also said it was "unimaginable, unacceptable and unforgivable" that the school had become "second-rate".

The public soul-searching spurred the Special Assistance Plan school to pull up its socks and, yesterday, students and staff had every reason to smile when this year's rankings were released.

While Raffles Institution (RI) retained its top spot in the Special/Express stream category, Catholic High along with Bukit Batok Secondary were among the most improved schools.

Catholic High moved up from 22nd spot last year to 14th.

Mr Chan, who studied at the school from 1963 to 1974, was happy at the news. The Minister of State for the Prime Minister's Office and Community Development and Sports said: "Now, the Catholic High community can hold its head high again."

Even before he made his reality-check speech, the school community had already swung into action.

The old boys' association had set up a scholarship fund to attract top students, and



DESMOND FOO

The move up the annual school rankings has brought cheer to Catholic High students (from left) Matthew Tiong Kwong Hoong, Desmond Oh, Daniel Soo Teck Keong, Toh Kiat Chay and Daryl Chng Choon Kiat to Catholic High.

started a mentorship scheme to pair these students with successful old boys, such as Environment Minister Lim Swee Say, Defence Science and Technology Agency chief Su Guanion and National University of Singapore deputy president Chong Chi Tat.

The school also tried to plug the "brain drain" from its primary school. It dangled scholarships and held talks at the primary school to convince pupils to continue their education at the secondary school.

One sign that it is attracting better quality students: This year, for Secondary 1, the

school has six special classes where top Primary School Leaving Examination (PSLE) students study English and the mother tongue at first-language level, and four Express stream classes. About four years ago, the reverse was true.

Take 14-year-old Camillus Kang, whose PSLE aggregate of 270 gave him the pick of top secondary schools. He said: "I know I could have gone to RI, but I wanted to stay here because this is where I spent my primary school years. The mentorship scheme made it all the more attractive."

He said his mentor, Nation-

al University of Singapore don Lim Seh Chun, had helped him with personal and study problems by giving him moral support and encouragement.

Principal Goh Hwee Choo, who took over in December 1997, credited her teachers for coming up with programmes to improve the students' subject scores and coping skills.

For some subjects, students are divided into groups according to their ability, so that teachers can tailor their teaching to suit them. The school has also conducted mock examinations and used them to spot students' weaknesses.

However, Mrs Goh knows the school's work is not done. She agrees with Mr Chan that the school should now aim for a spot in the top 10.

She said: "The calibre of students and staff is there. We have come up from 29 to 14. We just have to keep at it."

BEING AN INSPIRATION

VALUE-ADDED schools which inspire students to do better — in Monday's Education Pages.

◆ **MEAN LIBS AND LIBA:** LIBS is the ranking criterion for the Special/Express courses. Mean LIBS is the average aggregate grade of L1 (either English or Higher Mother Tongue) and best five subjects of all Special/Express course students in a school. For the Normal course, Mean LIBA is the average aggregate grade of English and best four subjects of all Normal course students in a school. Mother Tongue can be considered in the calculation of LIBS or LIBA if it is one of the best five or best four subjects. Last year's ranking in brackets next to the school's name.

SCHOOL	MEAN LIBA	ENTRY SCORE	SCHOOL	MEAN LIBA	ENTRY SCORE
1. Nanyang (1)	27.9	183-199	15. Kuo Chuan Presbyterian (8)	22.7	175-193
2. Nan Hua (7)	20.4	74			153-192#
3. Ngee Ann (3)	20.5	194-199	16. St. Margaret's (1)	22.8	181-199
		153-180#			153-191#
4. Ang Mo Kio (17)	20.6	176-197	17. Gaylang Methodist (12)	23.1	183-187
5. Presbyterian High (4)	20.6	175-197			153-187#
6. Duxman (14)	21.1	184-199	18. Swiss Cottage (5)	23.1	183-196
7. CHIJ St. Theresa's (13)	21.3	166-199	19. Bukit View (15)	23.2	157-193
		153-186#	20. Riverside (12)	23.3	177-198
8. St. Anthony's Canossian (9)	21.4	183-199	21. Yishun Town (15)	23.3	176-197
		152-195#	22. St. Hilda's (1)	23.5	181-196
9. CHIJ Katong Convent (1)	21.7	170-198			152-187#
		153-189#	23. Bendemeer (1)	23.6	164-195
10. CHIJ St. Joseph's Convent (1)	21.8	170-195	24. Bukit Panjang Govt. High (1)	23.6	187-199
		157-187#	25. Damai (20)	23.6	176-191
11. Paya Lebar MGS (6)	22.2	171-197#	26. Kwaq (20)	23.6	173-199
12. Tanjong (1)	22.3	152-189	27. Mayflower (18)	23.6	172-190
13. Hai Sing Catholic (25)	22.4	178-199	28. New Town (1)	23.6	167-186
14. Pei Cal (28)	22.4	152-187	29. Outram (1)	23.6	152-187
15. St. Gabriel's (1)	22.5	179-187	30. Alimud Ibrahim (1)	23.7	189-198
		152-186#	31. Ghim Moh (1)	23.7	152-182
16. Bloom Lay (10)	22.7	180-193	32. Queenstown (1)	23.7	159-188
17. Bukit Batok (34)	22.7	175-196	33. Queenstown (32)	23.8	164-195
18. Fairfield Methodist (1)	22.7	187-195	34. Woodlands (40)	23.8	158-187
		152-186#	35. Yishun (1)	23.8	161-191
19. Jurong (31)	22.7	176-199			

ENTRY SCORE: Refers to the PSLE scores of students who made it to the school last year. Students in the Special/Express courses take four years to sit for their O levels and students in the Normal course, five years. The range marked (H) is for students from a feeder primary school. (***) There was no Sec 1 Normal intake for Nan Hua.

(Appendix A: continued)

Sample News Article 4 – Starting Primary 1? Head for Prep School First

HOME

THE STRAITS TIMES : Saturday, December 13, 2003

Starting Primary 1? Head for prep school first

Parents are having children attend classes, hoping to give them a head start, but experts and principals warn against over-preparation

By SANDRA DAVIE and CRYSTAL CHAN

SCHOOLS say they do not expect children starting in Primary 1 to know their English, mathematics or Chinese — but anxious parents are having them attend classes anyway that promise to give the youngsters a few months' head start.

This is happening even though most six-year-olds have attended nursery and kindergarten classes for the past three years and have basic maths and language skills.

A check with a dozen tuition centres revealed that eight offer preparatory classes in English, mathematics and Chinese for those about to start school.

Most did not want to say how many children sign up for these classes, just that they did good business in November and especially December.

These outlets, mostly in Housing Board estates, charge \$80 to \$100 a month for tuition in at least two subjects.

Unlike kindergartens that teach youngsters language and maths through play, most use the chalk-and-talk method and get the children to complete worksheets.

Said Mr Samuel Ng, centre manager for Pacers Learning Centre, a tuition centre in Teck Whye: "Our kindergartens are good and the children who come to us know the basics, but parents want them to be ahead by at least a few months."

Mr Clement Kan, who runs the Tampines branch of Kent Ridge Tutors Consultancy, said that in his centre's Primary 1 English tuition classes, which some

pre-Primary 1 pupils attend, the children are taught how to write compositions and tackle comprehension questions.

He admitted that this may be a little above what six-year-olds need to know, but said it would prepare them for the years ahead. Besides, he added, parents want it.

Housewife Lilien Tan, 33, is one of them.

Her daughter attended a PAP Community Foundation kindergarten, knows simple addition and subtraction, and has no problems reading her Primary 1 English textbook; but Mrs Tan has been sending the little girl for preparatory classes since the start of this month.

"It's scary for a child when she starts school, so I want her to be

confident from Day One.

"If she falls behind, it'll be very hard to catch up," said Mrs Tan.

Another parent, Madam R. Saratha, 28, a production supervisor, said that she had not been worried about her son coping until she saw his Primary 1 textbooks.

"The sums were quite difficult, so I decided, better get him to attend tuition," she said.

She pays a private tutor \$60 a month to give him maths lessons twice a week.

Despite the growing popularity of preparatory classes, most of the principals interviewed said that they do not expect new pupils to meet fixed academic standards.

Most said the children should know the alphabet and be able to read and count.

Said Townsville Primary vice-principal Mohammad Haniff Abu Talib: "Children come to us with different levels of preparedness, so we start at the same level for everyone."

He warned against parents hot-housing their children.

"The most important thing that parents can do is to make sure that their children come to school eager to learn," he said.

Psychologists also cautioned against parents "over-preparing" their children.

Said developmental psychologist Nicon Chin, who has a practice in Mount Elizabeth Hospital: "The worst thing parents can do is to compare their child to the youngster's classmates. They'll pass on their own anxiety."

Children starting school need an adjustment period, he said.

"They need to adapt to a classroom regime and being in school for six hours at a stretch."

He echoed the advice given by principals.

"If children start primary school self-reliant, socially adept and eager to learn, they will find school fun."



At Kent Ridge Tutors, teacher Audrey Tan gets kids to do worksheets. CHEW SENG KIM

'IT'S SCARY FOR A CHILD WHEN SHE STARTS SCHOOL, SO I WANT HER TO BE CONFIDENT FROM DAY ONE. IF SHE FALLS BEHIND, IT'LL BE VERY HARD TO CATCH UP.'

— Housewife Lilien Tan, who got her daughter to attend prep classes

Appendix B: Advertisement banners found around public school compounds

<p>Location: Western Singapore Level: Primary School</p> <p>Form: A 30 by 6 foot banner unfolded from the roof of the school building facing the entrance of the school.</p> <p>Content & Context: A congratulatory banner with an itemized list of school achievements for the academic year 2004. These include academic achievements, sporting awards and national ranking positions.</p>	 <p>Set 1, Image 2</p>
<p>Location: Eastern Singapore Level: Secondary School</p> <p>Form: One of two identical banners displayed around the outer wall of the school</p> <p>Content & Context: Banner announcing the school achievement under the 'Value-Added' category of the Annual School Ranking Exercise.</p>	 <p>Set 2, Image 4</p>

Location: Western Singapore
Level: Secondary School

Form: A 3 by 2 foot Banner displayed on a fence outside the school entrance.

Content & Context: This banner was a congratulatory gift from the School Advisory Committee noting the school's success in securing a place within the Top-20 in the Value added category (Normal Stream).



Set 3, Image 1

Location: Eastern Singapore
Level: Secondary School

Form: The largest of three banners located around the school compound.

Content & Context: A large full-length banner draped on a wall located in the driveway announcing that the school was ranked among the Top-20 in the Value added category.

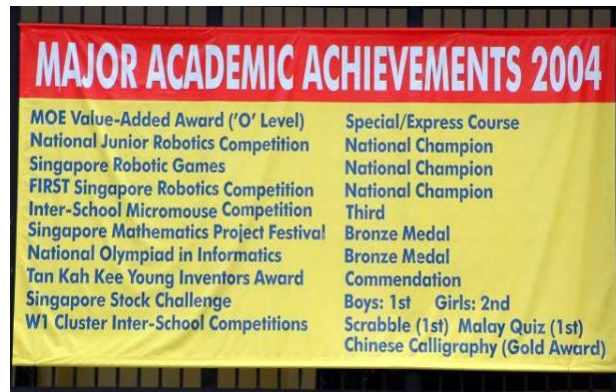


Set 4, Image 5

Location: Western Singapore
Level: Secondary School

Form: One of five cloth banners displayed on the main facade of a school. The size of this banner is approximately 6 by 8 foot.

Content & Context: This banner lists a string of the school’s “Major Academic Achievements” in 2004. Achievements listed are in the field of sciences, math, and commerce.

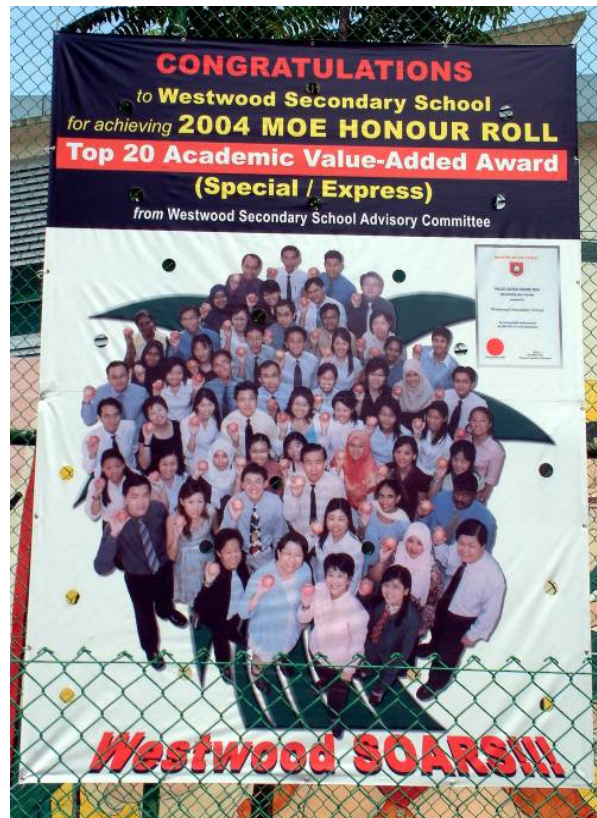


Set 5, Image 1

Location: Western Singapore
Level: Secondary School

Form: A 6 by 10 foot banner displayed along the perimeter fence of the school, in front of a 50 by 8 foot high wall mural.

Content & Context: A congratulatory banner identifying the school’s achievement in the school ranking exercise. The school won the *Top-20 Academic Value-Added Award* and made the *2004 MOE Honor Roll*. At the center of this banner is a photographic image depicting the school’s academic staff in a close huddle, each holding an “apple”—a symbol of unity and academic achievement.



Set 6, Image 3

Location: Western Singapore
Level: Secondary School

Form: One of two 6 by 10 foot banners displayed along the perimeter fence of the school

Content & Context: A banner displaying the school's co-curricular achievements in 2004. List of achievements includes the music, dance, and uniform groups' placements in national competitions.



Set 7, Image 2

Location: Eastern Singapore
Level: Secondary School

Form: A 7x10 foot silk-screened polyester banner located on metal scaffolding facing a busy traffic intersection.

Content & Context: A banner informing the community that the school had achieved the 2004 *School Distinction Award*. On this banner are silk-screened images of students participating in academic and sports activities.



Set 8, Image 1

Appendix C: Interview Questions

Questions pertaining to ART EDUCATION

1. Did you look forward to your art lessons? Why?
2. How has your experience in the art helped you developed as a person?
3. How was your learning experience of learning in the arts different from that of other subjects? Explain
4. Do you think art is a competitive subject? Should it be? Why ? Why Not?
5. Do you think every student in the public school system should be exposed to the arts?

Questions pertaining to the SINGAPORE EDUCATION STRUCTURE

6. Can you sum up your general academic experience in Junior College? Was it meaningful? If not why?
7. Is the education system in Singapore competitive? If so, what did you see as an evidence of competition and the effects?
8. As a student, how did you negotiate academic demands imposed upon you?
9. According to your opinion, should Art learning be competitive? Why? Why not?

Questions on SYSTEMIC ISSUES

Having considered your role as an art student, and your experience within the public school structure,

10. From your point of view, is the system you described hospitable to artistic development? If so why? If not why?
11. Do you think that the current educational emphasis on promoting art education within a competitive structure creates a learning dilemma? (follow-up questions if applicable)
12. Having experienced this “tension” first hand, as an art student, how did you come to terms with such a reality?