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Globalization, Multiple Intelligences, and ELT in Singapore

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Abstract

There are two parts to this paper – one introductory and theoretical: and the other "applied", and it is hoped that these two halves will contribute to a more complete understanding of the role and significance of Multiple Intelligence in English language education in Singapore. The first part of the paper will chronicle the rise of MI amidst the backdrop of globalization and the socio-political background of Singapore in the mid-1990's. The second part of the paper will focus on the model's application in four language classrooms in Singapore in 2004-2005. The paper concludes with a critical discussion of the strengths and weaknesses of Multiple Intelligence, and its sustainability and long-term viability in relation to national, pedagogical and language methodological issues in Singapore.

Introduction

Globalization has brought in its wake a general destabilization affecting all societies, vast population mobility, the emergence of multi-cultural societies in many places, and an exponential increase in human interaction. Such trends are fast redefining traditional parameters of culture and identity. The capital market policies accompanying globalization have expanded the role of trans-national corporations (TNCs). These TNCs own production facilities outside their home countries and coordinate their activities with many entities throughout the world, aided by complex networks of production and finance. They gravitate towards the countries with the lowest wages and help extend competition among workers to a global level. Some TNCs have grown more powerful economically than many nation states – a phenomenon that helps explain the weakened sovereignty of nation states (Chew and Quek, 2003).

In such a new world order, how do ambitious small new states survive? They will have to remake themselves. This means reversing policies, trashing the sacred cows of the past, retrofitting existing socio-political policies, and reinventing language policies. Hence, since the turn of the century, a Confucian Singapore has given way to a society with more gender rights, such as the awarding of equal medical benefits to both men and women in the civil service. A conservative Singapore has also recognized gay entertainment establishments and legitimized gay housing. A socialist Singapore has left old world industries to falter, their workers swiftly retrenched, and in their place promoted new knowledge-based industries with higher-skilled workers. Protectionist trade measures have been removed, foreign ownership restrictions on properties relaxed and insurance and telecommunication sectors liberalized. An upright Singapore has also sanctioned the building of a casino complex!

More startling, there has also been a bold suggestion by Parliament to double Singapore's current population of 4 million to 8 million so as to gain a competitive edge. It is a

proposal not to be taken lightly, being already in quiet practice for over a decade. For example, Singapore's population grew from 2.4 million in 1980 to 3.1 million in 1990 and to 4 million in 2000 (Dept of Statistics, 2001). In other words, between 1980 and 1990 the population grew by 29% and between 1990 and 2000, it grew by yet another 29% - a total of 67% in 20 years. What is novel is that this doubling is not a result of the natural birth rate, since fertility had reached below replacement level as early as 1975, and currently is one of the world's lowest at 1.25 in 2003.

This paper assumes that pedagogical innovations of any kind should always be understood within the important backdrop of the local political context, especially in small island states such as Singapore where the same political party has ruled Singapore since its independence and where Mr Lee Kuan Yew (MM Lee), the chief architect of the nation, is still in the cabinet as Minister Mentor and Member of Parliament for the Tanjong Pagar constituency. Power has been overwhelmingly in the hands of the People's Action Party (PAP) for half a century. Opposition parties are inconsequential and civil society, such as trade unions, free churches, liberal professions and autonomous universities, non-governmental organisations is weak. What adds to the impressive record is that the very powerful PAP is freely elected and opposition parties are legal. The speeches of the Ministers of Education can therefore powerfully influence the curriculum as well as the English language syllabus, and this will be further discussed.

This paper will show how innovative models such as Howard Gardner's (1993, 1995, 1999) Multiple Intelligences (MI) has tied in rather neatly with the Republic of Singapore's effort to remake itself in the educational arena in multifarious and novel ways since the onslaught of globalization. The first part of the paper will chronicle the rise of MI amidst the socio-political economic background of Singapore in the mid-1990's and the reasons behind the widespread acceptability and popularity of MI. This will be followed by the second part of the paper which will focus on the model's application in some Singapore schools. It will report on lesson observations of Multiple Intelligence in four neighbourhood schools in 2004-2005. This paper analyses how

teachers were able to learn from one another through Learning Circles (LCs), and how, through the process of planning lessons together, they came to understand not just their students', but also their own strengths and weaknesses. The paper concludes with a brief discussion of the strengths and weaknesses of Multiple Intelligence, its sustainability and long-term viability in relation to national, pedagogical and language methodological issues in Singapore.

Multiple Intelligences and Nation Building

Dr Ng Eng Hen, the Minister for Education, provided a snapshot on the role of education in Singapore during the Isreali Presidential Conference, and this may be used to describe Singapore's education system in a nutshell:

> "We are a geographically small compact city with a total land area of about 700 square km……Despite our size, we have a population of 4.6 million people. This makes Singapore the second-most densely populated independent country in the world, after Monaco. Participation in education is high - 98.4% complete at least 10 years of education while 93% progress further to higher levels of education…over 93% of students who graduate from our Universities and Polytechnics are employed within 6 months of graduation, earning a starting salary of about USD2000 and USD1400 respectively"
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> (Ng, 2008).

To run such a tight ship of highly qualified citizenry in a changing globalized environment meant that the government had to be always on its toes to look for "different ways of being smart". In this aspect, Howard Gardner's (1993) view of human natural talents, which he named the "multiple intelligences model", appears to have fit neatly with the aspirations of Singapore.

Traditionally, intelligence was thought of as a single score that a person received on an IQ test. Indeed, much of today's education addresses primarily linguistic and logical-mathematical intelligences – not surprisingly, since these are the intelligences favoured by society at large and in which most educators seem to be dominant. However, the theory of MI suggests other distinct units of intellectual functioning, which the brain is capable of. These units are labelled as "intelligences", each with their own observable and measurable abilities. Intelligence is defined as the capacity to solve problems or to fashion products that are valued in one or more cultural settings. Gardner (ibid.) claims that his view of intelligence(s) is culture-free and avoids the conceptual narrowness usually associated with traditional notions of intelligence. These units of intelligences are important skills to tap, not just in the classroom but in life in general. For example, when we attempt to solve a problem, we realize that no single piece of the puzzle can give us the whole picture. It is only when we put all the pieces of the puzzle together by using all our different intelligences that we can see the whole.

In short, MI theory proposes the plurality of intellect in the classroom and reminds us of the importance of teaching in a variety of ways to suit different profiles of students. Every student has all of the intelligences. However, they may differ in the particular intelligence profiles with which they are born - and they certainly differ in the profiles they end up with. In other words, it is a belief that we have only one brain each but that that brain can be stimulated in a variety of ways. In the language classroom, it is often the case that only one part of our brain – the verbal part - is exploited; the other parts are left unattended and unexploited by the language teacher. For example, if the teacher uses a very verbal style, it would only benefit students who are better as aural learners than visual learners. Of course, many students may learn equally well in either the aural or visual mode but there will be, inevitably, a significant proportion of learners who will be affected by the peculiar mode of instruction.

Armstrong (1994) reclassified Gardner's more theoretical explanations of intelligences as "smartness", so as to make it more concrete and comprehensible for the layman:

1. Linguistic intelligence ("word smart"):- which focuses on using words, both spoken and written;
2. Logical-mathematical intelligence ("number/reasoning smart") - which involves seeing logical patterns and using numbers (number smart);
3. Spatial intelligence ("picture smart") :which manifests itself in being able to use shapes, colours, graphics, and space;
4. Bodily-Kinesthetic intelligence ("body smart") – which concerns the use of the hands and the rest of the body;
5. Musical intelligence ("music smart")- which comprises the use of aspects of music, such as rhythm, timbre, pitch, and melody;
6. Interpersonal intelligence ("people smart"):which embraces interaction with and an understanding of other
7. Intrapersonal intelligence ("self smart"): which relates to understanding and controlling oneself.

MI theory highlights the fact that an increasing proportion of students enter school today unprepared to succeed in a conventional educational environment. Traditional teaching methodology, which primarily stressed linguistic and logical-mathematical skills, did not address the needs of these students. Rather than brand these students as "underachievers", proponents of MI would argue that it is highly probable that many of these "underachievers" are dominant in a learning style that is opposed to the prevailing teaching style. Not surprisingly, since 1990, in the field of language education, there have been many books and articles on MI theory (Armstrong, 1994 and Christison, 1996). As a teaching approach, MI has also been included in language methodology textbooks such as Larsen-Freeman (2000) and Richards and Rodgers (2001).

By cultivating the various intelligences inherent in each human being, it was thought that precious resources would be saved since tiny Singapore depended primarily on manpower, rather than natural resources to fuel its economy. The chance of developing every citizen to their full potential was greatly attractive because it reduced "wastage" of resources in a talent-hungry nation. (Hui, 2004). A penchant to avoid "wastage" can be seen in the significant number of scholarships awarded to students from China and India in the past two decades because as Minister Mentor Lee Kuan Yew explains, "If one out of four students from China or India stayed behind in Singapore… Singapore's talent pool would outweigh that of any neighbouring country (Today, October 14, 2004).

A History of Multiple Intelligences in Singapore

The official engagement of MI in Singapore schools began in 1997 at the onset of the Asian Financial crisis, which raised fears of a worldwide economic meltdown. The reaction of the Singapore government to this crisis was both economic and educational. Economic initiatives included the opening up of local markets in the banking and telecommunications sectors. On the other hand, educational initiatives, such as "Thinking Schools and Learning Nations" (TSLN), came with clear objectives to train the citizenry to be innovative, flexible, entrepreneurial and creative so as to better engage with changing global conditions (Saravanan, 2005). The "new economic order" was seen as a marketplace guided by rules outside the government's control, demanding new worker attributes such as the ability not just to work independently but in teams, to be risk takers, capable of learning, relearning and unlearning and to be creative and flexible (Goh, 1997).

At the opening of an educational seminar for pre-schoolers in 2001, Aline Wong, the Senior Minister of State for Education, provided a clear indication of government support for MI:

> "Multiple Intelligences Theory has impacted the design of curricula in many schools all over the world… Teachers apply the theory in the way they consider most appropriate for their students' profile, school and community. In doing this, the school not only awakens the child's joy in learning but also encourages the child's persistence and effort, which are equally necessary for his later success in life. Do not then train youths to learn by force and harshness, but direct them to it by what amuses their minds so that you may be better able to discover with accuracy the peculiar bent of the genius of each."
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> (Wong, 2001)

Since then, the TSLN journey, with MI as one of its staple features, has been reviewed annually as a means of improving the quality of interaction between teachers and learners. In 2003, the policy of "Innovation and Enterprise" was placed under the TSLN banner so as to encourage further emphasis on a "spirit of innovation and enterprise in our students, to nurture intellectual curiosity, passion, and courage to try new and untested routes, rather than to follow set formulae and standard answers" (Tharman, 2004). Here, schools are no longer viewed as educators but also "edupreneurs" that is, institutions fostering new sets of mental attitudes in the spirit of innovation and enterprise" (ibid.).

Moves towards the recognition of diversity, a fundamental tenet of MI, can thus be seen as making "pragmatic sense" to politicians and educators alike as it made democratically available the cultivating of *all* kinds of intelligences for *all* kinds of students. Recent research on MI in Singapore educational institutions by Mokhtar et al., (2007) also suggests that learning is enhanced by adopting pedagogical approaches that address students' various learning styles. The potential of diversity as a "resource" rather than a "liability" was recognised by Prime Minister Lee Hsien Loong when he rallied educators

and parents under the 2005 educational banner of "Teach Less, Learn More". He felt that too much time was spent on preparing children for examinations, rather than on inculcating qualities of thinking and creativity. Henceforth, educators were urged "to engage students and prepare them for life" – rather than "for tests and examinations" (MOE, 2005).

Just as the theory of MI has made it obvious that "one size does not fit all" in classroom learning, it had become increasingly apparent that the curriculum could be better tailored to the needs of each child. In other words, different schools would be built for students with different talents so as not to under-develop and under-utilize the full potential of Singapore's population. In view of this policy, the last five years has witnessed the growth of "specialty" schools, such as the National University of Singapore High School of Mathematics and Science (2004), the Singapore Sports School (2006), the School of the Arts (2008), as well as a School of Science and Technology in 2010, to cater to students of different talents (MOE, 2008).

Another means to cater to the diversity of talents inherent in the school-going population is the recent recognition of the International Baccalaureate (IB) as a prerequisite for university admission. The IB is a two-year pre-university course of instruction with a multicultural and globalist perspective. Its emphasis on conceptual thinking, process and communication thoughts, and methods of inquiry was felt essential to the new economic order. On the other hand, the GCE A Levels, traditionally held as the route to university, was revamped to enable students to learn independently and to think critically and innovatively in a multi-disciplinary context – a skill deemed essential in an era of innovation-driven growth and unpredictable change (Shanmugaratnam, 2005). Another innovation inspired by the principle of diversity was the introduction of the "integrated programme (IP) which enables students to span secondary and junior college education without the need for intermediate national examinations at the end of secondary schools. This meant that the time previously used to prepare students for the GCE level

examination would now be better used to expose them to broader learning experiences such as independent research, seminars, fieldwork and expeditions, available through platforms such as MI.

Multiple Intelligences and Teacher Training

The only teacher-training university in Singapore, the National Institute of Education (NIE), works closely with the Ministry of Education (MOE) to implement the initiatives of the TSLN. The clarion call to recognise students' differing interests, readiness and modes of learning through various differentiated pedagogies, and to practice less of 'one-size-fits-all' instruction" was taken to heart by its Professional and Development office, a department which updates teachers on pedagogical innovations in subject teaching. This entailed a broader vision of teacher preparation – concerned with transforming the beliefs and perspectives of pre-service teachers and initiating them into wide-ranging, worthwhile perspectives, values and understanding (Deng, 2005). As early as 2001, 360 teachers attended the two-day seminar on "Nurturing the genius in our pre-schoolers" in conjunction with a series of exhibitions for teachers and parents (Wong, 2001). Another 620 teachers also attended workshops by visiting MI consultants from the United States on the application of MI to various classroom subjects, including that of language learning.. Wong (2001) believes that each child is a precious individual with a "peculiar bent of genius" that is not to be despised.

However, because the initial teacher-education period is relatively brief in relation to a teacher's career, the MOE has recognized the need for continuous teacher education. Hence, the MOE has put in place, new structures and resources to support teacher professional development. Such new structures include the offering of competitive salaries in line with the private sector, the creation of a new School Staff Developer position, the provision of weekly one-hour teacher professional dialogues and the improvisation of a professional development scheme (Salleh, 2008). There are also

concerted efforts to reduce the student-teacher ratio, and space is built into teachers' weekly timetables so as to accord them more time for reflection and sharing – a chance to grow their intrapersonal intelligence (Shanmugaratnam, 2005). In addition, content time has been reduced so that teachers will have more time to make learning more engaging and effective for all concerned. Another policy is the paid 100 training hours annually of training entitlement which enabled teachers to choose from a plethora of government-funded professional development programmes from both private and public institutions.
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One popular development course is the week-long "Kagan workshops" organised by the Singapore Teacher's Union. To date, more than 10,000 language teachers have been trained by this series of workshops (Kagan, 2007). Kagan is well known in the field of cooperative learning, and especially strong in developing and utilizing interpersonal intelligence. Kagan's vision may be stated as follows:

(1) catering to student differences by teaching in a wide variety of ways;

(2) helping students develop all their multiplicity of intelligences;

(3) celebrating the diversity that exists among students and helping them see this as a resource, not as a problem.

The Kagan "structures" highlight the seven intelligences which comprise an individual's intellectual potential and coach teachers to transform this potential into at least a thousand. It also stresses the need for students to be instilled with a joy for learning since when both teacher and student enjoy learning from their experiences, they become life-long learners. Good teaching is associated with rich experiences and for students to acquire important content, they must process, explore, think, and thirst for knowledge. In Kagan's own words: "It's about differentiated instruction through multiple intelligences."

In language teaching pedagogy, an emphasis to instil more active and engaged language learning according to each child's special inclination is emphasized. The theory and practice of MI is included in modules offered in both pre- and post-graduate courses for the Diploma of Education. The 2001 Singapore language syllabus, in keeping with the underlying spirit of TSLN, aimed to nurture the child holistically through a combination of various language strategies. Methodologies such as drills, practice and rote learning were frowned upon and have disappeared from current textbooks. Because intelligences usually interact and language activities often involve more than one intelligence, teachers are encouraged to find ways of assessing their students' intelligences before planning their classroom activities. . These include observing, collecting documents (e.g., samples of student work), looking at school records, talking with other teachers and parents, and asking the students themselves. (Jacobs, 1997). It was envisaged that the incorporation of MI in the English classroom would encourage teachers to consider other forms of imparting knowledge besides the visual and verbal; and to draw out unconventional talent prevalent in every class.

Case Studies of Four Language Classrooms in Singapore

Our study takes us to four language classrooms in neighbourhood Singapore schools in 2004-5. Two are Primary Two classes (students between ages 8-9) while the other two are Secondary Two "normal" classes (students between ages 14-15). Neighbourhood schools are schools funded by the government and are attended by pupils who mainly live in the housing estates nearby. There are several streams of education in Singapore and the "normal" stream here refers to students who need an extra year in Secondary school to complete the General Certificate of Education (GCE "O" levels).

There were many MI-inspired lessons developed throughout the year. Some of these lessons worked better than others, depending on the skill of the teacher as well as the composition of the class. Lessons which did not go down as well with the class were reported at the Learning Circles (LCs) and further fine-tuned. The following is a

prototypical multi-skill integrated English lesson devised by the LC. It involves the teaching of the narrative genre to primary 2 pupils. The lesson went as follows:

A multi-skill integrated lesson

1. First, the teacher explained the conventions of the narrative genre, that is, "orientation", "development", "complication", "resolution" and that if they were to write a story, they would need to have all these four sections which make up the genre.

(intelligences: verbal/linguistic)

2. The students were then asked to draw a picture representation of the paragraph structure. Some students envisaged these parts in terms of a ladder with rungs, each rung signifying each stage of the narrative genre. Another group drew a wheel with the word "narrative" at the wheel hub and the other words such as "development". "complication" and "resolution" on each spoke of the wheel.

(intelligences: spatial)

3. Students then shared their drawings with other students, explaining what the drawings represented. Some of these drawings were hung temporarily on the walls of the classroom

(Intelligences: interpersonal)

4. Next, students used their bodily-kinaesthetic intelligence in groups of four or five to come up with a physical representation of the structure of the narrative genre. For example, one group presented the stages in terms of a mother hen telling her 4 chicks what to do and how to order themselves.

(Intelligences: bodily-kinaesthetic)

5. Students were then asked to reflect quietly on what they thought could be the reasons behind the narrative genre and to think of a story or nursery rhyme from their own culture which followed the pattern of the genre.

(intelligences: intrapersonal)

6.. At the next class period, students had to brainstorm, and free-write the story. As they wrote, they made sure that their story conformed to the genre.

(intelligences: verbal/linguistic)

7. As a final activity and a means to round up the lesson, students wrote a song on the narrative genre and sang them to the class either individually or in groups.

(intelligences: musical)

The next example of a language lesson is taken from a reading class in Secondary Two. The following is an example of a reading lesson. Here the teacher has chosen a story for the class to read from the Supplementary Readers. It is a story of "Kim Sondal and the River" (See Appendix A). Kim Sondal is a popular trickster in Korea. In this tale, he helps move wealth from the greedy rich to needy workers.

Teachers in the LC devised an MI activity in the following way. They used what is known as the "Tandem Model" (See Appendix B) to fit in the activities that they would use in their classroom. Not all the activities were used (due to lack of time) but the following were the activities that were planned by the LC and which could be used in connection with the story.

A Reading Lesson

1. As a pre-reading activity, the teacher shows some pictures of Korea and/or talks about the background of Korea in a general way

(Intelligences: visual/spatial, verbal/linguistic)

2. Students read the passage silently

(Intelligences: verbal/linguistic)

3. One of the comprehension question focuses on the estimation of the amount of water the workers drew from the river each day.

(intelligences: logical/mathematical)

4. After reading, students were asked to debate whether it was right for Kim Sondal to trick the rich man. They were first to brainstorm in groups and then to debate among themselves.

(intelligences: verbal/linguistic)

5 Here students wrote the script on part of the story, the part focusing on the negotiation of the price of the river in the style of Readers' Theatre.

(intelligences: interpersonal/social; bodily/kinaesthetic)

6. Students were asked to design a book cover for the story

(intelligences: visual spatial)

7. Students were asked to create a Rap based on the story

(intelligences: musical/rhythmic talents).

As a researcher and teacher-trainer, I was able to observe the teaching of the English language in these four classes on an average of once every fortnight, across the space of one academic school year (9 months). The objective of the classroom observation was to gauge the effectiveness of the MI technique, the difficulties faced by the teachers in applying it (if any), the students' response to it, as well as the comfort-level of the teacher in implementing it. In addition, I also conducted interviews with participating teachers and pupils so as gain a more intimate feel of the ground. This section will focus mainly on the results of the interviews, the work of the Learning Circles, as well as give an example each of an MI lesson taught in both the primary and secondary levels.

All pupils were subjected to a language test comprising the reading of a comprehension passage; composition writing, a listening exercise and a speaking assessment at the beginning and end of the year. These tests were to examine whether there were any discernible improvements in pupils' language skills before and after the implementation of MI. Both pairs of Primary 2 and Secondary 2 classes took the tests at the beginning and end of the year. However, one of each pair was taught in the traditional way (without

the input of MI) while the other pair was taught through the intervention of MI. The objective here is to gauge whether there might be any noticeable differences in the English language scores for what was deemed the *control group* and the *experimental group*. An analysis of the results showed an aggregate 9% point improvement in listening and speaking skills for the experimental groups which were subjected to MI pedagogical principles. A 5% improvement was shown in composition writing while comprehension skills showed less than 1% improvement.

The results of the interview confirm that MI was a popular approach and had wide receptivity among both teachers and pupils. The following are typical comments by the teachers on the incorporation of MI in their classroom:

"It is immensely rewarding …. Participants are usually motivated and informed, if not always too well. Students love the variety."

"It is not a big change because we have always used a wide variety of methods. Indeed MI is not new. We have been teaching many kinds of intelligences even before we heard of MI but what is new is that now we have something to call it by."

"It's a wonderful way to look at a child – that you are developing him as a holistic person and not just to pass the exams."

On the whole, teachers found the theoretical framework of MI easy to implement. They were happy to contribute to what they saw as the "total development" of the child. The general receptivity of MI among teachers could also be due to the fact that it was not a "radical" departure from previous language teaching methods. The most common reservation teachers had of MI was that it took a lot more time to implement than if they had just focused on the verbal-linguistic or mathematical-logical aspect, as was the hitherto common practice. Last but not least, the English language examination, which was compulsory for all students to take, and which basically tested verbal-linguistic elements, was also cited as a worrisome element. However, they were grateful for the coaching they had received on new methods of teaching and were happy with the

reduction in curriculum content which freed up time for them for more cooperative group work in class.

Where students were concerned, their comments on MI during the interview were highly positive. Typical comments included the following:

"I love to draw and teacher and other people are now more aware that whenever it comes to drawing, I will be the tops in class."

"It makes us see different aspect of a story or of anything we do."

"Writing a composition is not so hard now because the many activities we do before it gives us so many ideas."

"There is more group work now so the lesson is more interesting and moves faster."

On the whole, the classrooms became more alive with the injection of a greater variety of lessons. Students became more responsive during class and gained greater confidence in themselves with each passing day.

In our study on the implementation of MI in the two schools, participating teachers met regularly in Learning Circles (LCs), as part of team building. LCs are groups of teachers who meet regularly for professional self-development and usually comprise teachers of each level or of each area of interest. In the schools we were involved in, the LC comprised an average of 10 teachers interested in incorporating MI in their classrooms. The LC met fortnightly and at these meetings, there was a sharing of experiences, information and skills, which helped in the ironing out of problems faced in previous lessons and in the planning of future lessons. The LC on MI included a group of teachers who were eager to familiarize themselves with MI strategies in order to enhance learning. They were aware that while MI could be appropriate to any subject area, the mastery of life skills in English warranted the extra effort in trying out new ideas.

The LC was an ideal planning group because it enabled the exchange of ideas, hence enabling more effective lesson planning. Many skilful hands together also made materials creation, such as worksheets, charts, tables, etc. much easier to do (cf. Lau and Jacobs, 2002). In view of the different intelligences which each teacher possess, LCs enable teachers to "duplicate" the spirit of group work which their own students go through. Participants become conscious that in working as a team, they become well-equipped to tackle different issues and problems as people who are more developed in different areas of intelligence tend to look at different aspects of an issue. In short, the LCs which were formed in both primary and secondary schools to assist the implementation of MI enabled teachers to enjoy maximum benefit with minimum output. This is because "more heads are better than one" and LCs enabled teachers to learn from each other, develop better strategies and gain a greater insight into the complex art of teaching, not least that of the saving of time and resources. Rapport was another quality obtained through the LCs. In this project, the LCs were observed to generate a large amount of MI-inspired language lessons, many of which were novel, interesting and re-usable.

Generally, each LC would choose an upcoming lesson and brainstorm ideas for teaching the lesson via different intelligences. Once this was done, they would discuss these ideas and decide which specific idea to include in the plan for the coming lesson. The teachers would then divide the work among themselves especially with regard to the preparation of materials.

The LC teachers would subsequently teach the lesson, taking note of what seemed to work well and what did not. In the teaching, it should be noted that LC members were free to apply the lesson as they saw fit to suit their own classes. Not every member of the LC conducted the lesson as participation in each LC-designed lesson was voluntary. This was important as some teachers did not feel comfortable with certain learning activities. Nor did any LC member feel that they needed to conduct every single activity that was planned or discussed. Once members had conducted their lessons, the LC would get together in their regular meetings to recount their varied experiences. The discussion

would include an identification of the strengths and weaknesses of the lesson. They would then think of ways to improve the lesson the next time it was taught. In this manner, they collectively and gradually gained experience to develop better and more workable materials.

It should be noted here that teachers did not feel a need to include all seven intelligences in each lesson, although many members of the LC tried to create activities that included all seven. They were desirous not just to facilitate language acquisition among diverse students, but also to help students realize their full potential with all seven. Typically, what they strove for was to add to the traditional teaching method which would normally and only include verbal/linguistic and logical/mathematical intelligences. One way they did this was to think of the activities which they frequently used in the classroom and to categorize them according to intelligence type. Needless to add, with each lesson, the planning became progressively easier as teachers became more and more familiar with the various categories of intelligences.

Some of the categories of activities which teachers developed for their MI-inspired English language classes included English teaching methodologies such as:

Verbal/linguistic: note taking, story-telling, sustained silent reading, summaries, translation exercises, debates, giving speeches, using word processors to create magazines, newspapers, worksheets, etc.

Logical/mathematical: analyzing grammar, problem-solving language activities using logic, ranking and sequencing activities, puzzles for language learning, spelling, organising with Venn diagrams, Directed Reading Thinking activities (DRTA), Know-Want to know-Learnt (KWL), games.

Visual/spatial: illustrating stories with pictures, illustrating diagrams, maps and charts with descriptions, reusing sentence strips e.g. strip stories, rearranging pictures and/or cartoons, picture dictation, Shared Book Approach (SBA), using optical illusions, using videos, slides, movies, grids, etc.

Bodily kinaesthetic: Readers Theatre, Pantomime, Total Physical Response, Field trips, Mime, Musical, Language Experience Approach (LEA).

Musical: Writing and reading poems, learning language through songs and/or music, Choral speaking, Jazz chants.

Interpersonal: Working in pairs or groups, writing to pen pals, brainstorming, peer-editing, intercultural awareness activities, board games e.g. "Scrabble" and "Taboo".

Intrapersonal: Journal writing, learning logs, self-evaluation component, reflective learning activities, goal setting.

Conclusion

Language teachers may have always known that their students have different strengths but they may not have realized the ways and means to exploit this knowledge to the fullest. Here, MI theory gives them an opportunity to organize the language lesson through a theoretical model that is both practical and easy to implement. The literature on MI provides a rich source of classroom ideas and language teachers can tap on these when they are planning their lessons. This idea of MI has attracted the interest of many educators as well as the general public. Schools that use MI theory encourage learning that goes beyond traditional books, pens and pencils. Teachers and parents who recognize their children's gifts and talent can provide activities which will build on these. By strengthening, rather than rejecting or ignoring such differences, it is believed that students will at last be free to be intelligent in their own ways.

MI is an attraction to Singapore because of its ability to take different needs, interests and talents into account and thereby reduce educational wastage. There is, certainly, evidence

to suggest that when students use their dominant intelligence to enhance their learning of IL, it will entrench what they have learnt (Mokhtar et al., 2007). As a teacher-practioner puts it:

> "From Primary 1 to 3, Beng Lee (not his real name) was deemed to be "slow". He was sent to remedial class and he didn't perform well there either. He failed Primary 1, 2 and 3 but was "pushed up". Beng Lee became rather inattentive and difficult in Primary 4 and teachers normally left him alone sitting at the back of the class. However, His Primary 5 teachers observed that he was good in drawing and thought that perhaps he could benefit form learning visually. When she asked Beng Lee to create drawings of letters through movement, Beng Lee did much more than that, creating a whole array of letters of different alphabetic styles. He was able to draw out stories and he shared the drawings with his class. Much encouraged by the attention from his peers and other teachers, the teacher tapped his visual intelligence for all future class lessons. Soon, Beng Lee was reading and writing at almost the same level as his peers. And to everyone's surprise, he was able to pass the PSLE in one sitting. He is now in Secondary 1 and doing well" (Teacher, interview recorded in 2006).

However, MI is not without its theoretical problems. Waterhouse (2006) and Gardner and Seena (2006) have argued that Gardner's theory is based on his own intuition rather than empirical data and that the intelligences are just other names for talents or personality types. Another problem is the countless different interpretations of Gardner's theories all over the world. MI is apparently so flexible that any implementation will very much be a matter of individual interpretation. Albrecht (2008) finds the wave of enthusiasm for MI alarming and describes MI as "the overly decorated birthday cake with far too many candles in it." Kagan (2007) has also expressed the fear that MI theory could be used to exclude students, tracking them into special streams. Another concern with MI pertains to

difficulty of developing valid tests of the seven intelligences. This issue of testing returns us to Kagan's main worry about the use of MI theory, that it will be used to promote unequal education, leading to streaming and segregation not just in different classes but different schools. According to Kagan (ibid.), such practices would lead to labelling, lowered self-esteem, decreased expectations of students by teachers, and diminished opportunities for students to develop in a well rounded manner. However, no theory is perfect or without its criticisms and it remains imperative for MI practitioners to be aware not only of its potential but also of its potential pitfalls.

The main deterrent to educational reforms involving the interplay of all seven skills is however, not the theoretical fears and criticisms of the theory of MI. Neither is it the lack of trained teachers or enthusiasm on their part or the half-hearted measures of government policies. On the contrary, the main impediment to a more creative and individually centered style of learning rests in the extremely competitive nature of Singapore society which threatens to derail whatever exhortations the government makes. While we have surveyed the history of MI in the education system in Singapore and described some MI lessons in four neighbourhood language classrooms, it should not be assumed that what is advocated is widely practiced. This is because for Singaporeans, what is really important in schooling is how they fare in the job market. And what is important for the job market are the marks in the examination. It is the examination which determines which programme and school a particular student is eligible for and more importantly, what and how a subject is really taught. Usually, the examination determines how a subject will be taught in class despite what the syllabus may prescribe. For example, more exam-oriented and competitive schools would mean that a large proportion of principals may hinder the success of MI in Singapore as they may be keener to invest in areas that promise the greatest returns in the short term. This may be done by attracting talented students to join the school's niche programmes rather than promoting genuine diversity, innovation and equity (cf. Tan, 2008).This tension must be resolved before the advantages which MI offers can be truly utilized. Meanwhile, the paradox prevails as this is not a problem that can be easily solved as many socio-political complexities are at play where educational policies are concerned. The city state is the

enviable site of the unprecedented convergence of powerful forces of educational innovation and knowledge (Lee, 2007). Driven mainly by globalization, Singapore continues to define itself, in view of its lack of natural resources and small economy as an information/service/digital economy in the intersection of information and capital flows. Its well-educated workforce is headed by a highly professional government which has remained solidly in power and has delivered the social economic returns they promised. In addition, as "top of the class" on many of the international comparative measures of conventional educational achievement, Singapore has outperformed many of the traditional educational centres in North America and Europe (Luke et al., 2005: 8). A utilitarian perspective of pre-employment education and subsequent employability continues to promote an intimate bond between politics, economics and education. As we have begun with a quotation by the Minister of Education, Dr Ng Eng Hen, it may be fitting to end with another by him:

> "To conclude, history and geography dictated that education would, and will continue to be critical for Singapore to develop its human resource. To ensure Singapore's survival and create a brighter future, we need to help every Singaporean find his or her talent, and take them as far as possible. We need to prepare our people to be equipped for the global workforce." (Ng, 2008).

References

Albrecht, Jakob (2008). Critical Intelligence. Retrieved on 8 September 2008 from http://www.emeraldinsight.com/10.1108/00907320710774328

Armstrong, T. (1994). *Multiple intelligences in the classroom.* Alexandria Va: Association for Supervision and Curriculum development.

Chew, Phyllis Ghim-Lian and Quek, Ser Hwee (2003). Globalization. *Commentary*, Vol 18, 2003, pp. 1- 5.

Christison, M. A. (1996). Teaching and Learning Languages through Multiple Intelligences. *TESOL Journal*, 6, 1, 10-14

Deng, Zongyi (2005). Teacher Educating. In Tan, Jason and Ng, Pak Tee (eds.) *Shaping Singapore's future. Thinking Schools, Learning Nation*. Singapore: Pearson/Prentice Hall

Dept. of Statistics. (2001). Trends in Singapore resident population 1900-2000. Singapore: Government Printing Press.

Gardner, Howard (1993). Multiple Intelligences: the theory in practice. New York: Basic Books.

Gardner, Howard (1995). *Leading Minds. An anatomy of leadership*. New York: Basic Books.

Gardner, Howard (1999). Intelligence Reframed - Multiple Intelligences for the 21st Century. New York: Basic Books.

Gardner, Howard and Seana, Moran (2006). The science of Multiple Intelligences theory: a response to Lynn Waterhouse. *Educational Psychologist*, 41, 4, 227-232.

Goh, Chok Tong. (1997). Shaping our future: Thinking schools, learning nation. *Speech given at the 7th International Conference on Thinking*.

Hui, Weng Tat (2004) . Foreign Labour and Economic Growth Options for Singapore. Paper Series 04/2, Centre for Labour Market Research. University of Western Australia.

Jacobs, G. M. (1997). Review of the books *Multiple intelligences in the classroom and Multiple intelligences: Evaluating the theory; validating the vision. RELC Journal, 28(2),* 165-171.

Kagan, Spencer (2007) Teach less, learn more and Kagan structures. *The Mentor*, Sept-Dec 2007, p.7 – 12

Larsen-Freeman, Diane. (2000). Techniques and Principles in Language Teaching (2nd ed.). Oxford: Oxford University Press.

Lau, J., & Jacobs, G. M. (2002). I am smart: Applying the theory of multiple intelligences to English language teaching. *Teaching English Language and Literature, 18(2)*, 27-31.

Lee, Soo Ann (2007). Singapore: From Place to Nation. Singapore: Prentice Hall.

Luke, Allan, Freebody, Peter, Shun, Lau, and Gopinathan, S. (2005). Towards Research-based innovation and reform: Singapore schooling in transition. Asia Pacific *Journal of Education* 25, 1, 5-28

Ministry of Education (2005) Greater support for teachers and school leaders. Information retrieved Nov 19 2008 from http://www.moe.gov.sg/2005/pr20050922b.htm

Ministry of Education (2008). Programme for School-Based Excellence for Primary Schools and Niche Programme for Secondary Schools. Retrieved on 19 May fro http://www.moe.gov.sg/media/press/2008/04/programme-for-schoolbased-exce.php

Mokhtar, Intan Azura, Majid, Shaheen and Foo, Schubert (2007). Teaching information literacy through learning styles: The application of Gardner's multiple intelligences. *References Services Review* 35, 3, 463-480.

Ng, Eng Hen (2008). The Role of Education in meeting Future Opportunities and Challenges: Perspectives from a Small Multicultural Country Minister for Education and Second Minister for Defence, at the Israeli Presidential Conference 2008 on Thursday, 15 May 2008, at the International Convention Centre, Jerusalem. Information extracted on

19 May 2008 from http://www.moe.gov.sg/media/speeches/2008/05/15/speech-by-dr-ng-eng-hen-at-the-1.php

Richards, Jack C and Rodgers, Theodore S. (2001). *Approaches and Methods in Language Teaching* (2nd ed.) Cambridge: Cambridge University Press.

Salleh, Hairon. (2008). Teacher Professional Development in the TSLN Era: Current Challenges and Future Directions. In Jason Tan and Ng Pak Tee (eds.) Thinking Schools, Learning Nation. Contemporary Issues and Challenges. Singapore: Prentice Hall

Saravanan, Vanthamani (2005). *'Thinking Schools, Learning Nations' Implementation of Curriculum Review in Singapore Educational Research fro policy and practice, 4, 2, 97-113.*

Shanmugaratnam, Tharman (2005). Speech by Mr Tharman Shanmugaratnam, Minister for Education, at the MOE Work Plan Seminar 2005, on 22 September 2005 at the Ngee Ann Polytechnic Convention. Retrieved on 9 September 2008 from http://www.moe.gov.sg/media/speeches/2005/sp20050922.h

Tan, Jason. (2008). The Marketization of Education in Singapore. In Jason Tan and Ng Pak Tee (eds.) Thinking Schools, Learning Nation. Contemporary Issues and Challenges. Singapore: Prentice Hall

Today. 14 October, 2004, p. 7 (a Singapore newspaper)

Tharman, S. (2004) . The teacher as edupreneur: exploring new frontiers. Retrieved Nov 6 2007, from http://www.moe.gov.sg/speeches/2004/sp20040608_print.htm.

Waterhouse, Lynn. (2006). "Inadequate Evidence for Multiple Intelligences, Mozart Effect, and Emotional Intelligence Theories." *Educational Psychologist*, 41(4), Fall 2006, pp. 247-255.

Wong, Aline (2001). Speech by Dr Aline Wong, Senior Minister of State for Education, at the opening of the Ednoland "Nurture the Genius in your pre-schooler" seminar and exhibition on 10 August 2001 at Westin Stamford Ballroom. Retrieved on 9 September 2008 from: http://www.moe.gov.sg/media/speeches/2001/sp10082001.htm

Appendix A: Kim Sondal And The River

Every day, tired men carried water from Daedong River to the houses of the rich. Yet while the poor workers struggled with heavy loads, the greedy rich only wasted water, and cheated those who carried it. Thus the rich grew richer and the poor grew poorer

One night, though, clever Kim Sondal heard the water carriers complaining.

"I can help you." He said. "I'll loan you some money now and we will play a trick. Every day when you come from the river, you will find me sitting on the riverbank. Drop a coin in front of me as you walk by."

The next morning, Kim Sondal spread out a cloth and sat near the river. As each water carrier passed, he threw a coin into a cloth. That night, Kim Sondal secretly returned the money so that the men could throw the same coins again the next day and the next.

Day after day, Kim Sondal picked up piles of coins and soon the rich men who loafed by the river began to notice. At last they asked what he was doing.

"I am collecting my tax on the river water," he replied.

"But you don't own the river," they objected.

"Yes I do," he said. "Don't you see how the men pay me each time they take water? They know it is mine."

Now the rich men, grew more and more jealous of Kim Sandal's growing wealth. The coins on his blanket looked so inviting.

"Every night he takes home too many coins," said the rich men to each other. "He will soon have more money than we will. Perhaps we should buy the river and then we'll get richer than ever."

And so it was decided. The rich men went to Kim Sondal as he sat counting his coins.

"We wish to buy the river so that you can relax," they said, offering him a decent price.

"Friends, I make much money from my river," replied Kim Sondal. "How can I sell it for such a small amount?" Quickly, the men talked among themselves and then raised their offer. But he still refused, so the offer went even higher. And higher. At last, after much bargaining, he sold the river for a very large sum. That night, he divided the money happily among the water carriers.

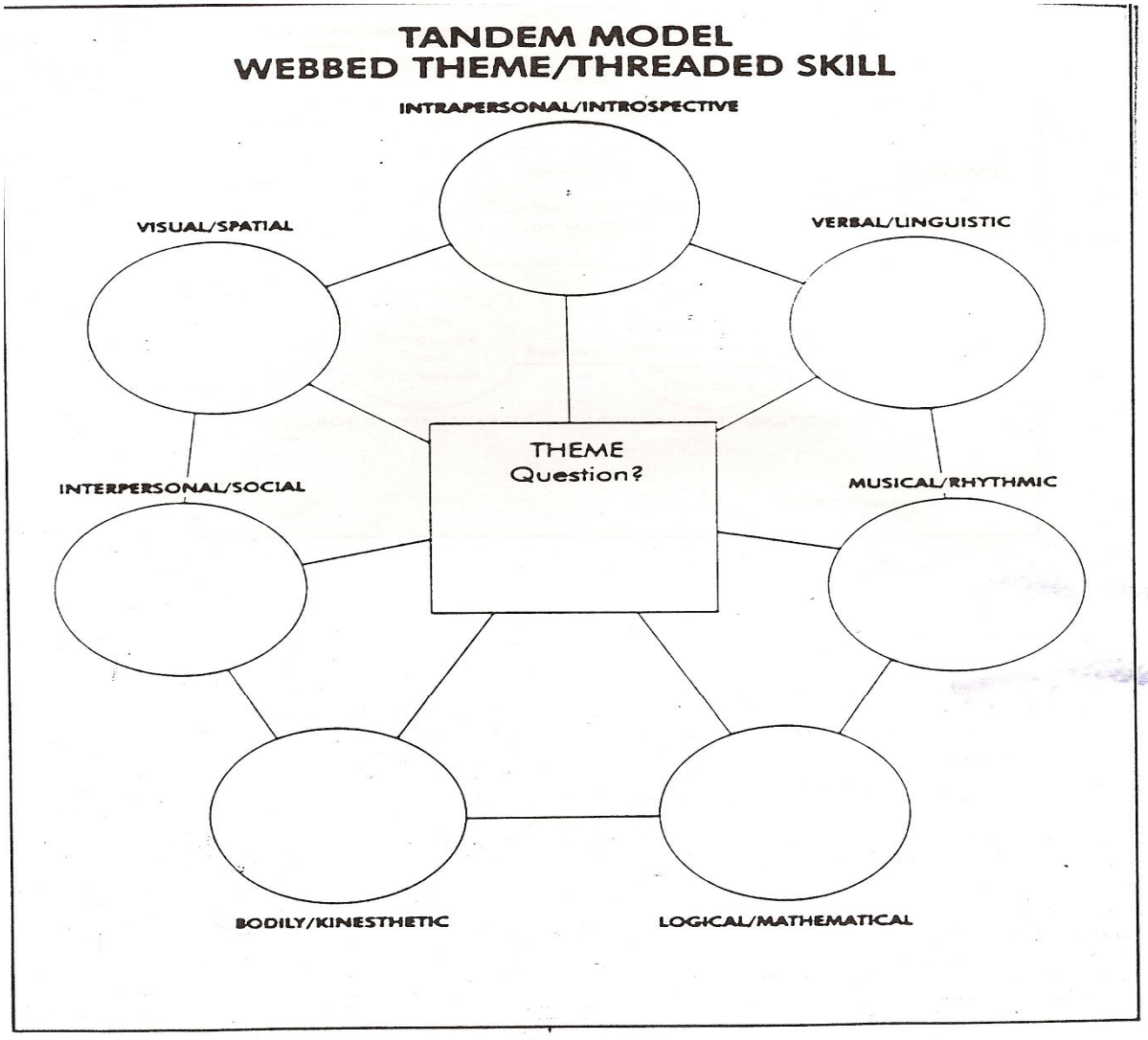
Hours later, as birds welcomed dawn, the rich men spread out a huge cloth and sat, waiting eagerly for their river money. Finally, a water carrier came. They pointed to the cloth, but the man passed right by without a pause.

"You forgot to pay for our water. It's our river now", they cried. He looked at them with the strangest expression, then shrugged his shoulders and walked on. Another man soon came carrying a load of water.

"Pay for that water," cried the rich man. "We own the river now." But the man only laughed and walked on.

Along came another carrier who did the same. And another and another. The rich men spent a long unhappy day until at last they realized how well they'd been tricked. They returned home in anger, and the river water, precious as it was, remained free to all. (Source unknown)

Appendix B: The Tandem Model which is used help teachers to plan their MI activities (Courtesy of Skylark Publishing Inc.)



The following is the plan of the lesson "Kim Sondal and the River" for Secondary Two students, created by the Learning Circle