

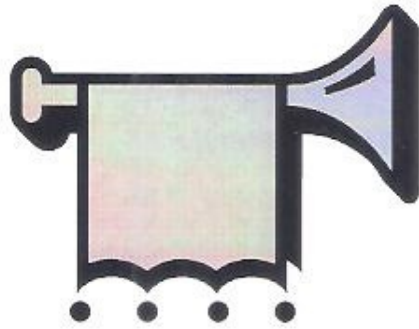


REVIEW

10th Anniversary

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Education
in the New
Millennium



A Call for Articles...

The ASCD (Singapore) REVIEW Committee seeks original articles on teaching and learning...

Manuscripts should be between 2000-2500 words, typewritten (preferably Microsoft Word document) and submitted in the form of a hard copy together with a 3½ inch diskette. Photographs would be appreciated. Contributions may be addressed to:

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The themes for the forthcoming issues are:

Vol. 9 No. 3: Teacher Training & Professional Development
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Vol. 10 No. 1: Managing for Excellence
Deadline for articles: 1 November 2000

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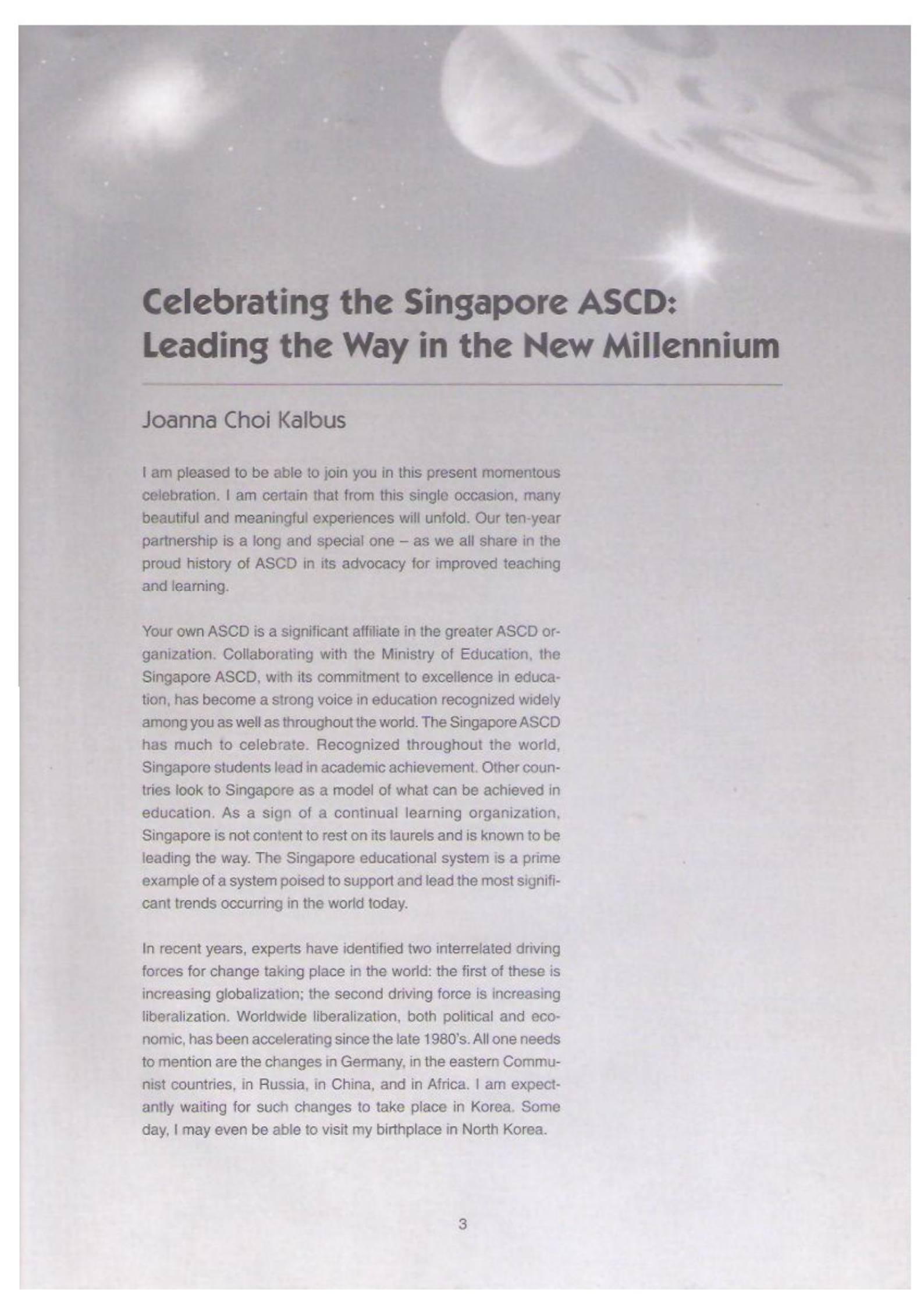
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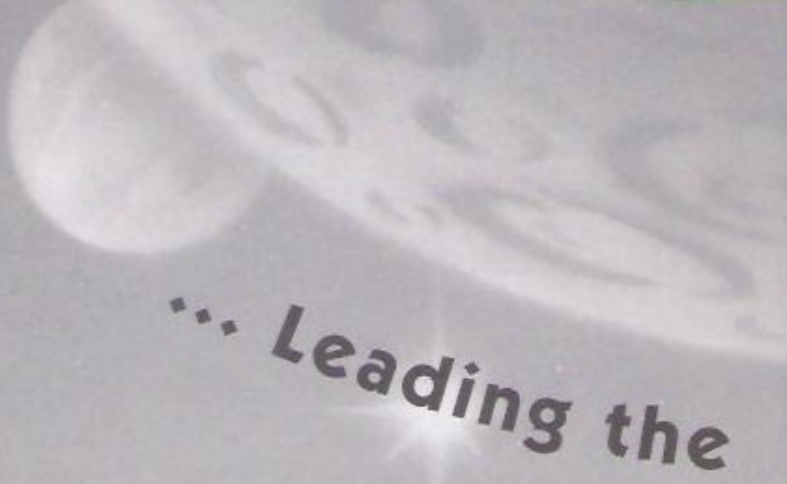
Celebrating the Singapore ASCD: Leading the Way in the New Millennium

Joanna Choi Kalbus

I am pleased to be able to join you in this present momentous celebration. I am certain that from this single occasion, many beautiful and meaningful experiences will unfold. Our ten-year partnership is a long and special one – as we all share in the proud history of ASCD in its advocacy for improved teaching and learning.

Your own ASCD is a significant affiliate in the greater ASCD organization. Collaborating with the Ministry of Education, the Singapore ASCD, with its commitment to excellence in education, has become a strong voice in education recognized widely among you as well as throughout the world. The Singapore ASCD has much to celebrate. Recognized throughout the world, Singapore students lead in academic achievement. Other countries look to Singapore as a model of what can be achieved in education. As a sign of a continual learning organization, Singapore is not content to rest on its laurels and is known to be leading the way. The Singapore educational system is a prime example of a system poised to support and lead the most significant trends occurring in the world today.

In recent years, experts have identified two interrelated driving forces for change taking place in the world: the first of these is increasing globalization; the second driving force is increasing liberalization. Worldwide liberalization, both political and economic, has been accelerating since the late 1980's. All one needs to mention are the changes in Germany, in the eastern Communist countries, in Russia, in China, and in Africa. I am expectantly waiting for such changes to take place in Korea. Some day, I may even be able to visit my birthplace in North Korea.



... Leading the

This liberalization trend has been brought about by increasing globalization. Knowledge about the lives of people in other countries, their standards of living, governments and freedoms spreads through world-wide travel and communication.

Singapore offers one of the finest examples of successful globalization. All of you here are, in the truest sense of the phrase, global citizens. I am constantly amazed at how easily you move from one country to another, from one culture to another, from one society to another, and from one language to another.

Now we might ask, "How has this increasing globalization and increasing liberalization come about?" For the last two hundred years, science and technology have been the dominant force in civilization. Science and technology have brought about this increasing globalization and liberalization. Certainly, material contributions of science and technology in communication and travel, as well as in wealth creation are the basic causes of these changing trends.

However, and perhaps more importantly, it is the way that science has changed the way we thought in the past and again is changing the way we think. We are now beginning to see the world through the eyes of modern science. Science has shown that everything is connected to everything else.

The Chinese knew this, as we can see from this ancient proverb:

*If you cut a blade of grass,
You shake the universe.*

Science has now revealed that even the smallest particles are interconnected. This interconnected factor permeates all of nature including living organisms, communities, and social systems.

Way in the New Millennium

For example, an illustration of this interconnectedness is the Butterfly Effect. Weather patterns are so sensitive to small differences, that a butterfly flapping its wings in Singapore can have an effect on weather patterns in the United States.

In life, we all knew that small changes could have great effects. Now science has substantiated this. A good example can be seen in this old poem:

*For want of a nail, the shoe was lost;
For want of a shoe, the horse was lost;
For want of a horse, the rider was lost;
For want of a rider, the battle was lost;
For want of a battle, the kingdom was lost!*

We must all understand that we live in a relational universe where everything is interconnected to everything else. We are all interconnected to each other. In a sense, we are all living in a single global village. We must always remember that – just as the butterfly can affect the weather – a small change in one country's operation can have a large effect on other countries, and a small change in education can have a great effect in the world.

Today, we are in the midst of massive changes – economically, demographically, culturally, and foremost, technologically. To meet the challenges and opportunities such changes bring, our educational focus should be on adaptability, flexibility, global citizenship, cooperation, and ethics.

We must teach our children to maximize their potential, to increase their tolerance and respect for diversity, to increase their receptivity to change, and to imagine possibilities. It is imperative for us to educate our children to understand the world as a sea of changing possibilities, full of interconnectedness and relationships.

... Leading the Way in the New Millennium

We need to create a vision of the kind of world in which we would want our children to live for the next 1,000 years. Experts estimate the life-expectancy for a child born today will average 127 years. This means we must prepare the children of today for living during the time of three different centuries!

We have enormous opportunities to create something new. What role will education play in creating this vision – a vision of living together cooperatively and in peace and interdependence with different peoples?

Singapore offers a prime example of this vision, a vision of global citizens in a global society. You have much to celebrate. Singapore is leading the way. Your nation is small in size – but large in stature. You are the ones who are making the difference.

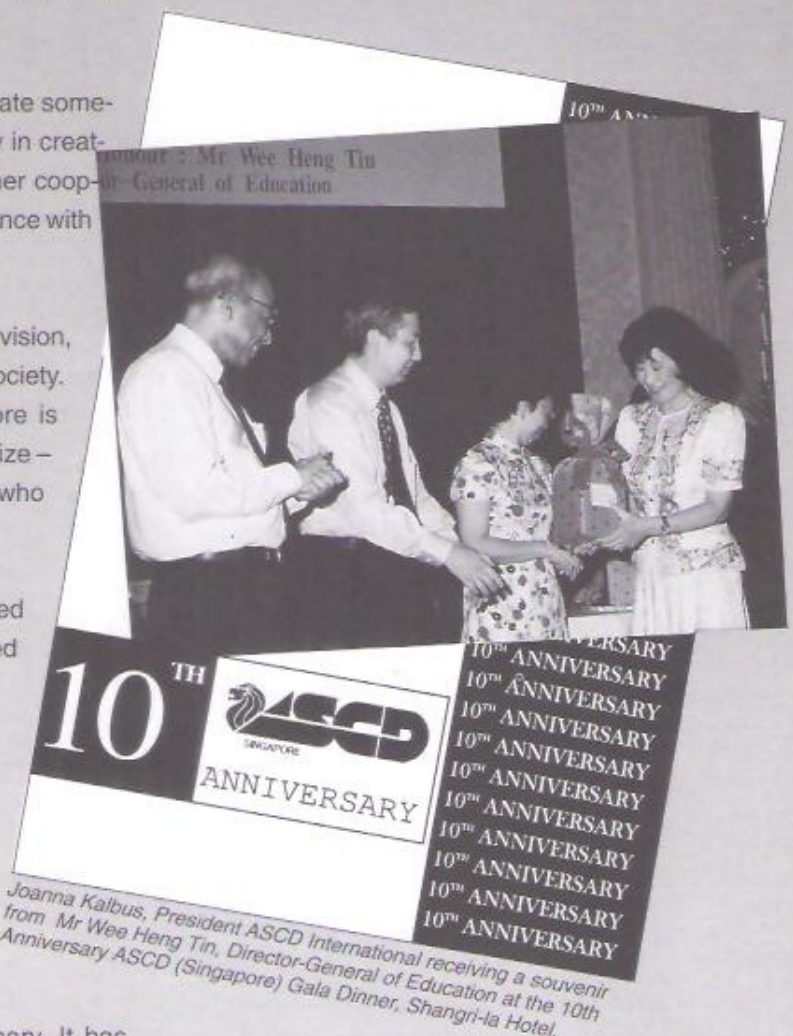
As we journey together into the uncharted waters of the next century, I am reminded of a line by the poet Antonio Machado:

*Wanderer, there is no path.
You lay a path in walking.*

Join me in dreaming and creating a new future as we journey together into the New Millennium.

Congratulations on your 10th anniversary. It has been a privilege for me to share in this very special event with you.

Joanna Choi Kalbus, Ph.D., ASCD President, ASCD International to ASCD (Singapore) on the occasion of its 10th Anniversary Celebrations on 9th March 2000.





Redefining the Role of the Teacher in the New Millennium – The Chinese High Approach

Yap Meen Sheng & Koh Yong Chiah

Introduction

“Undoubtedly, this is a time of unprecedented changes in education both in pace and volume. However, it is important to remember that in the end we cannot become what we want to be by remaining what we are. Existing systems produce existing results and if something new is required, the system must be changed... Change is not just about the creation of new policies and procedures to implement external mandates. It is also about the development of personal strategies by individuals and about their creative response and the ways they seek to influence the impact of structural or cultural or personal change, as much as organisational change. Change is first and foremost about people rather than things.” (Walker, L. & Ryan, J. 1999. P. 147-148)

The quotation sums up one of the many challenges confronting The Chinese High School as we surged forward in our effort in designing the future education for the generations of pupils who will be passing through the portals of this institution. While we are in the midst of restructuring the school and reforming the curriculum, it is imperative that we simultaneously embark on the task of reculturing the school. This we intend to do by redefining the role of the teachers and retraining them to meet the evolving economic, political and social setting and changing educative needs of the pupils.

.... The Chinese High Approach

Traditionally, the professional capability of the teacher is defined by the list of competencies, a result of the performance outcomes of their training. Such a teacher would be competent in at least 4 main areas: they would have demonstrated knowledge of at least one specialist subject and the ability to apply that knowledge with teaching; they would be able to manage a class and organised learning; they would be able to assess and record pupils' progress and report on it to parents; and they would have demonstrated an ability to recognise their own further professional development needs (Aschroft, K. & James, D. 1999. P.121).

These descriptions would have to change with the organisational and educational paradigm shifts experienced in recent times. The pressing need and speed with which schools have to re-



Interacting with staff of Queen's College, Hong Kong.

spond to the fast changing global environment have driven schools increasingly to embrace change. The information and technological revolution adds new dimension to the meaning of information acquisition and management. The need to cultivate and develop a new generation of knowledge workers for the New Economy requires a reassessment of our traditional curriculum and pedagogy. The rapid pace of technology and organisational change dictates that professional skills need to be constantly adapted and updated. Increasingly, schools will have to shift away from the traditionally content-based and subject (academic)-specific curriculum to one that strives to inculcate affective, technical and managerial skills to deal with the real educative and occupational needs of the pupils. There is an urgent need for educators to acquire new understandings and skills in order to mediate the new information and knowledge associated with the real world. "Like many groups of professionals, teachers seem to have experienced increases in the amount of work expected of them and in the gravity of the consequences for them if they do not increase 'productivity'. The intensification of workload in both volume and diversity, requires new managerial skills" (Ashcroft, K. & James, D. 1999. P.111). This 'vocationalisation' of the curriculum (Smyth.1996.p.187), the emergence of an 'enterprise culture', and the competitiveness of the education 'market place', challenges the conventional education wisdom and practices.

The need to restructure the school will call upon the need to re-examine past approaches and for a new breed of administrators and educators whose role will include managing the growing partnership between schools and industries, redesigning the curriculum to reflect the real world opportunities, and re-engineering the staff to accept the change and stay poised for continual learning. Therefore, corporate leadership training and the exposure to the repertoire of corporate philosophies and practices become an essential, and even critical, strategy for survival in the new world. School by its true nature should be a learning organisation and education has a crucial role in nurtur-

... corporate leadership training and the exposure to the repertoire of corporate philosophies and practices become an essential, and even critical, strategy for survival in the new world.



.... The Chinese High Approach

ing within every individual the skills and capacities required to function productively in an increasingly complex and constantly changing environment. Thus, it is the responsibility of the school to enable teachers to become experts at dealing creatively with change as a normal part of their work, a means of coping with the latest shifts in policy and practice, rather than always be reactive. Understanding the process of change, strategies for change and models of change are not only desirable, they are essential part of the creative professional's tool kit (Walker, L. & Ryan, J. 1999. P.149).

The Case of Chinese High School

With the rapidly changing education landscape unfolding before us, The Chinese High School (CHS) is currently taking the initiative to redefine the role of the educator. We find it necessary to deconstruct the traditional structures and operating mode of the organisation in order to facilitate both structural and cultural change.

The existing Heads of Department (HOD) System with its attending departmental structures guarded by subject boundaries, were found to be subject-centric and inflexible. This is further compounded by the competition between departments to leverage over the learning time of the pupils, whose performance is benchmarked by the present academic ranking system. To break this vicious cycle and the undesirable compartmentalisation of education, CHS has launched a scheme to reorganise the school into 5 self-managing schools, each with a full compliment of teachers from the various faculties micro-managing a small cohort of pupils for the main purpose of implementing a total and holistic approach to the development of the child. This will mean that teachers will now have to work closely in groups of diverse academic training collaborating with team leaders to manage the teaching and learning outcomes of their charges.

While we focus on the form of education, we are equally concerned about the substance and the process. The conventional role of the teacher as the sole provider of content knowledge has been challenged by the pervasive expansion of the internet. Access to information is no longer uni-channel or teacher-bound. To manage this information explosion and to convert them to meaningful knowledge for the pupils, becomes the real challenge for the educator. It is not how much teaching, but rather, how much learning takes place in school. No longer will it be true to subscribe that learning is only taking place when a teacher is seen with his or her pupils, but rather, learning should take place even in the absence of the teacher. The need to promote independent learning and intellectual self-determination means that pupils will have to construct their own knowledge (constructivism) and be accountable for their own learning outcome. No longer will the 'banking approach' to education, in which the teacher deposits the knowledge and the learner receives or withdraws it, be acceptable (Silverman, S.L. & Casazza, M.E. 2000. p. 255).



Sharing at the Teachers Network.

.... The Chinese High Approach

This development has profound implications on the role of the teacher. "Teachers' roles as 'expert knowledge holders' will be eroded. Instead they will become knowledge brokers, learning counsellors skilled in learning processes" (Day, C. 1999. p.207). Teachers will need to be equipped with the knowledge and skills to draw from a repertoire of strategies to cater for the individual needs of the pupil in our new ability driven paradigm. This will include the need for the teachers to be trained to take account of the affective development of the pupils under their charge, an area complicated by the IT age and the emerging cyber and virtual environment. Emotional literacy (knowing oneself and being sensitive to others), live interaction and ethical values, are critical issues which needed immediate attention. It follows that the provision of life skills training to nurture personal effectiveness becomes an area of concern. Other than numeracy and literacy, the need to put into operation these knowledge and having the skills to do so – 'Operacy' (De Bono. 1999. P.4) is essential for the cultivation of a knowledge workforce for the new knowledge-based economy.



Chinese High teachers with staff from Presbyterian Ladies College, Perth, Western Australia.

The role of the administrator must also change correspondingly. The administrator being the traditional apex of authority in the hierarchy of power must give way to an evolving lateral (flat) leadership structure where devolution of authority, empowerment and shared vision are devices that would help to promote a thinking and learning culture, one that is willing to accept and to initiate change. Apart from managing the academic outcomes and to take the lead in forging close relations and partnership between teachers, parents, pupils and the community, the administrator must also now assume the role of a CEO in harnessing the enterprising spirit and creative synergy of the corporate world in order to provide the needed resources and real world learning opportunities for the school.

Given this premise, CHS has logically placed special emphasis on professional development aimed at opening up broad avenues of choice (skills and strategies) which respect the educators' professional discretion and enhance their competence and performance. "Continuing, career-long professional development is necessary for all teachers in order to keep pace with change and to review and renew their own knowledge, skills and visions for good teaching... Successful school development is dependent upon successful teacher development" (Day, C. 1999. p. 2).

Redefining and Creating

- Redefining the role of the administrators. They are to act as change agents exploring new directions and taking risks. They will facilitate the needs of the teachers by empowering them, increasing their professional autonomy, promote intra-professional collegiality, decentralising authority and resources (human and non-human) and collaborating actively and forging strategic alliances with external agencies and industries. While remaining as the pivotal and final reporting and accounting channel, they will 'steer from the distance', at the same time, maintaining the delicate balance between traditional educa-

... an evolving lateral (flat) leadership structure where devolution of authority, empowerment and shared vision are devices that would help to promote a thinking and learning culture, one that is willing to accept and to initiate change.



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tional objectives and the new practices warranted by the changing economic, political and social context.

- Redefining the role of the HODs as Senior Professional Consultants. Their role is to provide expert advice on curricular and subject matters and to facilitate training and assessment of academic programmes. They are to take charge of their respective Learning and Research Centres (LRCs) which will cater as a learning platform for enrichment programmes and activities conducted beyond the perimeters of the core curriculum.
- Redefining the role of Year Masters/Mistress as Affective Consultants. They are to develop specialised skills in the field of psychology, counseling, life skills and leadership training. The People Development LRC will be established under their charge as a nexus of pastoral care programme, career guidance, life skill and leadership development, outdoor experiential training, and counseling services for the whole school.
- Redefining the role of teachers, redesignating them as faculty members, consultants and managers to give recognition to the expanded job specifications and skills acquisition that they are envisaged to cope with.
- Creating the appointment of Heads of Consortium (self-managing schools within the school). Their role is that of a team leader working with group to teachers to manage the total development of a small group of pupils. They are to provide the immediate support to both the teachers and pupils, to respond immediately to their needs and that of the macro environment, to make on-site decisions and to spearhead changes.
- Creating the appointment of Affective Coordinators within each consortium. They assist the Affective Consultants by managing vertically through the various levels (Secondary 2, 3 & 4), while the Affective Consultants managed horizontally across each of the levels. Together, they weaved an affective 'net' that helps to track the development of every child in the school.

- Creating the appointment of Education Consultants (Master Teachers equivalent). They are teachers who have demonstrated mastery of their subjects, Information Technology, Communication and Presentation, Thinking Skills, and Research Skills. Their role is to manage and keep abreast with frontier development in the areas of their expertise and to share the knowledge and skills with their peers and the community.

Retraining and Skilling

- Professional development for teachers in their subject areas. Emphasis is not on content training but on innovative ways of developing an effective curriculum and the translation of the host of information into meaningful knowledge and learning experiences for the pupils.
- Professional development for teachers in skills training. Some of these include creative and critical thinking, problem-solving, engaged learning (student-centered learning), experiential learning, process-centered learning, and Information Technology and Information Literacy.
- Professional development for teachers in affective education. Some of these include multiple intelligence, EQ & AQ, personality testing (MBTI), learning styles, classroom management, crisis and risk management, parent-teacher relationship, character ethics, pastoral care, and counseling.
- Professional development for teachers in managerial skills. Teachers are encouraged to enroll for courses in management leadership, team building, human resource development, strategic planning, project management, public relations and marketing.
- Professional development for teachers in postgraduate studies to achieve higher academia and training for professional and corporate leadership.

(The) emphasis is not on content training but on innovative ways of developing an effective curriculum and the translation of the host of information into meaningful knowledge and learning experiences for the pupils.



.... The Chinese High Approach

Practice and Practicum

- LRCs set up to encourage and instill a learning and research culture. The centers offer an operative platform for the teachers to implement best practices and engage visiting experts to hold intellectual conferences and collaborate with faculty members in joint projects.
- Attachment Programmes introduced for teachers to be seconded to industries, professional organizations, corporate agencies and institutions of learning for a short stint. This is to encourage them to 'think out of the box' and to be infused in the real world. Such experiences should be transferred to the crafting of the curriculum or programme that is sensitive to, and reflective of the macro environment outside the school.
- Teacher Exchange Programme. This will offer a broad educational experience for our staff to exercise their professional training in a cross-cultural setting.
- Professional sharing at local, regional and international conferences are actively encouraged by the school. This is one way of affirming our professional convictions, to learn from others and also to 'immortalize our knowledge'.

Support and Resources

- Reviewing and revising the performance indicators and assessment criteria for teachers to accommodate the changes.
- Creating time for professional sharing by weaving this into curriculum time. Provisions are also made for teachers attending professional courses and training during term time by the granting of study leave.
- Increasing the staff strength by 20% to cater for teachers taking turns for professional development and industrial attachment.

- Sabbatical leave of up to 3 months will be granted to teachers who apply to pursue further studies or attachment.
- Staff earning scheme (consultancy fees) introduced for teachers who have made significant contributions in professional sharing or are successful in developing innovative ideas or products that serves to enhance the process of teaching and learning.
- Sponsorship for deserving and aspiring teachers for post-graduate courses.
- Bringing in industrial support and partnership to provide resources, learning opportunities and technical and knowledge transfers.
- Forging faulty links with various universities and institution of higher learning to provide an extended learning and developmental platform for the teachers and pupils.
- All these changes are greeted with an appreciation of the need to have a high tolerance for mistakes, or even failure. "If we have not failed, we have not tried".

Conclusion

Change is a process, a journey. It is constantly evolving, taking into account the organization, the environment and the people making up the sum total. Changing the role of the educator is not the change itself. What have changed are the needs and the environment in which the school exists. The initiative taken by CHS will not be uncritically or readily accepted by some educators and researchers, who may view the reforms as succumbing to the climate of consumerism and marketisation of education, or more seriously, guilty of compromising the traditional ideals of education and the 'sacredness' of the teaching profession. Notwithstanding these concerns, we are confident that by redefining and reinventing the role of the educators as part of the total improvement effort of the school will, in the long run, result in positive educational outcomes.

All these changes are greeted with an appreciation of the need to have a high tolerance for mistakes, or even failure. "If we have not failed, we have not tried".

... The Chinese High Approach

"It is not enough to be content with practice as before. Teaching and learning are dynamic activities that are always responding to changing conditions and situations...Research has shown that teachers are an integral part of the education process, but they do not function alone. Even so, they are primary players and exert significant influence in how learning takes place. It is our position that new directions for teaching and learning include the evolution of teacher as innovator, researcher, and change agent" (Silverman, S. C. & Casazza, M. E. 2000. p. 254 & 260).

Therefore, it was left to us to choose whether we wanted to turn our backs on change and hence face the consequences, or confront it proactively and creatively to take advantage of it. We chose the latter.

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When Microsoft announced, in April, during the Education 2000 Conference, its new "tablet PC" which can display e-books "with a page-like interface", teachers and students in Dunman Secondary School in Singapore, were not impressed. They had been using a similar device, the "eduPAD" since July 1999, under a pilot research and development project with partners from the Ministry of Education, Kent Ridge Digital Labs (KRDL), CET Technologies and the National Computer Board (now IDA).

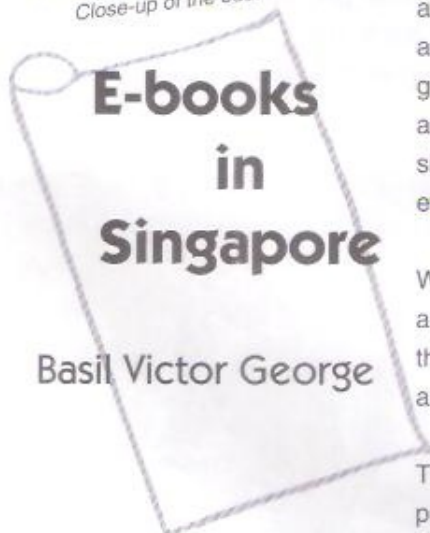
The eduPAD is an electronic device conceptualised, designed and put together here in Singapore specifically for teaching and learning. It boasts a colour display screen measuring 18 cm diagonally, a built-in speaker and rechargeable batteries that last 6-hours between charges. Its touch-screen facility and graphical user-interface makes it extremely easy to use.



Close-up of the eduPAD.

Each of the Secondary One pupils involved in the project has his own personal eduPAD; he has to log in his password to access the system. Wireless infrared communication makes possible a whole array of teaching and learning approaches. Mundane tasks like attendance-taking is done automatically; even late coming can be recorded.

Pop-quizzes, objective tests and worksheets can be prepared by the teacher any time before the lesson, using any computer terminal in the school and activated at the appropriate time during the lesson. Pupils complete their assignments and upload them to be marked electronically; they get their grades almost immediately. These grades can be archived and so tracking of individual student's progress is possible. Moreover, the teacher gets immediate feedback on the effectiveness of the lesson.



Wireless communication makes it possible for a teacher to send an assignment to her pupils without being physically present in the classroom. Pupils can keep track of the assignments they are required to complete in an electronic "to-do" list.

The class timetable is shown in a calendar-organiser format; pupils see their timetable for each school day in the year. Hence, class times can be rearranged very easily. Teachers can put assignment due dates for their students in the device as well.

The designers of the eduPAD have also incorporated Internet surfing facilities. Hence, learning need no longer be confined to the four walls of the classroom. Each pupil has also been given an e-mail address to encourage collaborative learning and project work with pupils in other classes and eventually with pupils in other parts of the world.

Perhaps one of the most talked about features of the project is the eduBOOK or electronic book. A number of Secondary One text books have been digitized and each is contained in a miniaturized memory card no bigger than a postage stamp and weighs only slightly more. The student can use the e-book in much the same way that he would use the printed book – he can turn the pages, highlight key sentences or phrases using an electronic highlighter built into the system, and even make annotations in the margins with the aid of a stylus. The e-book moreover, has features that are not possible with the printed version; words can be tapped on to get definitions and cross-references, or to listen to how they should be pronounced. Illustrations are no longer still drawings but animations and applets that help to demonstrate complex concepts.

Dunman's teachers and students agree that the eduPAD is yet to be tested fully. But they are encouraged by what they see. Teachers in Dunman, with the help of officers from the Educational Technology Division of MOE and researchers from NIE, are trying to find out how the device can help them with innovative approaches to teaching and learning.

Mr Basil Victor George is a teacher and Head of the IT Dept, Dunman Secondary School.

Radm Teo Chee Hean views the eduPAD at the official launch of the project in Sept 1999.



Teaching Language Through Literature: Responding to texts in linguistic, sensory and affective ways

Rosie Wee

On 20 October, 1999, a committee chaired by Director General of Education (DGE) was set up to promote the use of standard English in schools and institutes of higher learning. Prior to the meeting, members were tasked to draw up strategies “that schools and junior colleges could introduce or have introduced to promote the use of Standard English (SE) among their pupils and teachers.”

Among the strategies drawn up was the clarion call to “re-vitalise literature in the curriculum.” Schools were asked to:

- fortify the English Language curriculum in the upper primary by integrating components of literature within it.
- encourage more schools to offer Literature as an “O” level subject.

In this article I would like to propose that components of Literature should not only be integrated in the English language curriculum in the upper primary levels but extended to secondary levels as well if fortification of the language is to be effective. The end product would be more pupils offering Literature as an “O” level subject.

This article claims that teachers are reluctant to introduce Literature into the language curriculum because of a lack of knowledge of the values of Literature in the English Language (EL) syllabus. Should literary texts be included, the approach is cognitive rather than affective. Teachers are more anxious to get pupils to answer comprehension questions after a cursory reading of the text. There is no attempt to engage pupils with the text.

It is also my intention to raise awareness of the value of introducing Literature in EL teaching and learning and to give suggestions as to how learners can be helped to read Literature experientially. Implications of the findings to practitioners will also be included.

... teachers are reluctant to introduce Literature into the language curriculum because of a lack of knowledge of the values of Literature in the English Language (EL) syllabus.

The reluctance to introduce literary texts into the teaching of EL

There are at least three possible reasons why teachers develop such a phobia.

These are:

1. They lack understanding of the values of literature

This anti-literature attitude includes the idea that literature is of no value to real life as it is fictional and too remote for pupils to relate to. They have failed to appreciate the richness of literature in terms of character moulding, values, aesthetic assimilation and vicarious living.

2. They have misconceived ideas about what literature is all about

Another aspect of the anti-literature attitude is the conviction that literature is elitist, abstract and boring. They perceive it as an activity meant for pastime and has no place in the school curriculum. They fear that the abstract nature of literature will have an adverse effect on pupils and the introduction of it would affect the school's EL results and in turn, the overall ranking of the school.

3. They do not see the link literature has in the teaching of EL

Teachers have a tendency to see Literature as a separate entity from English Language. This is a fallacy. Just as reading and writing are inseparable, there is no distinct dichotomy between Literature and the English Language. A great deal depends on the teacher's ability to link the two by getting pupils to respond to the text in linguistic, sensory and affective ways.

The place of Literature in the EL curriculum

Literature has a place in the EL curriculum and in the following paragraphs I will elaborate on this.

Literature encourages critical thinking

Thinking School Learning Nation (TSLN) is one of the initiatives schools are required to embark on. As a pre-requisite, schools have to infuse thinking skills into the EL curriculum.

... there is no distinct dichotomy between Literature and the English Language. A great deal depends on the teacher's ability to link the two by getting pupils to respond to the text in linguistic, sensory and affective ways.

Literary texts offer vast possibilities for the teaching of thinking skills. Literature promotes interest and engagement as it addresses problems in which answers are not readily apparent. It leads to the application of strategies to discover information. Learning takes place because activities are meaningful and motivation is intrinsic. The end product would be the production of dynamic learners. (those who do, sense and feel.) (Hoyatzis and Kob. 1991)

The current catchword is systems thinking. "Systems thinking is a way of looking at occurrences as a whole; of looking at problems in their complete environment." (Zaraza 1996) Ron Zaraza (ASCD Review 1996) in his article, *Systems Thinking in the Classroom* postulated the possibility of using literary texts to teach EL. He describes a class of learners creating electronic graphs after reading William Golding's *Lord of the Flies*. The pupils were required to "use a special kind of software to graph each character's influence on the rising action." They have to defend their graphs with excerpts from the novel and then make presentations to the entire class. The exercise requires them to employ systems thinking to defend their case. Learning is directed yet pupil driven. Pupils need to rely on evidence and rational discussion rather than feelings or memorisation before forming judgements.

The application of Bloom's Taxonomy to literary text will also promote higher order thinking skills. Bloom's Taxonomy identifies the following levels of thinking skills namely:

- Knowledge
- Comprehension
- Analysis
- Synthesis
- Evaluation

Alvin Pang's article in TELL magazine (Volume 15 No 2 1999) illustrates how this can be applied using Higher Order Thinking Skills to a story "Cinderella" Pupils had to think through the answers on the basis of evidence and good reasons before they could answer the questions.

Literary texts are a good source for the organisation of ideas through critical thinking and judgement. Such texts, being authentic (i.e. those not produced for language teaching purposes) provide meaningful exposure to language.

Pupils need to rely on evidence and rational discussion rather than feelings or memorisation before forming judgements.

Literature promotes the use of Standard English

Scholars are of the opinion that experiential reading of literature can facilitate language acquisition. (Duff and Maley 1990, Royce 1969; Tomlinson 1998;) As literature is open to multi-interpretations, language teaching can be promoted through the sharing of experiences, perception and opinions after the reading of literary texts. (Duff and Maley 1990) Language proficiency stems from literary interest, which leads to effective thinking and processing of thoughts. Functional knowledge of language can only come from genuine involvement with language, largely from purposeful reading (Royce 1969)

By exposing pupils to a plethora of literary texts we are helping them to imbibe the richness which the language has to offer. It is delightful to savour humour in its varied forms. Pupils experience vicariously the reality of excellent characterisation and vivid descriptions.

According to Adams W. Royce (Royce 1969) "The truly functional knowledge of language, of its possibilities and limitations, can come only from genuine involvement with language largely from purposeful reading." An interest in reading and an ability to respond experientially will lead to proficiency.

Literature and National Education

The value of literature as a source of cultural enrichment is acknowledged by Collie and Slater (Collie and Slater 1987)

There is a place for literature in the promotion of National Education(NE), one of the three initiatives advocated for schools. In our society of synergy within our cultural diversity, the exposure to multicultural texts which literature provides will promote tolerance and harmony through an understanding of cultural diversity and discrimination present in society at large. Learners develop a balanced view of issues. In addition, they receive a global perspective of the world in which they live. Poems and stories about racism underscores the importance of teaching ethics, values and citizenship.

As teachers are required to infuse NE in the teaching of EL, teachers should consider using local literary texts in addition to multi-cultural texts.

I am not advocating that our pupils should be fed with a diet of local literature just to promote National Education, but rather,

Poems and stories about racism underscores the importance of teaching ethics, values and citizenship.

local literature should have a place in our classroom besides the foreign texts. Dr Kirpal Singh in his keynote address at the Literature Seminar 1997, lamented on the lack of interest and love for our local literature among the young. He was appalled to find (on interviewing them,) that "most of them said they didn't read Singapore literature and so did not know who the writers were."

Singapore has produced writers of international acclaim. Names like Arthur Yap, Lee Tzu Peng, Edwin Thumbo, Christine Lim and Catherine Lim have been woven into our national tapestry and yet with the exception of Catherine Lim whose works have received wide publicity, the others are relatively unknown to our young. If schools are emphasising History to promote National Education, our local writers should also be given their niche. Lee Tzu Peng's poem, *My Country and My People* offers more than facts.

*My country and my people
are neither here nor there, nor
in the comfort of my preferences
if I could even choose.*

Literature engages the affective areas of the mind

The affective aspect is an important factor to consider in learning. Unfortunately, many coursebook materials are too bland and fail to achieve the engagement needed for learning to take place. (Tomlinson 1998)

The best way to motivate pupils to learn is to get them interested. Teachers who resort to contrived texts that teach language drills are short-changing their pupils. Pupils who are motivated and engaged are more likely to achieve higher levels of performance. It is through the active engagement with the text that learners are obliged to pay careful attention to the text itself and to generate language in the process of completing tasks. (Hirvela 1996) The tasks should not be merely getting learners to comprehend the text but rather, interpretative in nature by getting them to present their reactions. This according to Hirvela is "the locus of control which a reader response approach challenges."(Hirvela 1996)

Literature enables pupils to learn from the Masters

Studies have shown that role models have a profound impact on learners. The works of masters will provide our pupils samples

Teachers who resort to contrived texts that teach language drills are short-changing their pupils.

One needs to be an apprentice before becoming a master. Showing pupils well written texts will stimulate thought, raise awareness of the style and purpose and the techniques used by the writer to achieve it.

of good writing for them to learn from. Writers emulate the style of other writers before they develop their own. Writing does not exist in a vacuum. One needs to be an apprentice before becoming a master. Showing pupils well written texts will stimulate thought, raise awareness of the style and purpose and the techniques used by the writer to achieve it.

A rich and varied literary environment is necessary to keep the adrenaline flowing and the creative pulse throbbing. With proper guidance and encouragement from an enthusiastic teacher, the pupils should be able to produce compositions that are of some depth and maturity.

Helping learners to read Literature experientially

The integration of literature with language depends on the teacher's ability to get pupils to respond to the text in linguistic, sensory and affective ways. An enthusiastic teacher, with knowledge of literary principles and a willingness to explore on the part of the teacher is crucial to the success of the lesson.

According to Dr Brian Tomlinson, (Tomlinson 1998) there should be a "delay in reading." Teachers should "start by encouraging experiential rather than studial approaches to reading." This can be done through dramatic reading either by the teacher or through listening to a tape. Following this the teacher could adopt the following approach.

Think Aloud Approach

Teacher guides pupils on how to approach a text by modelling; using Think Aloud Approach. This is a method in which the reader engages with the text by writing what went on in her mind while she reads. The strategies include:

a) Verbalising

Pupils verbalise the words and interact with the text by writing down the thoughts that come across.

b) Visualising

Pupils see connections and images in their mind's eye as they read.

c) Connecting

Pupils link the text with experiences in their own lives and with what they know of the world. This involves interaction between the text and the mental model of the reader.

d) Inferencing

Pupils learn to fill the gaps left by the writer by making conclusions based on the clues in the text as well as their own stored knowledge.

e) Predicting

Pupils predict what is likely to happen at each stage of the reading.

f) Handling Ambiguity

Pupils leave ambiguity on hold and come back to it later when there is sufficient evidence in the latter part of the text to provide the answer.

g) Responding aesthetically

Pupils engage themselves in the experience by allowing themselves to be affected by it.

h) Activating both the right and left hemispheres of the brain

Pupils process the text using the left hemisphere for processing syntax and the semantics of the text and the right hemisphere for visualisation, inferencing and emotive responses.

(An adaptation from Dr B. Tomlinson's article: *And Now For Something Not Completely Different: An Approach to Language Through Literature*. 1998)

Implications for teaching

Reader-response theory

Readers interact with the text using their own knowledge and experiences. Answers cannot be ferreted out from the text alone. The text is meaningful only when there is active interaction between reader and the text. Readers have to be guided to create meaning out of text. Teachers should understand the personalities of readers who are to experience this literature. (Louise Rosenblatt (1978)

There is the need on the part of the teacher to prepare pupils for this transitional competence. He should be prepared for responses which may not match his but nonetheless is valid to the pupil. The approach should be affective and not cognitive.

There is the need on the part of the teacher to prepare pupils for this transitional competence. He should be prepared for responses which may not match his but nonetheless is valid to the pupil.

Text selection

Literary texts offer a rich source for the acquisition of language. However, the choice of texts should be selective and tailored to the target readers taking into account their linguistic level. Materials given to pupils should be text driven rather than language driven. They should be multi-cultural, cater to different learning styles and provide opportunities for experiential learning to take place. It should contain engaging content and promote reader response from learners.

Focus on Intake Response and Development Response Tasks

An intake response task involves the expression of aesthetic responses to an experience of a text. (Tomlinson 1998) The focus is on what pupils have assimilated from their interaction with the text. Such tasks could include:

Pupils articulating their feelings about a character; writing a letter to a character, continuing a story or writing from another point of view.

At the next stage, pupils can be taught to increase their understanding of the text by developing an awareness of "how language is used to achieve effect." (Tomlinson 1998)

Literary texts provide spring-boards for creative teaching and learning. After the reading of a story, pupils could do a dramatisation of a scene, write letters to the characters, take on the roles of characters and write their points of view.

Conclusion

In conclusion, I would like to reiterate the call to fortify the English Language curriculum by integrating components of literature into the EL curriculum. This can only be achieved if practitioners and educators see the rationale for it.

Let there be a concerted effort to re-kindle the ambers of Literature before it tapers into cold ashes. Let us not flood our pupils with bland, boring texts and impoverish them with the famine of authentic and aesthetic literary texts. The choice is ours.

Materials given to pupils should be text driven rather than language driven. They should be multi-cultural, cater to different learning styles and provide opportunities for experiential learning to take place. It should contain engaging content and promote reader response from learners.

Notes

1. Tomlinson, B. *Materials Development*
2. Proposal of Strategies to Promote the Use of Standard English (SE) in Schools, MOE.

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Electric Soup

Student

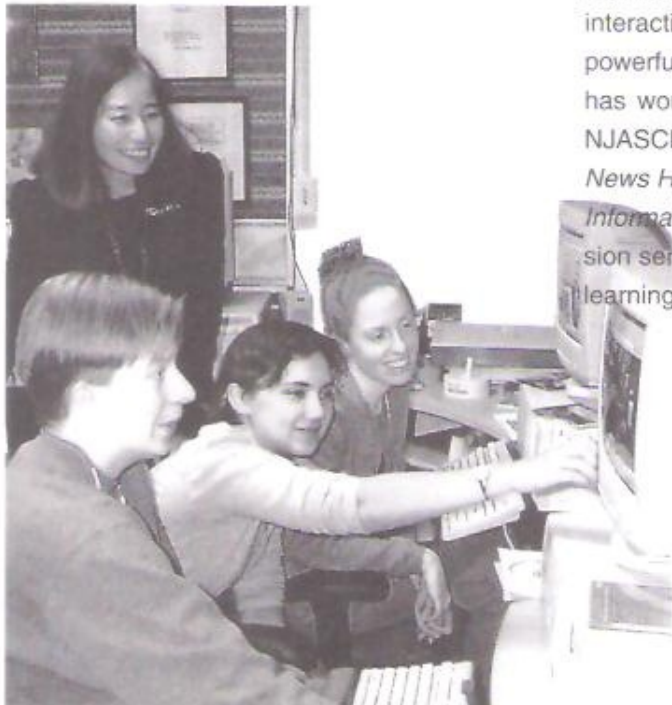
Empowerment Brings Velocity to Wired Words

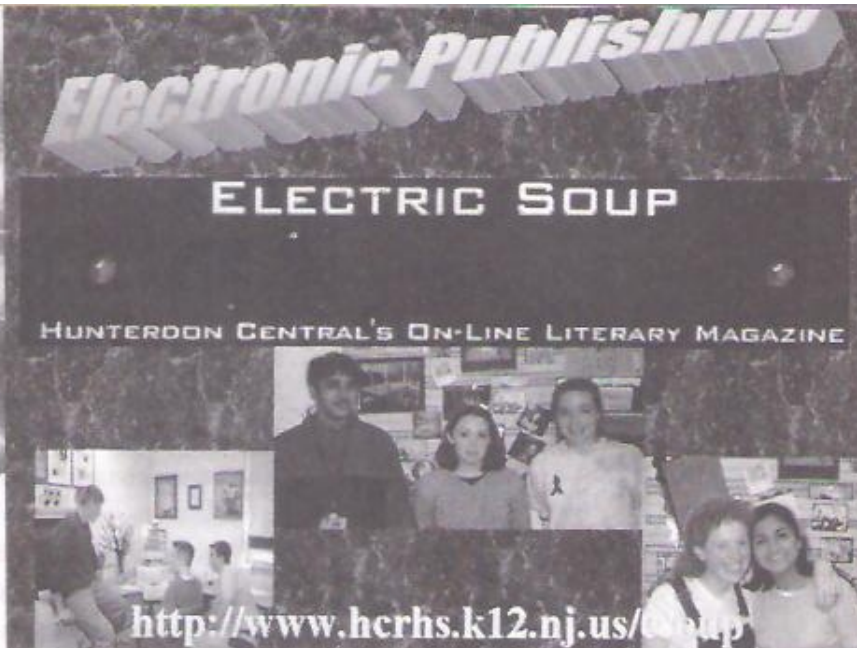
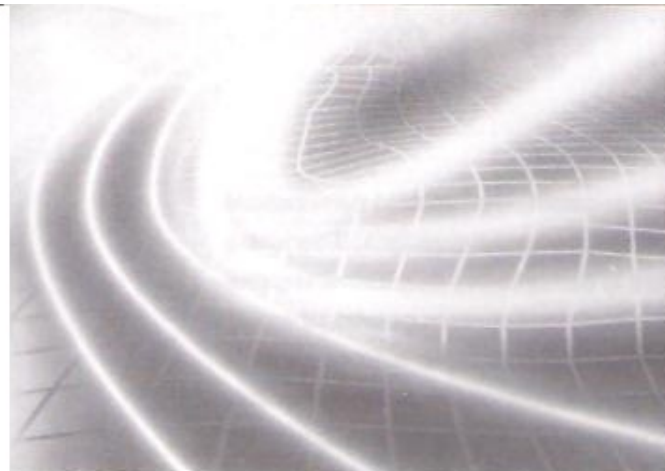
Florence McGinn

The poet Claribel Alegria states that "Poetry is like bread – everybody shares it." In the United States at Hunterdon Central Regional High School located in New Jersey, an empowered student, electronic publishing program, *Electric Soup*, shares electronic words internationally. The student-created e-zine is based upon a recognition that the privileged position of authoritative writing teacher has been transformed to a global, collaborative model by the Net generation's access to electronic, multimedia interactivity.

Wired words are alive and collaborative. A fresh, revitalized vision of a re-imagined writing classroom is based upon students empowered in multiple roles as writers, editors, technology peer workshop teachers, collaborative mentors for new editors, and pilot project team innovators. As Shakespeare stated, "One man in his time plays many parts," and in today's learning environment, the student's role is neither singular nor stagnant.

The award-winning *Electric Soup* project and its student-focused, technology-assisted learning approach to the writing process, to interactive workshoping, and to electronic publication, creates powerful examples of empowered students in action. This project has won a New Jersey Best Educational Practices Award, a NJASCD award, as well as been featured on the *Jim Lehrer News Hour*, on a nationally distributed AT&T video entitled *The Information Superhighway*, and on *Caucus New Jersey's* television series "The Shape of Things to Come." It wires words and learning with the emerging technologies.





As a published poet and English teacher, Florence McGinn, states "I want my student to have a rich experience with words. I want them to have a sense of audience. *Electric Soup* begins there, but we are fortunate enough to have the emerging technologies. Technology helps to mesh student-empowered learning together." Technology is a key and a gift, for it opens up opportunities for individualizing learning as well as challenging students to develop fresh, empowering roles.

This project begins in a computer networked English classroom where students utilize writing and learning process theories to create original manuscripts. But the process only begins there; students workshop, edit, and revise to polished, final manuscripts of submission quality. As students create sophisticated writing goals for themselves, they produce in-depth, multimedia portfolios of polished work to reflect progress and the achievement of teacher-directed as well as student-selected, independent goals.


Then, the writing connection intensifies by transforming student writers into literary editors empowered with multimedia tools that challenge the multiple intelligences and electronic possibilities that shatter barriers of time, distance, and politics.

Within an entirely student-created magazine, technology-assisted features reflect the imaginations and skills of individual student editorial teams. There are lively features in poetry, short story, and essay supported by rich backgrounds, digital images, and animated GIFs. There are special features such as CyberLit,

PotPourri, and a free writes segment. The features demonstrate unique forms or interpretative multimedia usages. There is a special feature for Alumnae to demonstrate how the writing process continues after graduation; additionally supporting the concept of a long, living writing process, there is a Community of Writers segment accepting the works of teachers, community members, and outside contributors. Reaching further into that welcoming concept of encouraging writing, a Young Writers feature exists for elementary and middle school student writers as well as for those who write for the younger reader. *Electric Soup* has an innovative feature called "Silicon Sound" which offers RealAudio of original student poetry produced as song. There is an Art feature as well as a Virtual Gallery that highlights student-created 3D images and digital animations. There is an International feature which has published German writing, Swahili pieces, work from France and South Africa, the work of professional Chinese poet Ke Yan, and work from the American International School in Bangladesh. Also, there is an Interview feature that has presented interviews of ComWeb and Global Knowledge Exchange President James Chang and *Children's Software Review* editor, Warren Buchleitner. The magazine reflects the transformed writing classroom, for it reaches past the usual, educational divisions of grade, age, and locale to form a unified network of wired words. To view the magazine, go to <http://www.hcrhs.k12.nj.us/esoup/index.html>




Left to right: Sujay Pandit, Douglas Gorton, Cari Kulpa, Neela Mookerjee and Emily Judson (standing)



Reflections of this program's success can be viewed in its students' stellar achievements and growth. Emily Judson states, "When I first began working as a member of the staff of *Electric Soup*, technology left me helpless and bewildered. I feared I would never be able to learn the software and accomplish all that was needed. To my surprise, I was able to learn the software and soon could not wait to start creating my features and to see them in their final forms. Now, I am comfortable with technology and always am willing to learn a new program. *Electric Soup* has been inspirational." Indeed, Emily Judson joins Douglas Gorton to form a powerful editors-in-chief leadership team. Douglas Gorton exclaims, "This project enables us to gain invaluable, hands-on use of today's cutting edge technology. The opportunities are amazing."

How do these students gain their technical skills? They teach each other! Students explore the software to learn what they need. Then, they share tidbits of technical knowledge as they discover complexities of expression and development together. As student editors attain skills, they are encouraged in leadership as they teach peer workshops to support new learners. The teacher's role is to introduce the software's potential and its vocabulary, to guide toward challenging learning goals, and to facilitate the processes of achievement and innovation. Active, empowered students shift naturally from roles of learner to those of mentors, teachers, and leaders as they strive toward in-depth, authentic learning products.

In addition, *Electric Soup* increases its technology-assisted interactivity and reach through electronic video-conferencing methodologies. Student writers and *Electric Soup* editors are linked with university student mentors. Through the use of a computer station connected to an ISDN line and equipped with Intel ProShare software, a CallPort, and headphones, electronic video-conferencing provides a digitized, distance learning writing workshop!



And naturally, student writers and editors enjoy mentoring others. So, *Electric Soup* editors use video-conferencing to mentor younger writers. And, students love writing collaboratively, so students are electronically linked with high school writing peers across the state. An equally important consequence of that electronic collaboration has been cultural broadening. The complexity of urban and suburban as well as multicultural experiences have been made real as students seek to write, edit, and publish together.

Today's cutting edge teaching practices demand multiple ways for students to demonstrate understanding of curricular concepts. Expressive, empowered student work becomes reflective, interpretative, and in-depth. As educators create avenues for multifaceted, technology-assisted student achievement, the modern classroom develops fresh velocity. And, as these remarkable opportunities empower students, education's abilities to individualize and to honor each student's process-oriented achievements becomes meaningful reality.

Simply start where you are to empower your students. Enable their exploration, and they will empower themselves to share the rich bread of technology. And, the learning feast will be built upon genuine knowledge, authentic learning products, and innovation!

Florence McGinn is a Commissioner on the Congressional Commission for Web-based Education. She is the recipient of awards that include Princeton University's Distinguished Secondary School Educator, the Microsoft-sponsored Technology and Learning National Teacher of the Year, the New Jersey Teacher of the Year as well as the US Eastern Region Teacher of the Year. Florence McGinn is presently appointed to advisorships for PBS On-line, the Milken Foundation, Technology and Learning magazine, and SchoolCity. Mrs. McGinn's pilot project work develops through support from AT&T, Johnson & Johnson, Liberty Science Center, Lucent Technology, Bose Corporation, Global Knowledge Exchange, ComWeb, and the Hunterdon Foundation. *Electric Soup*, her high school's on-line literary magazine, has received a NJ Best Educational Practices award, a NJ Association of School Curriculum award, and has been cited as one of NJ's best web sites as well as one of the Ten Best Educational Sites on the Internet. Mrs. McGinn is a published poet; her poetry collection *BLOOD TRAIL* reflects her Asian/American background and is available in bookstores and from Pennywhistle Press, 930 Baca Street, Suite 12, Santa Fe, New Mexico 87501 USA Telephone: 1 505 982 0066. She teaches English and is a Pilot Programs Developer at Hunterdon Central Regional High School in Flemington, New Jersey.



Back to the Future: A Matter for Career Guidance

Peter Khor

Introduction

More than ten years ago, the plight of Secondary Four students in terms of their career development was highlighted in a systematic survey conducted by the then Institute of Education involving 71 schools, and prospective employers of school leavers (Khor, 1987). The survey showed that Secondary Four students were generally lacking in job knowledge, job application skills and had no clear career directions. They were often unrealistic about their educational aspirations, job preferences and were materialistic in their job values. The survey highlighted the urgent need for career guidance in Singapore schools. Since then, largely through the introduction of the Pastoral Care and Career Guidance (PCCG) programme by the Ministry of Education, career guidance has come a long way in both its design and implementation in the schools, with the primary objective of enhancing the career development of students.

According to many theories of career development, adolescents are at the stage of career exploration, crystallisation of tentative career choices, and engagement in the process of career decision-making or career planning (e.g. Super 1980). Further, Khor (1994) has found that Secondary Four students were engaged in circumscribing job-self incompatible occupations and had tentative "best bet" career choices with a range of acceptable occupational alternatives in mind, a far cry from many of their predecessors' predicament of many having no clear career directions. In career decision making, Ng (1996) found in his study of a sample of Junior College students that self-efficacy in career decision making was strongest in students who had decided on their educational and career aspirations than those who were tentative or undecided in their career choices. Therefore, at different stages of development adolescents are involved in specific career development activities. How are our present secondary school students different from their predecessors in terms of career development? To what extent are they engaged in career developmental tasks expected of them, given the impetus of career guidance in the schools?

A Longitudinal Study

As part of a five-year longitudinal study on the various cognitive, social and psychological aspects of Singaporean adolescent development a sample of 316 students (Secondary One to Four) from four secondary schools responded to the same 23 questionnaire items measuring their career development and perceptions of parental involvement in the career choice process from 1995-1998. Following a principal components analysis, the following scales were constituted for subsequent analysis: a) Career Orientation and Planning (COP) scale; b) Career Decision-Making (CDM) scale and c) Parental Support (PS) scale. These comprised of five, six, and eight items each, with alphas of .60 (COP), .67 (CDM) and .86 (PS) respectively. MANOVAs were performed to examine age and gender differences over a 4-year period for each scale. Together with descriptive statistics and frequency distributions of selected scale items, a profile of secondary school students' career development is shown below.

Career Orientation and Planning

Tables 1 and 2 show the survey results in terms of the Career Orientation and Planning (COP) scale. The mean scores in Table 1 indicate that the students generally evidenced some idea of career orientation and planning; some thoughts were given to their future careers over a 4-year period, which generally remained unchanged. Table 2 shows that in terms of career orientation, 8 out of 10 students indicated they were aware of their own interests in relation to career choices, as well as the kind of work that would be satisfying to them. However, while slightly more than half indicated they had made some kind of tentative career choice, about the same number also indicated they did not know how to go about career planning. This was consistently so over four years. Also, no gender differences were found for the COP scale.

Career Orientation and Planning (COP) Scale (No of items = 5; Min = 5, Max = 20; Alpha = .60)

Table 1: Descriptive Statistics for COP Scale

N = 316	Sec 1	Sec 2	Sec 3	Sec 4	Remarks
Mean	13.56	13.43	13.45	13.53	• Some idea of career orientation and planning • *MANOVA shows no significant differences in COP for Gender
S.D.	2.57	2.40	2.54	2.53	

*NB: *MANOVA is a statistical procedure used in research to check if there is any significant difference on one dependent variable among three or more groups.*

Table 2: Percentage of Sample AGREE/STRONGLY AGREE to COP Items

Career Orientation and Planning Items	Sec 1 (N=344)	Sec 2 (N=344)	Sec 3 (N=344)	Sec 4 (N=316)
• Know how own interests can relate to career	88	82	83	85
• Some idea of the kind of satisfying work to me	79	81	81	85
• Made to tentative career choice	54	57	55	57
• Don't know how to go about career planning	55	61	58	61

Career Decision-Making

Tables 3 to 5 below show the results for the Career Decision-Making (CDM) scale. The mean scores in Table 3 indicate that the students were generally career indecisive over the 4 years. This, however, is to be expected since students were still in school and engaged in career exploration and crystallisation. They seemed to be slightly more indecisive when they were in Secondary 2. Table 4 shows there were significant differences in career decisiveness by gender. Females were very slightly, if not imperceptibly, more career indecisive than Males.

Career Decision Making (CDM) Scale (No of items = 6; Min = 6, Max = 24; Alpha = .67)

Table 3: Descriptive Statistics for CDM Scale

N = 316	Sec 1	Sec 2	Sec 3	Sec 4	Remarks
Mean	13.55	13.17	13.29	13.54	<ul style="list-style-type: none"> • Career indecisive over 4 year period • Slightly more so in 2nd year
S.D.	3.26	3.22	3.20	3.36	

Table 4: Gender Differences in CDM Scale

Gender		Sec 1	Sec 2	Sec 3	Sec 4	Overall Mean	Remarks
Male (n=152)	Mean	13.97	13.34	13.57	13.91	13.70	<ul style="list-style-type: none"> • Career indecisive over 4 year period for both sexes • Manova F (1,314)=4.97; p<. 02 shows Females very slightly more career indecisive than males.
	S.D.	3.29	3.31	3.23	3.54		
Female (n=164)	Mean	13.15	13.01	13.04	13.19	13.10	
	S.D.	3.19	3.13	3.15	3.16		

Table 5: Percentage of Sample AGREE/STRONGLY AGREE to CDM items

Career Decision Making Items	Sec 1 (N=344)	Sec 2 (N=344)	Sec 3 (N=344)	Sec 4 (N=316)
• Many interesting jobs, hard to decide	80	80	75	75
• Dream about future job, no idea what is suitable	68	78	78	75
• Many voices telling me something different about future career ... confused	61	72	68	67
• Keep changing my mind about suitable job	61	62	62	60

In terms of making career decisions, Table 5 shows more than 7 out of 10 students found it hard to decide on a career with so many interesting jobs to consider. However, at Sec. 1, slightly more than 6 out of 10 students seemed to be thinking about their future careers, and this number had increased to nearly 8 out of 10 students by Secondary Three and Four. Again, this is a far cry from nearly ten years ago when only about 40% of 438 Secondary Four students surveyed were found to have given some thoughts to their future careers (Khor, 1987). Presently, more than 60% also indicated they were somewhat confused as to what jobs were suitable since there were many voices presumably giving them information. Perhaps that was why a similar proportion indicated they kept changing their minds about a suitable career.

Parental Support

Tables 6 to 8 below show the results for the Parental Support (PS) scale. In terms of parental involvement, the mean scores in Table 6 suggest students generally perceived their parents as positively supporting them in their career planning and decision making process.

Parental Support (PS) Scale (No of items = 8; Min = 8, Max = 32; Alpha = .86)

Table 6: Descriptive Statistics for Parental Support Scale

N = 316	Sec 1	Sec 2	Sec 3	Sec 4	Remarks
Mean	20.93	21.00	21.47	20.70	• Positive parental support in career planning and choice over 4 year period.
S.D.	5.75	5.35	5.45	5.41	

No gender differences (Table 7) were found in terms of parental support; both sexes similarly perceived positive support from their parents in thinking about their future careers. This is encouraging in that traditionally, there is greater parental fuss over boys' choice of careers than girls'. Perhaps this is changing in that parents now perceive the career development of their sons and daughters as equally important in a competitive, meritocratic society.

Table 7: Gender Differences in Parental Support Scale

Gender		Sec 1	Sec 2	Sec 3	Sec 4	Overall Mean	Remarks
Male (n=158)	Mean	21.50	21.78	21.92	20.67	21.47	• Positive parental support for career planning and
	S.D.	5.85	5.10	5.31	5.22		
Female (n=186)	Mean	20.39	20.28	21.04	20.72	20.61	• MANOVA shows no significant differences in parental support for Gender
	S.D.	5.61	5.49	5.55	5.60		

Table 8: Percentage of Sample Indicating MODERATE/LARGE EXTENT of Parental Support

Parental Support Items	Sec 1 (N=344)	Sec 2 (N=344)	Sec 3 (N=344)	Sec 4 (N=316)
• Parents listen, suggest but leave career choice to me	70	72	71	72
• Approve of my career plans, makes it easier for me	70	69	73	73
• Help me clarify my interests and abilities	61	63	61	54
• Willing to finance me even if career not their preference but mine	59	65	67	62
• Help me find out more about careers I'm interested in	56	48	54	41
• Actively discuss with me regarding career choice	53	55	57	50
• Encourage me to plan my career early	47	51	57	55
• Help me through process of deciding on a career	46	49	49	44

Table 8 above shows that the majority of students perceived their parents' involvement as listening, making suggestions but leaving the choice and planning to them. Parents were also perceived as helping the students clarify their own interests, abilities, actively discussing career plans, and a willingness to finance their children's career pursuits even if it was not their (i.e. the parents') preferred choice. Nearly half also indicated their parents helped them find out more about careers they were interested in. It is encouraging to note that even in the early secondary school years, parental involvement in students' career development was highly evident. In contrast, only about 12% to 23% of Secondary Four students surveyed ten years ago indicated they had sought help from their parents concerning their future careers.

A Matter for Career Guidance

There is a certain degree of career indecisiveness on the part of the students because they are in the early stages of career exploration and crystallisation, and presently would not be expected to have made definite choices. In fact, it has been found that even at JC level, there existed a certain degree of developmental career indecision, a normal process adolescents go through as they make transition into early adulthood (Lim, 1995). This is expected to change in the subsequent years of the students' career development. While it is encouraging to note that many of the students surveyed knew how to relate self-knowledge (e.g. interests) to careers, students do need guidance in career planning in order to transit from developmental career indecision to being career decisive.

A useful approach that career guidance teachers and counsellors can adopt may be termed the P.E.T.E.R (for Prepare, Explore, Test, Eliminate and Realise) plan. It offers a simple career guidance format to implement with students based on the ideas of Super (1980), Holland (1985), Gottfredson (1981) and a career guidance model articulated by the author earlier integrating self-knowledge, world of work knowledge and career decision making skills (Khor, 1987). The P.E.T.E.R. Plan is shown in Figure 1 below.

Figure 1: The P.E.T.E.R. Plan

Career Guidance Objective: Help Students To...

PREPARE	EXPLORE	TEST	ELIMINATE	REALISE
<ul style="list-style-type: none"> • Learn about self; interests, abilities, work values • Learn decision making skills • Learn about occupations, world of work in general • Choose tentatively 	<ul style="list-style-type: none"> • Talk to job holders • Talk to teachers, parents, counsellors • Explore educational opportunities and specific occupations in detail • Access career information 	<ul style="list-style-type: none"> • Take related courses to get a feel • Take part in career interest related activities • Take part/full time job, work shadowing, and work experience schemes 	<ul style="list-style-type: none"> • Narrow choices after checking them out • Revalue, assess chances of entry • Compromise with realistic, "best bet" choices 	<ul style="list-style-type: none"> • Plan for education, training required • Implement plans to reach goal • Be flexible to adapt

While it is beyond the scope of this paper to articulate the above plan in detail, the embodied career guidance principles involve getting students to develop their occupational self-concepts, learn how to make informed decisions, understand how the world of work is organised in terms of structure as well as the psychological characteristics of various occupations. Students are encouraged to take an active part in career exploration by first widening their occupational horizons, and then subsequently narrowing their choices to a list of tentative job-self compatible options. They are then encouraged to further explore in detail these occupations, through vicarious (e.g. taking related courses, talking to people) and direct means (e.g. take a part time job related to their interests or similar to their preferred choice). Through the application of informed career decision making skills, students are guided to eliminate further occupations that are out of reach or deemed as less job-self compatible, to compromise with realistic career options that they can pursue. With these options in mind, students are helped to plan for the education and training required with plans to reach their goals.

Career guidance should also recognise that in today's world and in the new millennium, career development is to be seen as a lifelong process of getting ready to choose, choosing, entering, adjusting to and advancing in an occupation, rather than a single point event. Students should be encouraged to be flexible and adapt and change as they grow and develop in their occupational self-concepts. According to Watts (1999) it is through this process of learning about oneself and in work incorporating elements of 'careering about' that people continually construct and forge their careers. Such is the new concept of career development.

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Introduction

Education encompasses the development of the whole child and the foundation is his values. Schools, working with the home and community, are important in shaping the moral values of our pupils and instilling social responsibility. Our pupils will also need to learn how to relate to their elders and peers.

Values Education had traditionally been taught through conventional methods of chalk and talk, group discussions and involvement in community projects such as visits to homes for the aged. However, this year, with the set-up of the IT infrastructure in the school, Bedok Town Secondary School explored the use of IT in generating pupils' interest in Values Education. The theme "Respect and Care for the Elderly" was chosen because of the social challenges posed by the aged and the ageing population in Singapore in the new millenium.

Method

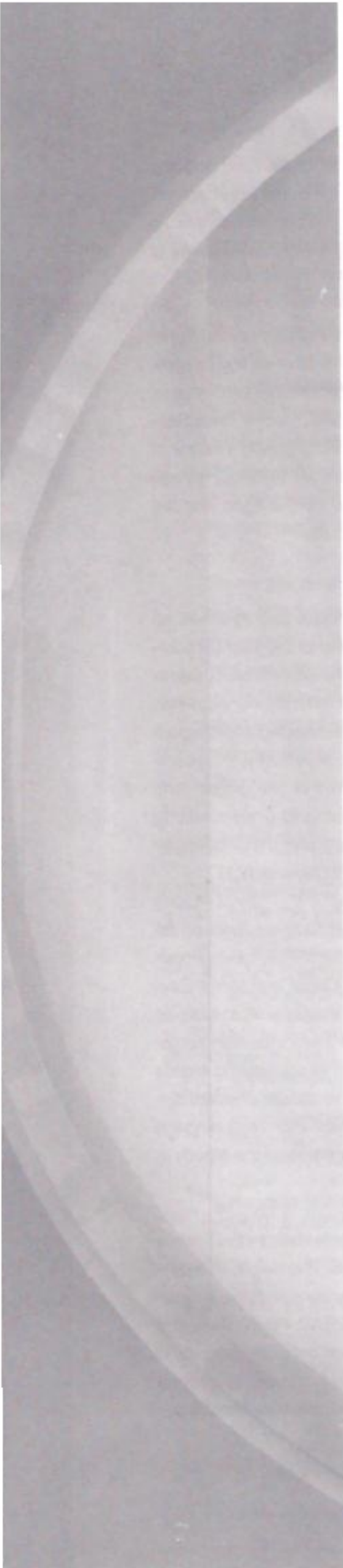
The graduating classes were selected for this project as they would be leaving the school at the end of the year for post-secondary education or the workforce. It therefore becomes important to educate our pupils on the needs of the aged and the ageing in Singapore in order to equip them to be able to serve the community better. The objectives of this project is to increase pupils' awareness and understanding about the aged and ageing and the challenges faced by the elderly through the use of IT.

Old Wine in New Vessels: Values in IT

Koh Boon Long &
Mary Koh

Pupils worked in groups of fours or fives on an interdisciplinary project entitled "The Ageing Population" involving Mathematics, Science, English, Civics and Moral Education, National Education and IT. Information on this topic was obtained from available print materials, a Net search and interviews with senior citizens. Pupils conducted a search on the Internet concerning trends on Singapore's ageing population, health problems and the physical disorders faced by the aged. They also accessed information regarding the social problems of the aged and the contributions made by the elderly in Singapore.

The interviews conducted by our pupils during their visits to the homes for the aged were recorded on video and digitised. This provided a permanent record of their interesting personal interactions with the elderly. The school also made arrangements with the TSAO Foundation and SAGE to hold a video-conferencing session between our pupils and some of their elderly personnel. This technique enabled the pupils to interact with experienced senior citizens without having to leave their classroom.



The pupils were able to glean from these experienced personnel, tips on how to look after the elderly and be informed about the various activities/services conducted by the organisation. In this way, pupils were presented with a different perspective of the elderly citizens who are still active and contributing to society as opposed to those whom they visited at the homes for the aged.

At the end of the project, the groups were required to produce a multimedia presentation using the Director software. Teachers used these materials in their class discussions to reinforce the value of "Respect and Care for the Elderly". Selected projects would eventually be posted on the Web as resource material for educational use. Bedok Town Secondary School is currently on in the 'Fast Track@School' project which provides the broadband access necessary for retrieving information on our projects for teaching.

Findings

A questionnaire was administered to 61 pupils at the end of the project to ascertain the benefits gained. The following results were obtained:

1. Increased awareness about the elderly

Pupils indicated that their knowledge about the elderly had increased significantly through the project. They were now more aware of

- the problems faced by the elderly
- how to care for an elderly person
- the organisations in Singapore that provide assistance/ help to the elderly
- the contributions that the elderly could make to society.

2. Improved attitude towards the elderly

Most of the pupils agreed that the project had helped to

- improve their communication with an elder
- improve their relationship with the elderly
- achieve personal satisfaction in helping an elderly person
- appreciate the contributions made by the elderly
- appreciate the elderly persons in their lives.

4. Impact of IT

While our pupils enjoyed the visits to the homes for the aged, assembly talks, reading materials on the elderly and interviewing the elderly, most of them indicated that using IT had helped to promote their interest in the topic "The Ageing Population". In particular, the multimedia presentation (employing the Director software) and the Internet search were highly rated by pupils. The other interesting and innovative IT approaches identified by the pupils were video-conferencing and the digitisation of the video-taped interviews with the elderly in the homes for the aged.

5. Voluntary Service

Pupils were asked if they were keen to be involved in helping the less fortunate. Three-quarters of the pupils in the project had indicated an interest in volunteering their services to help others such as the

- physically challenged children (44%)
- elderly in the homes for the aged (38%)
- tutoring children (38%)
- mentally challenged children (25%)

However, only 20% of the pupils were willing to do voluntary service for the elderly after their GCE 'O' levels. The main reasons indicated by pupils for not volunteering after their secondary education were that they

- lacked confidence in helping the elderly
- preferred to concentrate on their studies
- perceived a communication problem with the elderly
- unable to find the time.

Conclusion

This study demonstrated that innovative technology can be effective in promoting pupils' interest in Values Education. Through the use of IT such as video-conferencing, net search and multimedia presentation, pupils not only enjoyed learning about issues involving the elderly, they had also developed greater respect and care for the elderly persons in their lives. It was also heartening to know that they would consider getting involved in voluntary service to help the less fortunate. Encouraged by this, the school will continue to exploit IT to teach Values Education in innovative ways that would facilitate pupils' learning as we see not only value in the use of IT but values being transmitted through the innovative use of IT !

*This paper was first presented at the Education 2000 Conference in April 2000, Singapore. **Mr Koh Boon Long** is the Principal of Bedok Town Secondary School and **Mrs Mary Koh** is the of Principal, Evergreen Secondary School. The rest of the team members are **Miss Catherine Thong**, (Head of Dept/ IT), **Mr Choo Chee Yong** and **Mr Wee Gark Kung**, all from Bedok Town Secondary School.*



Do students' perceptions of school change over time?

Tan Wee Kiat & Esther Tan

Introduction

In Singapore, children move from primary school to secondary school after the Primary School Leaving Examinations (PSLE). On the basis of the PSLE results, the children are streamed into the 'Express', 'Normal Academic' and 'Normal Technical' courses. The top 50% cohort of these students are categorised as 'Express' students and are expected to complete the secondary school education in four years while the 'Normal' students may take five years to do so. Whether in the Express or Normal course, school and schoolwork take up a big part of the student's time and life. How they perceive their school and schoolwork is therefore of great interest to educators, parents and the public.

In a study on the risk-taking behaviour of 5149 Singapore students aged 12 to 19 conducted in 1994, two foreign researchers, Ball & Moselle, remarked: "Youth culture revolves, for the most part, around school and school-related activities. If one overhears teenagers huddled together in shadowy alcoves or at the back of the bus, it is not uncommon to find that the topic of conversation is schoolwork, teachers and grades". In another survey on the state of youth in Singapore conducted by Yeo & Chow in mid-1997 on a representative sample of 600 youths aged between 15-29 years of age, 'schoolwork' was listed as a major concern by 25.3% of the sample. No doubt if we looked at the youth in this sample who are students in secondary schools, the percentage listing schoolwork as a major concern would be much higher.

The present study tries to track the kinds of impressions that Singapore students have of themselves and their school as they proceed through the secondary school years. The questions that are of particular interest in this longitudinal study are the following.

What is the pattern of student perceptions, over time, of
(a) school (b) teachers (c) peers (d) schoolwork ?

Do students in the different courses differ in their perceptions of school?

Do girls and boys differ in their perceptions of school?

The Sample

The sample comprised 250 students from four schools. The 250 students participated in the study for four years from Secondary One to Secondary Four. In the sample there were more girls than boys (54% compared to 46%). The Express course students made up 57.6% of the sample while the Normal (Academic) and Normal (Technical) students formed 30.0% and 12.4% respectively.

Data collection

Questionnaires were administered to the students every year. The first data collection was conducted in 1995 when the students were in Secondary One. They were followed up for four years until 1998 when they were in Secondary Four. A number of students who participated in the survey in Secondary One did not participate in the later years. The 250 students in the sample are those with complete data from Secondary One to Secondary Four.

Instrumentation

In this study the students' perceptions are based on data gathered from four questionnaires. The questionnaires contain items asking for responses with regard to:

- (a) You and Your School (14 items)

Example: I am proud of this school.

- (b) You and Your Teachers (15 items)

Example: My teachers care for me.

- (c) You and Your Classmates (16 items)

Example: My classmates encourage me to work hard.

- (d) You and Your Schoolwork (14 items)

Example: I am confident of obtaining good results in my tests/exam.

The items in the questionnaires were constructed with the help and advice of lecturers from the National Institute of Education and the school principals. Each item in the questionnaire contained a 4-point response choice. A response of 'Strongly Disagree' was scored as 1 point while 'Strongly Agree' would be given the maximum score of 4 points. An average score of 2.5 and above may be regarded as a positive score.

What are the students' perception of their school?

The data (Table 1) shows that the adolescents in the sample seemed to be quite positive in their perception of school as they generally obtained mean scores above 2.50 . All the students seemed to be very positive about school when in Secondary One, especially the girls in the Express course.

As expected, the picture was most positive when they were in Secondary One but declined slightly as the boys and girls grew older and moved up the levels to Secondary Four. Probably the transition from primary school to Secondary One made them feel "grown up" and " important". They were less enchanted with their school as they moved up the levels although the overall picture was still a positive one. At Secondary Four, the male students in the Express course and the female students in the Normal (Academic) course had the least-positive perceptions of school. It may be conjectured that for the Express male students, they feel the pressure of school expectations in doing well in the O-Level examinations while the Normal course girls, at 16 years of age, are finding school regulations restrictive of their freedom and enjoyment.

Table 1: Perceptions of School

Level	Course	Male	Female	Average
Sec 1	Express	3.09	3.22	3.16
	N. Acad	3.24	3.03	3.14
	N.Tech	3.15	3.14	3.15
	<i>Average</i>	3.15	3.15	3.15
Sec 2	Express	2.98	2.91	2.94
	N. Acad	2.90	2.97	2.94
	N. Tech	3.03	2.82	2.92
	<i>Average</i>	2.96	2.92	2.94
Sec 3	Express	2.83	2.99	2.91
	N. Acad	3.03	2.84	2.94
	N. Tech	2.88	2.84	2.86
	<i>Average</i>	2.90	2.93	2.91
Sec 4	Express	2.79	2.99	2.89
	N. Acad	3.03	2.76	2.89
	N. Tech	2.87	2.89	2.88
	<i>Average</i>	2.89	2.91	2.89

What are the students' perceptions of their teachers?

With regard to perception of the teacher-student relationship, the majority of the students in the sample were positive in that regardless of age or gender, they all scored a mean that was above 2.50 (Table 2). That the students' perceptions of teachers were markedly higher in Secondary One may perhaps be due to the fact that teachers are aware of the drastic change in curriculum from primary to secondary school and make extra effort to help the students to cope with this change.

However, the students appeared to be more critical of their teachers as they grew older as there was a gradual drop of the mean scores across the age groups. This decrease in mean scores was observed with both gender groups which means both boys and girls alike, became more critical of their teachers as they grew older although the overall picture remained positive. That children become less impressed by adults (whether they be teachers or parents) is not unusual as the children develop greater competency and, hence, less dependency on adults.

The girls in the Normal (Academic) and Normal (Technical) courses had the least-positive perception of teachers when in Secondary 3 while Express-course boys experienced this least-positive perception in Secondary Four. If time had permitted, a sub-study to find out the reasons for this dip in perception for these sub-groups at these particular ages would have been illuminating.

Table 2: Perceptions of Teacher-Student Relationship

Level	Course	Male	Female	Average
Sec 1	Express	3.07	3.12	3.10
	N. Acad	3.12	2.81	2.96
	N.Tech	3.00	2.95	2.98
	Average	3.07	3.00	3.04
Sec 2	Express	2.84	2.85	2.84
	N. Acad	2.89	2.84	2.87
	N. Tech	2.72	2.88	2.80
	Average	2.84	2.85	2.85
Sec 3	Express	2.92	2.90	2.91
	N. Acad	2.93	2.65	2.79
	N. Tech	2.91	2.66	2.78
	Average	2.92	2.79	2.86
Sec 4	Express	2.70	2.80	2.75
	N. Acad	2.98	2.75	2.86
	N. Tech	2.84	2.84	2.84
	Average	2.80	2.79	2.80

What are the students' perceptions of their classmates?

Students, like all human beings, need to feel accepted and appreciated by their peers. The sense of belonging and class membership are important indicators of school adjustment. As the schools in this study are co-educational, the student needs to feel accepted and appreciated by their peers of both sexes. In this study, all the means are above 2.50 indicating that the perceptions of peer relationships were generally positive (Table 3).

In Secondary One, the students from the Express Course and Normal (Academic) course enjoyed more positive peer relationships than their counterparts in the Normal (Technical) course. The Normal (Technical) students are the ones who performed the most poorly in the Primary School Leaving Examinations (PSLE). That this affected negatively their views of themselves, making it harder to accept and appreciate their peers, may be conjectured. This would not, however, explain why their perceptions of their classmates were again lower when they were in Secondary Three. Knowing that such less-positive perceptions of peers may occur, perhaps extra 'team-building' activities could be carried out to bolster relationships and perceptions at Secondary One and Secondary Three levels for the Normal (Technical) students.

Table 3: Perceptions of Classmates

Level	Course	Male	Female	Average
Sec 1	Express	2.92	3.06	2.99
	N. Acad	3.00	2.92	2.96
	N.Tech	2.75	2.74	2.74
	<i>Average</i>	2.93	2.97	2.95
Sec 2	Express	2.83	2.81	2.82
	N. Acad	2.80	2.81	2.81
	N. Tech	2.89	2.84	2.86
	<i>Average</i>	2.83	2.81	2.82
Sec 3	Express	2.94	2.87	2.91
	N. Acad	2.98	2.79	2.87
	N. Tech	2.79	2.73	2.76
	<i>Average</i>	2.94	2.83	2.88
Sec 4	Express	2.91	2.95	2.93
	N. Acad	2.97	2.85	2.90
	N. Tech	3.02	2.85	2.93
	<i>Average</i>	2.94	2.90	2.92

What are the students' perceptions of schoolwork?

With regard to perceptions of schoolwork, there seemed to be no gender differences in that both boys and girls shared similar views of their perceptions of ability to handle the schoolwork. The data (Table 4) shows that in Secondary One, all the students were generally positive about their ability to do the schoolwork. In Secondary Two, the Normal course students, both boys and girls, appeared to find substantial difficulty in coping with their curriculum load. The confidence of the Normal (Academic) students dropped, between Secondary One and Secondary Two, from 3.09 to 2.72. For the Express students, their level of confidence in coping dropped rather sharply from 2.87 in Secondary 2 to 2.67 in Secondary 3.

At the Secondary Four level, it is the Express students who have the least favourable perception of their ability to cope with the schoolwork. This is somewhat unusual as the Express students are the most academically-able, compared to the Normal (Academic) and Normal (Technical), students. While the curriculum expectations for the Express course are more demanding than for the Normal courses, it is still a bit surprising to find that Express students feel the pressure much more. One may conjecture that the Express students have much higher expectations of doing well in their schoolwork (and, hence, in their tests and examinations) especially at Secondary Four when the qualifying examinations for the next level of education (junior colleges and polytechnic) are held. Consequently, they may feel relatively more anxious at this stage. There seemed to be no gender differences in that both boys and girls shared similar views in their perceptions of their ability to handle the schoolwork.

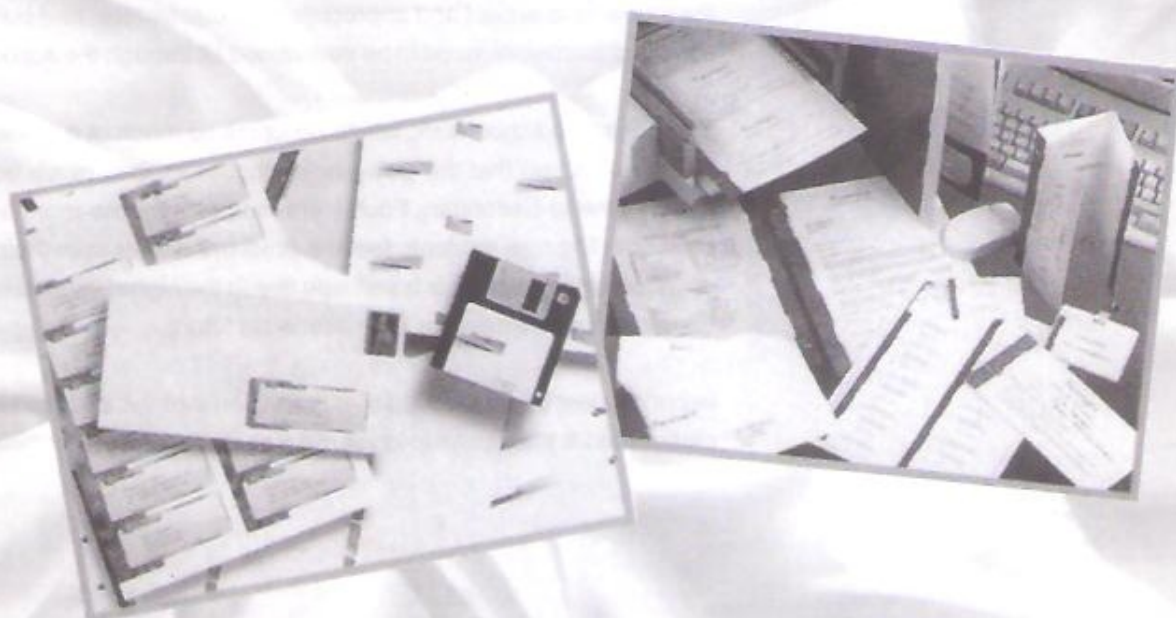


Table 4: Perceptions of School Work

Level	Course	Male	Female	Average
Sec 1	Express	2.91	2.89	2.90
	N. Acad	3.11	3.07	3.09
	N. Tech	2.87	2.95	2.91
	<i>Average</i>	2.97	2.96	2.96
Sec 2	Express	2.86	2.88	2.87
	N. Acad	2.71	2.73	2.72
	N. Tech	2.74	2.77	2.76
	<i>Average</i>	2.80	2.82	2.81
Sec 3	Express	2.68	2.66	2.67
	N. Acad	2.82	2.72	2.77
	N. Tech	2.62	2.74	2.68
	<i>Average</i>	2.72	2.69	2.70
Sec 4	Express	2.64	2.66	2.65
	N. Acad	2.81	2.75	2.78
	N. Tech	2.91	2.82	2.86
	<i>Average</i>	2.72	2.70	2.71

Summary

The data from the different questionnaires indicate that the students in this sample of 250 students generally have positive perceptions of their school and enjoy being in school. No doubt much of this positive perception is due to their teachers and principals who care for them.

The students are also generally positive about their peers. As the students in secondary schools are at a very impressionable age, it is important to ensure that their peer influence is a good one. Activities that help the students to accept and appreciate their classmates, and build team-spirit and teamwork, need to be maintained all through the school years.

With regard to schoolwork, which occupies so much of a student's life, the students feel that the going gets tougher as they move from Secondary One to Secondary Four. Here, surprisingly, the more academically-able Express students feel the pressure harder than their Normal course counterparts. This is perhaps due to the higher expectations that Express students have for their academic future.

In conclusion, it may be said that the majority of the 250 students who participated in this four-year longitudinal study generally liked their school,

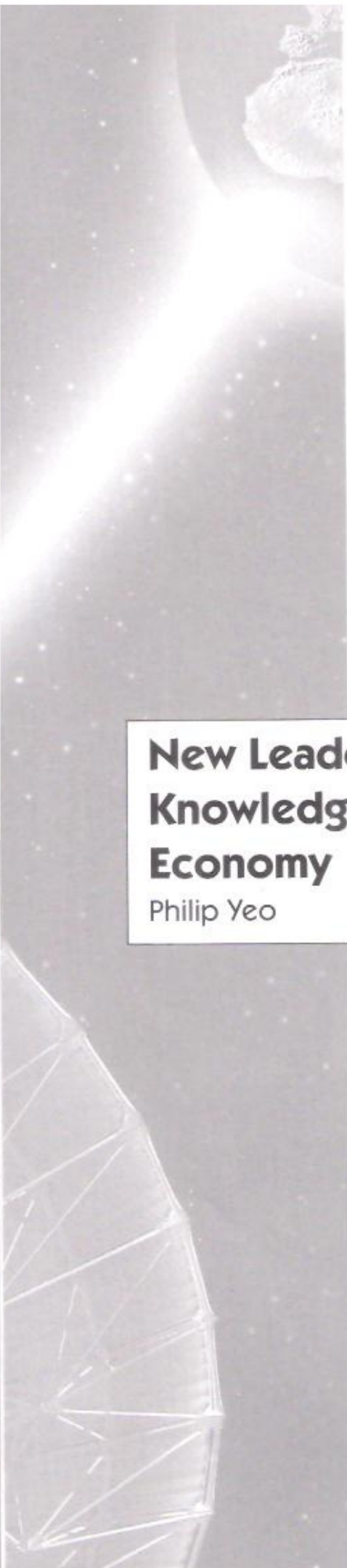
related to their teachers and classmates positively and were able to cope with their schoolwork sufficiently well.

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Let me begin by first making a few broad observations on Leadership and how I think it has changed in history up to our time. I will then try to apply some of those ideas to the new conditions of a Knowledge-Based Economy or KBE. The mission of the Economic Development Board today is to nurture a KBE. A KBE environment is one in which knowing how to use knowledge will be the key ingredient for success. And leaders must do this well. The question is how.

I intend to look at Leadership mainly as it applies in business and the workplace. But let us start with a look at history. To be a leader has never been easy. Those of you who are leaders in your field might agree with me. Those of you who are trying to get there might agree with me even more. To be a leader is to provide the vision, to lead, to sustain the confidence, trust and respect of others, and to motivate them towards higher achievement. This requires great personal effort, energy, perseverance and, at times, self-sacrifice. This has not changed, although the means may have.

Perhaps one can argue that it has become harder to be a leader now than in the past. In ancient times, leadership was rarely questioned.

Everyone knew who was the king, emperor or pharaoh. The leader's word was law. There was no choice but to obey. Well, there was a choice, but only if you did not mind having your head chopped off! Of course, there were times when leadership was challenged on a large scale, such as in wars. But the challenge came from other leaders, of other states or countries. Also, these conflicts were mostly motivated by differences in religious belief, or were battles for land and trade between

territories. By and large, leaders could lead undisturbed. The hierarchical social system, which was widely practiced (mostly imposed), meant that this kind of automatic acceptance of leadership was in operation in every area of life, from the state to the community to the family.

All that has changed. Satellite TV and mobile phones are invading the most remote jungles. Today, even relations between parent and child are quite different. In those days, parents had a pretty good idea what their children were up to. Children did not have much opportunity for contact with others outside the family, and through that contact, to learn new ideas to challenge parental authority. Today, children speak a computer language that some parents cannot even begin to understand. In many Singaporean homes now, children have their own personal fixed telephone lines and mobile phones. They are able to know much more about the world than their parents. My own children use the Internet to increase their understanding of the world every day.

New Leaders for a Knowledge-Based Economy

Philip Yeo

Now let's do a fast-forward through history. We see that the concept and acceptance of Leadership has changed over time. It has evolved along with the economic, social, philosophical and cultural transformations in human life. For instance, in philosophy, the idea of individual free will and self-determination has increasingly gained acceptance around the world. This has made it more difficult for leaders to just snap their fingers and expect silent obedience. Even in the army, the place where one used to instinctively picture automatic leadership, Singapore is now talking of the thinking soldier. This is a soldier who may obey an order from a higher-ranking officer, but not before thinking through for himself whether he has any value-add to offer, or whether he has a suggestion for a better way of doing things that the officer may not have thought about. New leaders must convince, not just command.

Technology has been a major driving force in changing the structure of human organisations. For instance, the tremendous advances in physical mobility have allowed people to vote with their feet whenever they found their existing leaders not entirely to their liking. The invention of the automobile, the train, the airplane, and other means of movement have literally liberated and transported people to wherever they want to go. Who knows, one of these days, the creation of a personal helicopter that you can strap to your body and fly anywhere you like will bring about another whole new era of personal mobility. The only downside will be that you cannot claim frequent flyer miles! Leaders must learn new ways of persuasion when their followers can fly...

It is the driving force of technology that leads us to this question of how Leadership will change in a KBE. Leadership will be affected as the nature of business and the world changes. But I believe there will always be some things that will not change despite the information revolution. Some enduring qualities of leadership will survive despite technology. This should give some comfort to the old-fashioned among us, who would like to see some stability and serenity in the world we know. I can think of ten changes that will affect the nature of Leadership in a KBE.

First, the new leaders must demonstrate that they can process information well. There is no running away from the impact of the Internet. It offers information to everyone. Today, you can search and learn something about practically everything from a website. For me, I am trying to study biology #101 and brain sciences #101 off the World Wide Web. Practically every organisation has a website where there is available, for free, at the click of a mouse, much more information than most people would ever want. The flow of information has exploded. But information is not knowledge. It is possible to be swamped with information, and yet know next to nothing. Knowledge still means processed information, information that has been extracted and made to relate to other informa-





tion, so that it becomes more useful. What this means is that a leader is still the one who can turn information into knowledge, and apply it better than the next guy. Those who work in academia, like many of you in the audience, will play a vital role in teaching these skills. In fact, with the information explosion, one might even say you have your work cut out for you.

Second, leaders must know that the value of human interaction will remain crucial. The Internet has brought about global connectivity. But while anyone may be able to email the US President, not everyone can gain an audience at the White House. A leader will still be the one who networks better and has more and better connections. He is better able to maintain them to effective use, to bring benefit to others. The people skills required for this will still be an asset to any organisation. The Internet can never replace human contact totally. It is an enabler of human communications, but face-to-face contact will still be crucial. You can email a frozen smile. But you can't email the warmth of a handshake. It is about trust, chemistry, call it what you like. This is why I am on the investment road much of the time; there is nothing like connecting face-to-face across a table to bring home the bacon. Though, some Singaporeans think the investments fall generously from the deep blue sky.

Third, new leaders must be very good at differentiating between good and bad ideas. The ongoing dotcom fever has seen an explosion of business ideas. The leader will be the one who can spot the winner. As business becomes globalised and open to competition from everywhere, it will become harder to protect a business purely on physical barriers and protectionist actions. Business will simply move to where it is easier to make money. In such an environment, continuous innovation and creativity are crucial ingredients of success. A leader will be one who can innovate and create value better than anyone else. This will not change. Of course, you might say that a dim-witted boss could buy talent and pay people to innovate and create for him. But the boss still needs to be able to know a good idea when he sees one.

Fourth, new leaders must know how to get financial backing. To grow a business, size does matter. This is still true, which is why there are so many mergers and acquisitions going on, from pharmaceuticals to petrochemicals to print media. In a KBE, it will become easier in some cases to raise money, as venture capitalists put money into what they think are good ideas, to bet on the next big winners in business. Whatever the case, a business leader with an idea must be one who can convince the people with the deep pockets to part with their money. This "extraction ability" remains a useful attribute, no matter how the nature of business is transformed.

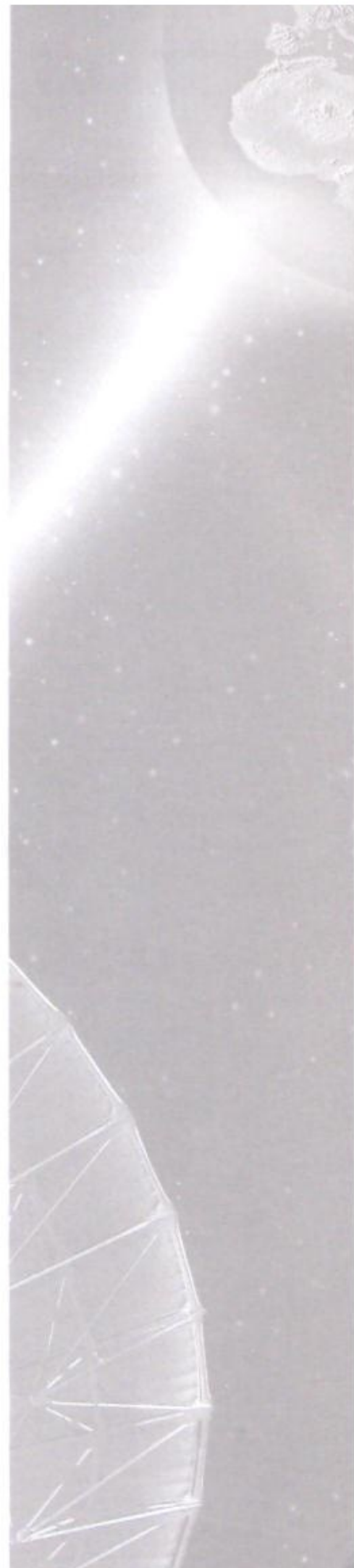
Fifth, in a strange way, new leaders at times have to be not more democratic but more decisive. A key facet of the KBE will be the increasing need for speed and flexibility. Decisions will have to be made in what is now called Internet time, with no respect for time zones. There will be less time for prolonged boardroom deliberations or consensus. To take a risk is to take firm decisions and act swiftly. At the same time, more consultation will be necessary when you have more brainworkers with you. So, the consultation process will have to be super-quick – the way I like it, as my staff can tell you.


Sixth, new leaders must be good at inspiring others. Earlier, I mentioned that, even in the army, the relationship between subordinate and superior is changing. This development will be even pronounced in civilian life. In the schools and almost everywhere else, the power relationships between the leader and the led will be realigned.

No leader, or boss, who just barks orders like a bulldog, will get very far. Today, one must inspire, convince, at times, even plead and cajole. The stern disciplinarians of the old Parade Square, if there are any of them still around, must be glad that they are retiring, or going R-O-D.

Seventh, to earn a true following, leaders must maintain the highest standards of honesty and integrity and have the humility not to crow about their achievements. Honesty and integrity is about doing what is right even when no one is watching, as someone has once said, or when the personal cost is high. A Leader must lead by example – not by talking alone, but also by walking their talk. Humility is about acknowledging the contribution of others within and without his/her organization. Borrowing loyalty and support is crucial in our fast pace of life today.

Eighth, new leaders must be good motivators. Another aspect of the KBE is the increased mobility of the highly talented. The human needs for fair recognition and remuneration will become more important on the individual worker's agenda, if increasingly we say we believe that human talent is critical in a knowledge economy. Those who have skills in high demand can, and will, move to where the best opportunities are. What this means for leaders is that more time may have to be set aside for on-the-job training for new staff, given a higher turnover in the job market. Being a good manager will mean being able to communicate ideas well and to inspire confidence. On the other hand, there will be those who are less skilled, who will still need to be motivated, despite the skills gap. All in all, leaders will need to be more conscious of the need to communicate with workers and of the best ways of motivate them at different levels.





Being good motivators will also mean being good at spotting talent and ensuring leadership succession. These skills will make the difference to how well an organisation can survive and function, even when the baton of leadership has to pass to the next man.

Ninth, new leaders will have to be broad generalists, with a good working knowledge of many fields and of current affairs. The changing nature of work, and the faster pace of change itself, will mean that more work may have to be done in ad hoc teams, with team players bringing diverse expertise in a multi-disciplinary fashion. Everyone is being asked to multi-task, to apply knowledge in one field to other fields, as technology converges and new synergies between different spheres are discovered all the time. Leaders must be able to do this better.

Tenth and finally, new leaders will have to be good strategic thinkers, because of the frenetic pace of change. They must be able to see beyond the horizon and yet not lose sight of the immediate. If the world is changing before our very eyes, leaders must be nimble and versatile, to adapt swiftly to new conditions. There can only be less room for rigidity and inertia. The butcher of sacred cows will be kept busy.

A Knowledge-Based Economy opens up myriad opportunities for people to gain instant access to information and connections on a scale never before experienced. Fundamental qualities of Leadership have not, and will not, change. But there is no turning back the clock's impact on Leadership. Wide access to information has made it more difficult to gain Leadership.

Aspiring leaders must put in personal effort to access and apply knowledge better. The new leaders of a KBE will simply have to work harder and smarter to get there, and stay there. The sooner they know this, the better. And this is where schools, and education, come in. As educators, you have a vital task in moulding the new leaders for a KBE. And for this you can freely borrow my ten changes on Leadership in a KBE. I wish you all the best as you apply yourselves to this noble calling.

Philip Yeo is the Chairman of Economic Development Board, Singapore. The above article is the text of his keynote address at the "Education 2000 Conference" held on 7th April at Suntec City.

Teachers' Clipboard...

"Effective leaders blend an understanding of the past with a vision of the future."

Leroy Hay
President
ASCD International



"My interest is in the future because I am going to spend the rest of my life there."

Charles Kettering



"Children are living messages we send to a time we will not see."

ASCD, Iowa State
USA



