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Ideas for Schools

ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT

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ASCD REVIEW

ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT (SINGAPORE)

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A School That Puts Questions In Place

Lim Lee Hean

School climate as a subject of study has captivated the interest of many (e.g. McDill and Rigsby, 1973; Brookover, Beady, Flood, Schweitzer, and Wisenbaker, 1979; Rutter, Maughan, Mortimore, Ouston, and Smith, 1979; Anderson, 1982; Ng, 1985; Quek, 1988). These overseas and local research attest to the significance of school climate. It is difficult for practitioners in education to ignore the overwhelming conclusion from the above studies that school climate does make a difference.

Stripped of its theoretical over-tone, Finlayson (1973, 19) maintains that:

Parents, teachers and *visitors* [italics added] to school become aware of the "tone of the school" after entering it. They intuitively gain impressions from a number of cues -- the way pupils behave towards each other, the way pupils answer queries addressed to them, the way pupils move about the school and how they conduct themselves in

the playground, the way teachers address the pupils, the way visitors are received, to name only a few.

With reference to the above citation, it is on the basis of visitor's observations and interviews that I am unfolding aspects of my visit to a school. The venues of the pupils' interviews were the school hall, study areas and the canteen. The interview questions focused on school life, ranging from structured "What time do you reach school?" to open-ended "What do you think of your school?". Interactions with the pupils revealed that there was no prior announcement of visitors to the pupil population, and hence no special preparation of model interviewees or sights. The observations and interviews were conducted under natural settings, as ideally preferred. Effects of contrivance were reduced to a minimum.

The first three groups of interviews involved five to six lower secondary pupils per group. In the school hall, the interviewer moved amidst the pupils who were seated

on the floor reading, and conducted on-site interviews with randomly-selected pupils. One of the deepest impressions gathered by the interviewer was the unanimous pupils' affirmation that they always came early to school; some as early as nine in the morning to study. It is of interest to note the visit was made in March 1996, a time when there was no examinations round the corner. Such motivation to be *in* school is consistent with answers from three groups of pupils from the graduating classes, who were interviewed in the canteen and study areas. These pupils expressed that they stayed in school after class, till four or six in the afternoon.

While there are schools having to wrestle with the basics of pupils' attendance during official curriculum time, what entices pupils of this school to come early or stay later? Why are they amenable to spend an inordinate amount of time in school doing their school work beyond school hours?

Probing into pupils' perspectives provided some insight. The statements that follow are representa-



An inviting school climate that entices pupils to come earlier and leave later

tive of comments on the pupil-appealing furniture: "I like the school. The facilities (are) good. The tables here look like McDonalds". Brightly coloured, modern designed tables and chairs were placed all over for pupils to study. Even the canteen furniture was not devoid of bright colours. In spite of an enrollment of 1700 pupils coming early and leaving late to study in school, one prime reason cited by the pupils for staying in school beyond curriculum time was the "quiet" school environment which facilitated learning. During the interviews, the pupils confirmed that they were confident of having a seat to study. The school was obviously inviting for pupils to spend their time beyond curriculum hours.

Groups of pupils of the graduating classes were observed doing their self-study even before the start of the program at 1400 hours. They did not mind shortening their lunch break "since we're given the avenue to study". Vending machines dispensing drinks were placed near the study tables for the convenience of the pupils. The pupils also shared with the interviewer their expectation of a better future with good paper qualifications. In addition, they felt that "since they (1995 pu-

pil cohort) have done so well, we have to do better this year."

Besides the facilities, the quiet study atmosphere and the motivation to succeed, the interviews also showed that the school teachers, schoolmates and principal emerged as attributing factors. The teachers were there to offer a helping hand. "The teachers are friendly; help us whenever we have problems." "After school we go and ask them (teachers) if we have difficulties, they will help us." "The students are all quite nice." The interviewees said

that the principal talked to them at times during assemblies or flag raising. "Talk about school life, like our problems, or fight against gangsterism." Seemingly anxious not to be misunderstood by the interviewer, someone quickly clarify, to the eager nods of the others, "There is no gangsterism in our school. Not bad, our school. Students care for each other."

The element of care appeared prevalent. Voiced by both pupils and principal alike, it was like a common thread that weave the human connections. The principal expressed, "Near the exams, students tend to find a place to study at night. I open up the canteen at night for them to study." Acutely aware that his pupil input had "poor foundation", lacking in "self-study habits, exam skills, time management", he sought to bring out the best in them. He engineered the gear towards a conducive school learning environment, driven by his ardent belief that all who reached him can be taught. He declared, "In this school we begin with one premise: All children can be taught. And we end with one premise: All children can be taught."

The pupils were quick to express



Under attractive beach umbrellas, among flowering plants



Pupils staying in school beyond curriculum time, with the convenience of vending machines and appealing furniture

their appreciation of the principal. "Managing school so well, improve the results." "Not every principal can get cooperation of teachers to stay back, give extra lessons." "Those things that need to repair... he repair the toilets." While management literature (e.g. Katz, 1975) asserts that technical skills are subsidiary to conceptual and human skills in top management, in the pupils' perception, getting his hands soiled in the interest of the school was also a quality attribute of the principal. One may argue that the core of the issue is not the technical skills of toilet repair, but by utilizing his awareness of pupils' background and their perceptions, the principal had effectively communicated a powerful message to those in his charge - he *cared* for them.

There was a degree of congruency in the observations of principal-pupil interactions and pupils' verbal expressions. Here are some remarks from the pupils: "He (Principal) is very strict, but very friendly. When we have problems, can see him." and "School discipline is good. Quite strict." When the principal joined the pupils at a later stage for photo-taking, he laughed loudly and

said jokingly of the interviewees, "They are tortured by me." Instead of ordering his pupils to participate in the photo-taking, he phrased it with "Come on, TCS filming Stars." In the school hall, when he sensed some excitement arising as a result of the abrupt interviewing, all that was required of him was a gentle reminder, "The rest of you students continue with reading." There is no question that the principal commanded respect from the pupils; there existed a kind of loose-coupling that blended firmness with being approachable.

It is apt at this stage to name the school and some relevant statistics. When Goh Tong Pak took over the headship in 1992, Xinmin Secondary School was ranked 134 out of 141 in the annual ranking of schools. It has since made phenomenon progress to be within the top fifty schools. From the observations and interviews, it was emphatically evident that such achievement was not incidental. It was sheer hard work and smart work, of a principal who transformed a vision into concrete reality.

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Been There, Done That, Didn't Work: Alternative Solutions for Behavior Problems

Often the best way to help students with behavior difficulties is to demonstrate flexibility and respect.

Barbara J Ayres and Deborah L Hedeem

Ms. Sanderson has just announced that students should take the next five minutes to finish their journal entries and go to the corner of the room for the daily class meeting. One student, Josh, doesn't wait. He jumps up, pushes his journal and pencil off his desk, and heads toward the back of the classroom, pulling classmates' papers to the floor and touching their heads as he passes their desks. Annoyed, they tell him to stop, but he only grins, then stops at the teacher's desk to try out some of her supplies.

Ms. Sanderson asks Josh to put the items down and join the group. He plops down in the middle of the group after stepping over classmates who sit on the floor. When the teacher asks the students to share what they did last night, several raise their hands. Before she

can call on anyone, Josh yells out that he went swimming and starts talking about his outing.

Sound familiar? As increasing numbers of students with disability labels are being taught in general education classrooms, teachers find themselves working with youngsters who sometimes are disruptive, who disregard rules, who appear not to respect the personal space and belongings of others, or who neither pay attention nor follow directions (Hedeem et al. 1996). Classmates may be quite tolerant of these students at first, but over time, they, like their teachers, can become frustrated and unsure of how to respond.

For children or young adults with certain behavioral difficulties, responses that have been successful for other students may be ineffective. Thus we share the following

alternative solutions. First, however, here are four guiding principles that educators we have worked with have found helpful.

Principles of Problem Solving

Teachers need to engage in active, collaborative, creative problem solving with their colleagues and students when developing solutions to common behavioral problems (Janney et al. 1989, Topper et al. 1994). In particular:

Teaching students with behavior problems requires a team approach. General and special educators, parents, classmates, and administrators bring varied perspectives and ideas to the table. Gathering ideas from people who are not directly involved in the situation can infuse new perspectives into the problem-solving process.

Establish a shared vision of your goals for students - the positive behaviors you expect of them, not what you want students to STOP doing. These goals will guide team members in their discussions with one another and in their work with the students.

Understand that behaviors are communication. We may view students' actions as inappropriate, but they often see it as a very good way to get their message across and their needs met. They may act inappropriately to get attention, to play, or to escape a situation. Part of the problem-solving process is determining which messages are behind the students' behavior, so that they can be taught more positive alternatives.

Proactive, preventive plans help students learn new ways of communicating and getting their needs met. Too often, we react to students who have behavioral difficulties only after they've engaged in inappropriate behavior. Instead, we need to identify the skills we'll teach them, and describe how we can respond to inappropriate behavior in positive, supportive ways.

Common Problems, Possible Solutions

The following solutions (and problems) come from educators who are working together to create classrooms where all students are welcome--regardless of their physical, intellectual, or emotional characteristics. Their solutions provide three important needs--choices, structure, and predictability.

1. Make successful transitions. Some students have difficulty moving from one activity or subject to another. For example, a child might continue to add to his or her draw-

ing even after the teacher tells the class to finish the project later. The child may become upset when you insist that she stop. Trying to reason with the student, you find yourself caught in a power struggle, wondering who will win in the end.

- Rachel's teacher used a timer in addition to a verbal reminder. With ten minutes to go until the next activity, he would approach Rachel, set the timer for five minutes, and tell her that when it rang, she would need to start putting her things away in preparation.
- Larry's teacher gave Larry an item to be used in the next activity that he could carry. For example, when it was time for a story, the teacher handed him the book she planned to read. She would tell the entire class the name of the book while Larry held it up for everyone to see. She would then ask Larry to take the book to the reading area. In addition, to pique the class's--and Larry's--interest, she often related an interesting tidbit from the book.
- Kristen's teacher discovered that a daily picture schedule helped. She took photos of Kristen and her classmates participating in various activities and put them in a small book. A few minutes before each transition, she asked Kristen to take out her schedule book and look at herself having fun with her friends in the next activity.

2. Create a sense of control. All children strive to feel a sense of control in their lives. Some, however, exert control in ways that many adults find difficult to understand and accept. As teachers, our natural instinct might be to restrict their privileges and try to show them who is boss. But teachers who work

with these students successfully give them many opportunities throughout the day to feel a sense of control, while providing an overall structure.

- Laticia's teacher emphasized choices by asking where Laticia wanted to work (at the desk or at a table), what writing utensil she wanted to use (pen, pencil, or marker), what color paper she wanted for her final project, and whether she wanted to write or illustrate her response.
- William was a student who had many ideas about what he wanted to do at any given time, and he was determined to carry them out regardless of what the rest of the class was doing. His teacher helped him plan a sequence, asking him to first state what he wanted to do, then figure out a plan that was acceptable to teachers and classmates, and then determine an appropriate time to do it. As a result, William knew that his teacher was interested in his ideas and that he would be allowed to follow through on them--at the appropriate time.

3. Follow classroom rules. At the beginning of the school year, many teachers work with their students in drawing up classroom rules. With only periodic reminders, most students follow these rules, but a few do not. Some disrupt classmates who are working or standing nearby, speak out without being called upon, or use inappropriate touching or language to convey their needs.

- When Tony swore in class, many of his classmates would giggle, thereby encouraging him to swear more often. His teacher did not permit swearing in class, but she knew that Tony had a difficult time controlling his words. She met with the class

and asked for ideas. They decided not to laugh when Tony swore, and, in fact, to compliment him when he used friendly, pleasant language.

- Carrie's teacher wanted to help Carrie learn to raise her hand and speak politely in a "classroom voice" instead of yelling out her responses. The teacher moved Carrie's desk to the front of the room. On an index card, he wrote the steps involved (get an idea, raise your hand, wait to be called on, speak in a soft voice), then taped the card to Carrie's desk. Carrie practiced this sequence with her teacher twice a day. Whenever Carrie spoke without being called upon, the teacher would remind her to raise her hand by pointing to the card on her desk.
- Jeremy had difficulty expressing himself in class and would sometimes hit his teacher or classmates when he wanted their attention. Jeremy's teacher decided to help him learn to tap others on the shoulder or hand instead. Whenever Jeremy approached someone or needed something from another person, an adult or classmate would remind him to tap them lightly in order to gain their attention. If Jeremy did hit someone, he was prompted to tap them instead.

4. Share information with other students. We have always been concerned with the confidentiality of students who receive special education services. But just because we do not say anything about a child's behavior does not mean that other students don't notice it. When students with behavioral difficulties are educated in general education classrooms, peers will often observe and question their behavior, as well as the adults' responses. The students

will also mimic the adults' attitudes and behaviors. For these reasons, it is important to be honest with the student's classmates so they can begin to understand why he or she is using certain behaviors.

- In Angeleen's classroom, the teacher discussed similarities and differences among all people and asked the students to identify these qualities in themselves. He then read the class stories about children with special educational needs, one of whom was much like Angeleen. On a day when Angeleen was out of the classroom, her classmates discussed how they could tell when she was becoming upset and try to redirect her attention to something else. They generated a list of ideas and picked two they would try during the next few weeks.
- Byron, who had Tourette syndrome, was an accepted member of his own 6th grade class. Some of his friends noticed, however, that the other 6th graders were not treating him very kindly during lunch hour and recess. With the encouragement of their classroom teacher and the special education teacher, his classmates organized an information session for all the students. They discussed similarities and differences among people, and Byron offered specific information on Tourette syndrome, the tics and other behaviors he could not control. The teachers who are most successful in working with students with behavioral difficulties are those who collaborate with colleagues, students, parents, and people who are not directly involved and therefore can offer new perspectives. Successful solutions tend to involve educators and classmates who show flexibility and respect; and pro-

vide choice, structure, and predictability.

Teaching students with behavioral difficulties can be challenging, but it is well worth the effort. When teachers see the positive changes they have brought about, they know their hard work has been generously rewarded.

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Disruptive Behaviours: The Student's Perspective

June Y. C. Mak & Lily Y. S. Wong

Misbehaviour in the classroom is not a new problem. All teachers have to deal with it to ensure a conducive learning condition. If misbehaviours which disrupt the learning routine are not controlled, it is bound to interfere with the learning and teaching process of all members of the class. As such, any disruptive behaviour in the classroom is a matter of concern not only for the teachers and the school but also the learners themselves. Even the misbehaved students seem to want lessons to be free from disruption. They rank the ability to control the class as the most important characteristic of a teacher (Gannaway, 1976).

Teachers have their own perception of misbehaviour. At a forum on discipline in Singapore schools organized by the Singapore Teachers' Union in July 1994, participants attributed misbehaviours to negative peer influence, poor parental supervision, unfavourable home background, diminishing authority of the school, negative peer values, values transmitted by the mass media, stu-



TEACHING TEACHERS TO TEACH

dents' part-time employment and over-protective parents.

Parents, on the other hand, perceive that schools are not doing enough in this area to curb misbehaviour. They are at the same time divided in their views as to how much of the problem is their responsibility and how much of it is that of the teachers and the school.

In all these discussions, the pupils' perception of misbehaviour is not given due attention. What are their views on misbehaviour in the classroom? Perhaps their perception and suggestions could enlighten teachers, parents and the school and may shed further light on the problem and management of disruptive misbehaviour in particular.

This study attempts to understand a bit more of disruptive behaviours in the classroom, and how they can be reduced. Suggestions from the students may contribute to the measures of overcoming disruptive behaviours. With the understanding of the problem also from the students' point of view, both teachers and learners can work collaboratively to curb misbehaviour and thus improve the learning environment for all students. As Rogers (1969) puts it pointedly "the crux of the learning situation is the relationship between the facilitator and the learner."

The Study

The first author approached her colleagues, and 50 teachers (out of 58) agreed to be involved in the study. First they were asked to identify the behaviours which often disrupt their lessons. The behaviours were then ranked based on the number cited. A list of 12 most commonly occurring misbehaviour was drawn up as follows:

1 talking during lessons

Level	Times being identified					Total
	1	2	3	4	5	
Sec 1	18	5	1	0	0	24
Sec 2	57	16	2	2	1	78
Sec 3	30	18	6	1	0	55
Sec 4	27	14	2	0	0	43
Sec 5	9	5	1	0	0	15
Total	141	58	12	3	1	215

- 2 no books (textbooks/exercise books/workbooks), stationery, instruments, PE attire, art materials, wrong books
- 3 inattentiveness, day-dreaming, lethargy*
- 4 joking, teasing friends, unnecessary remarks, playing, kicking neighbours' chairs, throwing papers and things at one another
- 5 sleeping in class*
- 6 not doing homework/assignment, not handing in books, do not meet datelines, need to be chased
- 7 absenteeism, truancy, leaving class without permission, not in class but in school
- 8 rude/aggressive when reprimanded using vulgar language, indifferent/disinterested attitude
- 9 walking/moving about in class, changing seats
- 10 making disruptive noises (whistling, drumming tables and chairs)
- 11 late for class especially during changeover of periods
- 12 quarrel/fight/argue/unruly behaviour

(Note: * a misbehaviour which is not disruptive but not tolerable)

Based on this set of misbehaviours, teachers were then asked to name two students who consistently display each of the behaviours in their lessons. Eight

misbehaved students, two from each level, from Secondary 1 to 4, were short-listed for interview. The questions asked of them were meant to find out from them as to how and why they misbehaved and what measures could be used to help them overcome the disruptive behaviours in class. Four well-behaved students, one from each level, were also identified. Their views on how they and teachers could help were elicited.

From the teachers' identification of students who were disruptive in class (see Table 1), we could see that three times as many Secondary 2 students as Secondary 1 students were identified as misbehaved. The numbers identified from Secondary 3 and Secondary 4 were each about twice as many as those identified in Secondary 1. This suggests that the youngest students in this secondary school were not as bold but had the tendency to be restless. Once they were adjusted to the new school environment, they could be equally disruptive. At the same time, fewer Secondary 5 students were identified as disruptive, probably due to the small number enrolled in this level. Also, it could be that those who could not endure the discipline of schooling would have left school and those

Table 2: No. of Students by No. of Misbehaviours by Level

Level	Number of Misbehaviours				Total
	1	2-3	4-5	> 6	
Sec 1	13	8	1	2	24
Sec 2	48	26	4	0	78
Sec 3	28	21	4	2	55
Sec 4	24	19	0	0	43
Sec 5	8	4	3	0	15
Total	119	78	12	4	215

who remained were more serious about learning and were less likely to misbehave.

Altogether 215 students were identified to be disruptive. Fortunately, only seven percent of these students were identified as misbehaved more than twice (see Table 1). About the same percentage of students displayed more than four types of disruptive behaviour (see Table 2). Nevertheless, with such a vast number of misbehaved students, identified once or more by teachers as disruptive, and displaying one or more types of misbehaviours, it was necessary for teachers to help reduce misbehaviour so that learning and teaching can go on.

Reasons for misbehaviour

The eight misbehaved representative students were asked at the interview to give reasons for their behaviours. They were honest to share their views with the first author. Reasons revealed were that:

- the lessons in these classes were boring
- they were unable to cope with the lessons (attendance has been irregular)
- they had lost interest in these sub-

jects and disruption was a means to pass time

- they could not understand teachers' teaching as explanations were not clear
- the class was noisy, they could not concentrate, so they joined in the misbehaviour

The above reasons for misbehaving were mostly lesson-related. Some students confessed that they did not always misbehave. It all depended on who the teacher was as well as the lesson being taught. Only one student claimed that he misbehaved because he simply wanted the teacher to answer his question. He revealed that "the teacher ignores him, brushes him aside and scolds him as troublesome." No wonder students' behaviour varied from teacher to teacher. Other reasons for misbehaving include:

- the urge to talk and to share with friends especially after a long weekend, and
- the lack of home support and parental supervision as parents were divorced, separated or busy at work and they needed to be listened to.

Misbehaviours due to the above reasons could be eliminated if teachers put aside time for students to communicate in class and gave them opportunities to voice their opinion, be these grievances or joys. Time well spent in the class is more meaningful and preventive than time spent on controlling or managing in a reactive or punitive manner.

Management

Twelve students, eight misbehaved (all boys in this school, except a handful of girls in Secondary 1 but none of the girls was identified as misbehaved) and four well-behaved, were interviewed individually to find out what teachers could do to reduce misbehaviour. They generally exonerated themselves from the disrupting incidents. A few mentioned that they could help to make classroom learning experience a better one for themselves, their classmates and their teachers. They suggested several ways they could do to curb disruptive behaviour in class. Some mature and reflective responses were as follows.

- Students need to be more disciplined themselves.
- Students need to be diligent in their studies.
- Students need to be regular in their attendance in school.
- Students need to cooperate with their teachers.

Since the students were ready to be responsible for their actions, they should be made to understand why disruptive behaviours were disapproved. They should be told that misbehaviours interfered with the learning opportunities of other students and imposed stress on teachers (Mortimore et al., 1983). Any act of misbehaviour prevented the teacher from teaching and the

learners from learning.

With their experience in misbehaving and understanding of their own misbehaviour, they made several suggestions for teachers to consider:

- Teachers need to be firm and be in control of their classes as 'soft' teachers could be taken advantage of by students. Control could be done through the setting and enforcement of classroom rules.
- Teachers need to be consistent and fair in reprimanding or imposing punishments, that is to scold or punish only the guilty ones; do not pick on the misbehaved ones over and over again just because he had misbehaved before; not to send students to detention class for small matters like talking in class.
- Teachers need to teach well and systematically, making lessons interesting and be clear in their explanations and instructions and thus avoid boredom.
- Teachers need to try to understand their students, be friendly, talk and laugh with them, scold when necessary but not to nag; respect them and receive respect in return.
- Teachers need to be supportive, and be reasonable in their demands and expectations.

During the interview, the students also suggested some management strategies:

- The very disruptive students should be sent out of the class so that others in the class would not be affected.
- The Discipline Masters could intervene in very disruptive and noisy classes and when the situation is out of control.
- Parents could be called to school

to discuss the problems but this measure should be used only as the last resort.

- The misbehaved pupils could be sent for counselling.

Implications for the school

The type of problems that occur frequently in our classrooms are actually not serious. But the long term solution to such disruptive behaviour would require personnel, teachers in particular, who have both the skills and the personality to cope positively and constructively with these problems. One of the most effective ways to influence the style of classroom control in a school is by open communication and discussion with students as well as with colleagues. Teachers need to upgrade their skills in the cognitive area continually. What they teach should be relevant to the lives of the students they come in contact with, thus making the content more meaningful to learners.

The wider implication is for the school to intervene and support the teachers in their effort to manage their classes. Administrative support should be positive as teachers are reluctant to make referrals. Referrals are often construed as a reflection of teacher competence. At the school level, the administration could explore the idea of setting up 'time-out rooms' where disruptive students could be sent 'to cool off.' It has to be supervised, but going to these rooms should not be seen as a punishment. Perhaps more importantly, the school could look into the possibility of providing small group teaching or a remediation programme in so-called 'detention rooms' for students to complete their work under supervision. In addition, a back-up service which the school administration has to strengthen in terms of resources and training is counselling. Disrup-

tive students can be assisted through counselling to develop a sense of responsibility for their actions.

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Getting Pupils to Visit and Use Library Facilities

Evelyn Looi

Reading maketh a man
Sir Francis Bacon

“Reading widens your knowledge, experience and horizon, heightens your sensitivity to language and deepens your appreciation of life”

As educators we believe in the value of learning. Indeed one can say that the love for books and learning is one of the marks of the educated person. As such, every effort should be made to inculcate this love in our students and the library, a centre of independent learning, must be made a part of the pupils' life.

To begin with, I feel that money spent on creating an attractive ambience is an investment as it does draw the pupils in. The library can be made a pleasure to visit if, besides being well-lit and air-conditioned, it has comfortable chairs, cushions and a generous amount of

greenery and eye-catching posters.

Displays, Pathfinders, Projects

Wherever possible, we have tried to create little nooks with display tables based on themes. These are changed every month or so, thus providing something interesting for the pupils each time they visit the library.

Display tables can focus on academic areas like History (Upper Secondary), History (Lower Secondary), English and so on. This is enhanced by a “Pathfinder” on the subject. Pathfinders are topical lists of recommended books, complete with ratings. Other non-academic areas include Biographies, Social Issues, Teenage Problems, Sports, Craft and Indoor Entertainment, Local Fiction, Light Reading and so on. Librarians are in charge of these tables, arranging them attractively, replenishing them and even deco-

rating the table with related artefacts. This project done on a competition basis usually raises the standard of work.

A year-round display is of course the New Arrivals table and revolving shelf which is enticingly located at the entrance. Some other year-round displays could include focus on Popular Books, Light Reading, Librarian's Choice/Highly Recommended Books. Here we have taken advantage of the selection from “Who's Reading What in Singapore”, a publication of the National Library which features the choices of well-known local personalities. We have even made bookmarks based on them and put them in the corresponding books.

Displays can also be effectively linked with the school calendar. The tables could be filled with books on Saving the Earth just prior to Earth Day, Chinese culture, folklore and festivals in the Chinese New Year

season, the Singapore Collection - People, Places, Fiction during the National Day period, Craft books just before the holidays and so on.

More significantly, these displays can be co-ordinated with projects and quizzes organised by the various departments. When this is done, pupils will have to make a trip to the library; they will also be convinced of the relevance of further reading to their curriculum. Sometimes there is a need to red-spot selected books, i.e. for reference only, during the period of the project. This is certainly one way to ensure the compulsory use of library material!

Holiday Reading Programme

The school holidays, in particular the mid-year and end-of-the-year holidays, are optimal periods to implement compulsory borrowing of library books. Classes are rostered to visit the library for their compulsory borrowing (each pupil to borrow 5 books - at least 1 fiction, 1 non-fiction, 1 Chinese and 2 of his choice). This is held during the post-exam period. Having carried this out for a few years, it seems to have reaped benefits. During the recent holiday, well over 80% of the pupils borrowed books even though it was made not compulsory. I'd like to think it has become a part of the school culture.

Enrichment Activities - Films, Quizzes

The screening of films based on books is a marvellous springboard to introduce pupils to reading, especially of the classics. Where teacher-librarians are available, a discussion of the book and/or author following the film would certainly enhance its appreciation. Ready-to-use worksheets and activities based on well-known films



New Arrivals



Who's Who Quiz



Multimedia Resources

Every effort should be made to inculcate a love for books among pupils and the library, a centre of independent learning, must be made a part of the pupils' life.

really, the questions can be 'recycled' after a few years!

Publicity & Promotion - Talks, Notice-boards, Newsletter, Reports

Rapport with the school population can be established with scheduled termly talks by a teacher-librarian. Pupils will be kept informed of current and forthcoming Library activities. New books as well as highly-recommended books can be highlighted. Celebrities and teachers can be invited to share about the books they enjoyed reading. Some writers are quite willing to share their experiences at school talks.

Another way of making the school more aware of Library activities is the use of notice-boards. When placed in a strategic location where no one will miss seeing it, as well as strikingly done up (Tip: Get the help of Art students, or again roster it to groups of enthusiastic Secondary 1 librarians), it often proves highly effective in giving the library a high profile. The library can also hitch on to the school newsletter by asking for a regular column in it, and even asking *their* personnel to do the write-up!

Besides having posters of "New Arrivals" (photos of books look very attractive), it would be good to keep the school informed of the top 20 books borrowed for the month and also the monthly Loan Statistics of each class. In fact, our loans statistics are taken into consideration in the "Model Class of the Year Competition".

The Support of the Principal and Heads of Department

This cannot be over-emphasised. Besides allocating a substantial budget to develop the book collection, the employment of a library aide to assist teacher-li-

brarians is invaluable. The selection of teacher-librarians with a passion for the library is crucial too. These teachers should, I feel, concentrate on one ECA only if we hope to make the library a place the pupils love to go to.

Excellent service

On the part of the librarians, we have to ensure excellent service. Open communication via a suggestions or reply service should be provided. Allowing reservations of books and providing an enquiry service would also be much appreciated.

The Media Centre

Having a Media Centre, with computers, video and laser-disc players has certainly made the library more attractive and this is an area we can capitalise on.

Information Skills Lessons

This is yet another area we can capitalise on to inculcate in pupils the relevance and benefits of the Library to their lives. In our school, these lessons are a compulsory part of the curriculum.

Library work, no doubt time-consuming, really offers a whole creative, challenging and rewarding dimension to school life. The satisfaction of course comes when the library becomes a place they love to go to and this remains for the rest of their lives.

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and books are also widely available in the market nowadays. Ideal times to screen these films would be on Fridays, the day before a public holiday and during the holidays.

Quizzes are another way to encourage reading and indeed to implement compulsory reading! They could be on Books in general - Authors, Titles, Characters, Set texts, Great People, Quotations, Singapore History or any other subject area. Quizzes, especially when done on a bigger scale with a large audience and attractive prizes, are generally exciting, enjoyable and memorable. It may require tremendous effort organising the quiz, but

School-Wide Voluntarism

Students at Buona Vista Secondary serve the community

Mabel Lim

Buona Vista Secondary School wants its pupils to have a deeper sense of care and concern, especially for the elderly and the less fortunate. As such, the school is striving to provide an education "Towards a Caring Nation" for its pupils. The school also believes strongly that it has a duty to serve the community in its immediate neighbourhood.

All lower secondary pupils involve themselves in helping two charitable organisations (affiliated to the National Council of Social Services) in flag days. Regular visits are planned throughout the year so that a closer relationship is formed between the elderly and the youngsters, with benefits to both. The elderly receive companionship while the pupils have much to gain from the interaction.

It is hoped that, after four or five years in the school all pupils would have adequate opportunities to in-

volve themselves in activities that help them grow in social consciousness and develop a deeper sense of care and concern for the elderly and the less fortunate. And when they leave Buona Vista Secondary School, they would be among the many citizens helping others strive "Towards A Caring Nation". In this way, the school would be contributing much to society.

School-Wide Voluntarism began when Dr Anthony Loh joined the school in February 1990. He noticed that the elderly would walk up and down, through the school, sit in the canteen or at the technical workshop. He was curious and wanted to know who these people were and what they were doing in the school. According to the members of the school advisory committee, they told him that these were people from the HDB flats in the neighbourhood. They were retired, lonely, perhaps even living alone.

He decided that as a school we had to do something for them.

In May 1991, the school wrote to the HDB, the Ministry of Community Development and the residents' committee asking for names and addresses of senior citizens living in the neighbourhood. The search yielded 300 names and a questionnaire was sent out to ask what their needs were and whether they would welcome visits from pupils. Some 90 families responded and in the following month, Secondary 3 Express pupils in groups of three and four were matched in terms of language and visited the elderly regularly. This programme was further extended to include the Normal course pupils in 1993. Secondary 3 pupils were trained in skills in caring for the elderly.

Before actually going out and visiting the senior citizens, all Secondary 3 pupils must attend a school-based workshop on under-



Having a little tea party with the elderly

standing the elderly. This workshop takes them through an experiential learning exercise where pupils experience what it is like to be old. One of the experience was to stuff cotton wool in their ears and to try listen to others talking. Next, they wore goggles that were tinted and found it difficult to see clearly, especially the depth of the stairs. To experience how the taste-buds of an elderly would change, pupils try to taste a sweet while they pinch their noses. They also put plastic bags over their hands and found it difficult to unbutton and button their shirts. We also had their legs tied to simulate difficulties in walking. In 1995, some of the pupils also had the privilege of trying out the senior simulator kit through the help of the National Council of Social Service. Pupils also had a chance to role-play communication techniques with a canteen helper and an associate teacher in the school. This role-play had enabled them to ask questions more tactfully so that the senior citizens will feel more comfortable talking to them.

The pupils make it a point to visit the senior citizens at least once a month. Every year the whole school will contribute foodstuffs and distribute them to the senior citizens

just before the Lunar New Year. One of the groups learnt to prepare some food for the elderly bearing in mind not to add too much salt, sauces or chilli in the dishes. They even invited one of her neighbours to a little tea-party.

How has the visit change the pupils understanding about senior citizens?

Before the visit, many pupils thought that senior citizens were grumpy people but after the visit, they realised that the elderly were actually very cheerful. Some of the pupils were nervous and afraid that they would be turned away by senior citizens on their first visit. It turned out otherwise as the senior citizens were easy-going and friendly. One of them took the trouble to serve drinks and made a special effort to remember the likes and dislikes of the pupils.

The pupils learnt that they should care more for the elderly and try to help them in whatever way they could. They also learnt to care and share with the elderly and treat them like family members. One pupil even commented, "I have learnt to respect and take care of the elderly even though they were not re-

Pupils learnt that they should care more for the elderly and try to help them in whatever way they can.



Putting plastic bags over their hands and trying to button and unbutton their shirts



Learning to communicate with the elderly through role play



Wearing the 'Senior Simulator Kit'

lated to me.”

The programme has drawn the school and the community closer together. Pupils felt that they have improved in their relationship with the elderly. In the meantime, the school is working with The Care Corner (Queenstown) to develop ways to improve the quality of their visits. It is hoped that this will lead to a meaningful exchange of ideas between teachers, social workers and pupils.

Linguistic Coaching: Helping Beginning Teachers Defeat Discouragement

Paul F. Caccia

A new slant on coaching -- which focuses on partnership, open dialogue, and continuous learning -- helps novices through those particularly challenging first days. It also helps seasoned teachers improve their performance.

A novice teacher starts the school year full of enthusiasm and ambition. A few months, or even weeks, later that same teacher has sunk into discouragement about ever becoming successful in the profession. Sound familiar?

I have witnessed high hopes degenerate into despair several times during my career as a teacher trainer and administrator. Most recently, I've seen it at the inner-city elementary school where I was assistant principal and where I now serve on an executive board.

Our beginning teachers' main

problem was an inability to cope with challenges to their authority. Frequent power struggles with students gradually bogged down teachers in what they saw as a daily succession of failures. I suggested to my principal that we try linguistic coaching to help our new teachers develop greater practical competence and maintain their initial enthusiasm. I first began using linguistic coaching, a comprehensive approach to effective communication, in 1990 in a mentoring program for novice teachers. The success of that program and subsequent programs designed for veteran teachers has convinced me that this approach has many benefits. For example, it helps teachers cope more effectively with stress, establish authority for themselves in their teaching roles, and improve their overall outlook and performance.

Looking at Linguistic Coaching

In developing this system of conversational analysis and communication (Flores 1982, Flores and Winograd 1986), Fernando Flores drew on the Theory of Speech Acts pioneered by philosopher John Austin (1962) and later refined by his student John Searle (1969, 1979). The premise underlying their work is that all speaking and listening can be categorized as some kind of action -- stating, promising, requesting, asserting, declaring, deciding, replying -- in which the speaker makes a commitment with the listener.

In Austin and Searle's view of communication, the critical actions involved in, for example, constructing the Empire State Building would include not only excavating, lifting, and hammering, but also making

assessments, requests, offers, and promises. Flores realized that looking at communication in this way opened up new possibilities for helping people avoid misunderstandings and work together more effectively. He applied Austin and Searle's categories of speech acts to make practical improvements in training personnel, designing software products, and managing a staff (Flores 1982).

From Flores's approach, my point of departure in linguistic coaching is the premise that all speaking and listening arise from a pre-existing background of beliefs, attitudes, experiences, and emotions. Whenever teachers do their jobs -- plan lessons, handle student misbehavior, interact with administrators and fellow teachers -- they bring much more than just their professional training to what they are doing. A host of personal and cultural interpretations influence teachers' frames of reference for understanding and reacting to each teaching situation. Some of these are valid and some are not. Invalid interpretations make it difficult for teachers to adapt and to perform respectively on the job.

An example will illustrate how linguistic coaching works in practice.

Establishing the Coaching Relationship

Mike, a first-year teacher, believed that "strong teachers handle their own problems."⁽¹⁾ To Mike, sending a student to the timeout room or asking for help in managing a class was a sign of weakness. As he explained to me later, "If I couldn't handle classes on my own ... well ... then what was I doing here in the first place?"

Mike struggled through his first weeks trying to be strong the best way he knew how. He isolated him-

self from the expertise and support of his colleagues. Behind his perpetually closed classroom door, he resorted to a mix of sarcasm, argument, and manipulation to manage his students.

For those of us who don't share Mike's beliefs and interpretations, it's easy to see how they could hinder his efforts to teach effectively. But because beliefs and interpretations such as these are part of the background a teacher brings to the job, he or she either doesn't notice them or mistakes them for truths that need to be dealt with in some specific way ("Tell me how you get them to keep quiet"). I am not saying that Mike or any of the other new teachers didn't know the difference between facts and interpretations, but in my experience, most of us sometimes blur this distinction as we go about the business of everyday living.

This brings us to an essential element of linguistic coaching: people cannot learn to communicate more effectively unless they become skillful at making rigorous distinctions between facts and interpretations. For example, Mike's conception of his students as 28 perpetual threats to his authority to teach -- his own belief and not a fact -- would continue to undermine every method he employed in his efforts to establish good discipline. Indeed, I have observed beginning teachers produce mayhem using exactly the same words and gestures that a seasoned teacher uses to establish order. Why? Because beginning teachers use these methods without a veteran's understandings, and therefore less effectively. By giving priority to externals -- techniques and methods -- many beginning teachers remain trapped in a struggle to reach a preconceived solution without recognizing that their difficulties stem from their perception of the

Linguistic coaching helps teachers cope more effectively with stress, establish authority for themselves in their teaching roles, and improve their overall outlook and performance.

problem itself -- like people in the 1400s trying to figure out how far it was to the edge of the earth.

Mike, for example, asked me for techniques that would keep him from getting drawn into arguments with students. Even if I had given him specific methods for avoiding arguments during his first weeks of teaching, I doubt that they would have had much impact on his overall effectiveness. To me, Mike's reliance on arguing and sarcasm wasn't the problem but, rather, a symptom of the real issue: a lack of awareness of how his notion of strong teaching was causing him to communicate with students in ways that perpetuated his discipline problems. In order to coach Mike, I first had to gain his trust and confidence -- trust that my sole purpose was to support him in achieving success as a teacher, and confidence in my ability to help him realize his goals. When I felt we had established enough rapport, I formally offered to coach Mike, explaining what our relationship would be and what he could expect from it. He accepted.

I did not take Mike's acceptance as blanket permission to tell him what to do. From experience, I knew that coaching exists in name only unless the coach and the person being coached share a continuing trust and sense of purpose. I frequently checked with Mike to make sure that we were still in agreement about our coaching project.

Coaching, then, is a partnership that hinges on two prerequisites: The person being coached must agree to be coached, and the coach must have an unswerving commitment to that person's performance.

Three Tenets of Coaching

Once Mike agreed to let me coach him, we had several conversations in which I began to show

him that his understanding of strong teaching was just that -- his understanding, not some immutable truth. Next, I asked questions designed to help him see how his conception of "strong" was actually the source of his "weak" performance. Finally, I suggested a different interpretation of strong teaching, which included asking for help, making mistakes, and learning from those mistakes. In asking Mike to try this new interpretation with his students, I warned him that initially it wouldn't feel "strong" at all, but that it would gradually help him develop the authority he desired.

Each time Mike reported back to me, I asked him to state the relevant facts ("A student slammed her notebook shut just as I was about to check her work"); his reaction ("I was mad; I thought she was trying to make me look bad"); and his action ("I made a sarcastic remark"). I used Mike's comments and others like them as a basis for coaching him to develop new interpretations and to take more effective actions.

For example, in the case of the student slamming shut her notebook, Mike's use of sarcasm was based on the premise "never let students know they got to you." I pointed out how this premise undermined his purpose as a teacher. What alternatives, I asked, might he have employed if it had been OK to let the student know she got to him? He agreed to try them out in a follow-up conversation with the student. After speaking to her, Mike reported back to me that instead of "playing mind games," he had been able to tell her frankly what he did and did not want. As a result, he was able to listen to her version of the matter with an open mind.

As the coaching continued, Mike became less sarcastic and more direct with students. He also began

to use routine discipline procedures, such as sending disruptive students to the timeout room, instead of trying to manage everything on his own. Consequently, Mike had more time and energy to focus on teaching, and as the year progressed his true strengths began to emerge. He organized a chess team, began teaching math and science more innovatively, and served as a mentor for troubled students.

These accomplishments were the result of the gifts Mike brought to the job of teaching, not of the coaching I gave him. The coaching did, however, allow him to develop the resilience, clarity of purpose, and authority he needed to bring those gifts to light.

In summary, the fundamental elements of coaching for improved communication performance are:

1. Identify the performance to be improved (Mike's manner of dealing with student misbehavior);
2. Establish the interpretations behind the performance ("A strong teacher handles his own problems"); and
3. Intervene by coaching for new interpretations and actions.

Not Just for Beginning Teachers

The beginning teachers I coached achieved better results than other new teachers who were not coached. Where their predecessors had struggled just to get through their first year of teaching, the coached novices maintained a more positive outlook and, as the year went on, made consistent progress in establishing a authority and autonomy.

In accounting for their successes, they all made specific references to linguistic coaching. For example, one teacher wrote:

Coaching helped me see the connection between what I think of myself and what the students (and others) think of me. You made me observe myself in a new way: I was able to see that I have certain ways of thinking and acting that don't get the results I want, but that doesn't make me a bad person or even a bad teacher.

Since my initial work with beginning teachers, I have seen how linguistic coaching can help improve the performance of administrators and experienced teachers. For example, my principal said that she learned to communicate more effectively with parents -- to better manage complaints and to elicit greater cooperation -- as a result of being coached. In another case, a skilled veteran teacher found herself enjoying her students more because she had gained greater fluency in communicating with them.

Linguistic coaching can also be an effective tool for intervening in serious professional breakdowns, such as job burnout. When John, a teacher from another school, came to me complaining that he sometimes woke upon school days "sorry I'm still alive," I proposed that learning to communicate more effectively might help him overcome his feelings of frustration and powerlessness. During the six months that I coached John, he learned to communicate in ways that led to more effective action. For example, he began to participate in what he had considered to be "waste of time" faculty meetings instead of sitting in the back of the room reading the newspaper. He also learned to make direct requests of students, parents, and administrators instead of airing vague complaints.

As John tried my recommendations, he reported that his mood of apathy and hopelessness lifted. To his amazement, he began working

late into the evening creating his own lessons, parents acknowledged him as "a teacher who cares," and colleagues began seeking his advice because they saw him as an exemplary teacher.

Creating a Climate for Learning

The significant contributions of linguistic coaching to the practice of teaching extend not only to the individual being coached but to others throughout the building. I, for one, received as much benefit from coaching as the new teachers did from being coached. Establishing and maintaining a coaching relationship with them forced me to deal with the same issues of authority, self-confidence, and self-awareness that they were facing with their students. In order to coach them to continually improve their communication performance, I had to keep improving my ability to communicate with them. The overall effect was a feedback loop: the more they learned, the more I learned, and so on.

Further, the project motivated everyone involved to work to create a climate in which coaching could take place. While our school has long been blessed with a cohesive, hard-working faculty, as a group we became more ambitious and proactive in coming together to deal with problems and in forming teams to achieve specific goals. This outcome leads me to believe that coaching, with its emphasis on partnership, open communication, and continuous learning, could serve as a practical model for implementing site-based management, improving school climate, and achieving many of the goals of educational reform.

(1) Mike and John are pseudonyms.

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Understanding Creativity from a Diversified Perspective

Tan Ai Girl

The term “creativity” has multiple implications and meanings (Akiyama, 1975). “To understand creativity one should have an attitude to consider various aspects of creative activities (p.5), or to consider problems from various aspects (p.102).” Modern theories of creativity suggest that the concept of creativity should be understood from different perspectives. Creativity is not just scholastic. It exists in the arts as well as in the sciences. It can be found in music as well as in sports (see Gardner, 1993). Within one field various types of creativity may be shown (Tan, 1995). Creativity is an individual as well as a social and a cultural phenomenon. Many factors influence a person’s creativity in a particular field, and the interest of a group in a certain type of creativity (see Csikszentmihalyi, 1988; Amabile, 1983; Simonton, 1988). This manuscript intends to introduce

to teachers some recent theories of creativity. All teachers should follow the development in the research in creativity. With the rapid change in global environment, schools are responsible for preparing the younger generation to think and work creatively.

Types of Creativity

Creativity exists in multiple forms across disciplines, within a discipline and across cultures. Draeger (1991) defined that creativity is a prerequisite condition for discovery, invention and innovation. He claimed that all innovations of different degrees involve creativity.

Across Disciplines: Creativity appears in various disciplines. There is, for instance, technical creativity, musical creativity, artistic creativity, linguistic creativity, scientific creativity, social creativity or math-

ematical creativity. Gardner(1993) proposed a theory of multiple creativity. An individual can be creative in more than one discipline. Gardner investigated individual case studies. He adopted a developmental approach, examined instances of creativity drawn from a specific historical era. He focused on how individual breakthroughs, as well as the dynamic interaction of disciplines of practice and reactions of the surrounding community. He examined seven extraordinary individuals: Sigmund Freud (1856-1939, the neurologist-turned psychologist), Albert Einstein (1879-1955, the theoretical physicist), Pablo Picasso (1881-1973, the Spanish-born painter), Igor Stravinsky (1882-1971, the Russian born composer), T.S. Eliot (1888-1965, the St. Louis born poet), Martha Graham (1894-1991, the Pittsburg born American dancer), and Mahatma Gandhi (1869-1948, the Indian political and

Table 1: Multiple Creativity

	Strength	Weakness
Freud	linguistic, personal	spatial, musical
Einstein	logical-spatial	personal
Picasso	spatial, personal, bodily	scholastic
Stravinsky	musical, other artistic	
Eliot	linguistic, scholastic	musical, bodily
Graham	bodily, linguistic	logical-mathematical
Gandhi	personal, linguistic	artistic

Source: Howard Gardner (1993). *Creating minds* (p.363). New York: Basic Books.

spiritual leader). Most of them were outstanding in more than one kind of creativity (see Table 1).

Within a Discipline: Within a discipline there are various types of creativity (Tan, 1995). *Breakthrough* creativity deals with the discovery of an idea or a product that other people have not thought of. This kind of creativity involves the ability to go beyond the traditions and the norms. It demands also the ability to free oneself from external (for example, from the environment) and internal constraints (for example, cognitive maps). An example of problem solving that requires breakthrough creativity is to avoid using noise to wake up a person. To overcome this constraint one has to search beyond the common practice of using an alarm clock, for example to wake up a deaf person sleeping in a locked room. *Adaptive* creativity concerns innovative improvements on existing products. An example of this type of creativity is to improve a bicycle that is suitable for winter. Creativity regarding human beings' behavioural patterns is *individual* creativity and *group* creativity. *Individual* creativity is likely common in individualistic societies. *Group* creativity is useful when the task involves collective efforts.

Across Cultures: The claim that people of one culture are more creative than those of another is not valid. Creativity exists in all cultures and in all levels of social classes. Researchers today agree that geniuses as well as laypersons show signs of creativity (see Sternberg, 1985). Lay as well as expert's conceptions of creativity provide information for understanding the concept of creativity. In societies where the industrialised culture is part of the daily life technical creativity can easily take place. In societies where human relationships are respected, creativity in social and interpersonal relations is likely emphasized. In a cross-cultural study, Japanese students showed their competence in improving a product incrementally (Tan, 1995). German students, on the other hand, redefined the problem and often proposed a new area when the given task did not match their cognitive map. The Japanese students tended to use materials that are proximal to the problem. For example, to design a silent "alarm clock" that is able to wake a sleeping person, one of them suggested changing the shape of the pillow into a chair. The Singaporean students, on the other hand, are interested in playful ideas. For instance, some of them proposed to use cold water or ice.

Creativity is more than just an individual's actions

Without a nurturing environment an individual's creative potential can not be easily transformed into creative performances. The creator is like the performer on stage. In many respects, the creator needs social support and recognition.

Csikszentmihalyi's A Three-System Theory of Creativity

Csikszentmihalyi (1988) proposed a three-system model of creativity that consists of the individual, the social institutions (*field*) and the culture (*domain*). According to him, creativity is not the result of an individual's actions. It is a product of three main shaping forces or systems. The *field* (social institution) selects promising variations and incorporates them into the *domain* (culture). The *domain* (culture) preserves and transmits the selected new ideas or forms to the next generations. The individual processes variations and changes to the *field* (social institutions). All information is stored in the symbol system of culture, in the customary practices and in the language. An individual needs access to this information to be creative.

Simonton's Chance-Configuration Theory

Simonton adopted a social psychological approach toward creativity. He has done extensive empirical work from the historiometric perspective based on archival data of prominent creators. He believes that *leadership* is one of the important qualities of a creator. The creator uses his/her leadership quality to persuade his/her colleagues and the public to appreciate his/her new inventions. Simonton's (1988) chance-configuration theory comprises the chance permutation (elements placed in certain order) of

With the rapid change in global environment, schools are responsible for preparing the younger generation to think and work creatively.

mental elements; the formation of configuration (stable permutations); and the communication, social acceptance and social preservation of those configurations. The first two ideas concern cognitive processes, whereas the last deals with the presentations of the creative performances to the public and their conservation in a society and a culture. Communication configurations are stable permutations in suitable forms but contain linguistic or mathematical elements that make them accessible to other scientists. Simonton (1988) lists four requirements that influence the social acceptance of a configuration (pp. 17-18):

- 1 A similar repertoire of mental elements (methods, questions, etc.) of each member in a community.
- 2 These mental elements must be in comparative disarray in the minds of potential acceptors to initiate a more efficient approach to structuring information.
- 3 There must be a consensus on the meaning of the linguistic, logical and mathematical elements making up the communication configuration.
- 4 The originator must have successfully translated and communicated the initial conception so as to facilitate the requisite reverse translation by fellow scientists.

Scientists who accept the original configurations may recognise these configurations according to their conceptions. The social preservation of a configuration depends on whether it is competitive enough compared to the other new or existing configurations.

Components of Creativity

Similar to Simonton, Amabile

uses a social psychological approach to study creativity. Contrary to Simonton who studies the genius, Amabile assesses common people's creative performances. According to Amabile's Componential Model of Creativity (Amabile, 1983), there are three components of creativity: domain-relevant skills, creativity-relevant skills and task motivation. All these components possess social elements such as education, training and environment.

- 1 Domain-relevant skills comprise knowledge about domain, technical skills and special domain-relevant talents. These skills depend on innate cognitive abilities, innate perceptual and motor skills, and formal and informal education.
- 2 Creativity-relevant skills comprise appropriate cognitive style, implicit and explicit knowledge of heuristics for generating novel ideas and conducive work style. They depend on training, experience in idea generation, and personality characteristics.
- 3 Task motivation consists of attitudes toward the task and perceptions of self motivation to understand the task. It depends on the initial absence of salient extrinsic constraints in the social environment, and the individual ability to cognitively minimise extrinsic constraints.

Implications for Teachers

Before introducing creativity in the classroom, teachers should update their knowledge base with the latest and the newest models and concepts of creativity. They should understand student-teacher and parent-teacher interaction, the influence of culture on each type of creativity and the selection of techniques of creativity, and the importance of knowledge in creative perfor-

mance.

Student-Teacher Interaction: Teachers should be aware of the existence of intellectual and non-intellectual creativity. A student may be creative in academic and/or non-academic disciplines (see Gardner, 1993). Teachers should pay equal attention to all types of creativity. They should introduce the concept of multiple creativity to their students. Creative activities in schools should cover both academic and non-academic domains. Students should be made aware that creativity in sport and music are equally important as creativity in academic fields. Non-intellectual creativity should not be neglected as it is essential in developing healthy personality and leadership. It is essential to allow students to be an independent thinker who possesses the opportunity to decide which kinds of activities they would participate in instead of being assigned to a fixed program. Students should be given the opportunity to self-discover their strength and weakness. Teacher is responsible to provide guidelines but not to impose a fixed structure of development to the students.

Teacher-Parent Interaction: Not only teachers but also parents should be exposed to methods of discovering and nurturing creativity. Early recognition may help students to develop their creative potential into creative performance. Home environment and classroom environment may nurture or prohibit creative performances of a person (see Csikszentmihalyi, 1988; Simonton, 1988). Thus, teachers and parents should help to create a creativity-friendly environment for the students.

Techniques of Creativity and Cul-

ture: Teachers have to recognise that techniques of creativity can be culture-bound. "Imported" techniques should be examined to find out if they are suitable for the group. Modifications to techniques of creativity are sometimes essential. For instance, verbal brainstorming may not be suitable for students who are not used to expressing themselves in the public or in a group. They should be given an option, for instance, to write down or to draw their ideas on cards or paper. In a cross-cultural study, it is found that most Asian students are not used to answering open-ended questions (Tan, 1995). Teachers should formulate the questions in such a way that they help motivate students to think and act creatively.

Creativity and Culture: Teachers should make use of the behaviours and thinking patterns of their students in designing creative activities. Behaviours and thinking are influenced by culture. In cultures where collective behaviours are more appreciated, small groups' activities should be promoted. Culture in this sense refers to the way of living of a group. A group can be identified by its gender, age, ethnic background and educational background. Between teachers and students there are different and similar behavioural and thinking patterns. Among the students such similarities (or differences) may also exist. Individual attention should be given to students who exhibit special behaviours.

Knowledge and Creativity: Without knowledge and training, creativity can rarely take place (see Amabile, 1983). Students should be equipped with knowledge that are relevant to their potential field of creativity. Teachers have to be creative and to be knowledgeable

enough to guide the students to develop their creative potential.

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Speaking Up or Not Speaking Up: Reasons From the Willing and Reluctant Talkers

Sim Ah Lian & Lily Y. S. Wong

Education is a communication process whereby students must use skills such as speaking, listening, reading and writing as evidence of learning and, more importantly, to demonstrate understanding (Freimuth, 1982). In the classroom, talking is the most common form of communication. More often than not the teacher talks and students listen. Frequently, it is the teacher who asks questions and students answer, or students ask and the teacher or another student answers. This form of communication enables the teacher to check whether students have understood the lesson, whether they are following what is being taught and also provides feedback on the effectiveness of teaching. Thus, teachers are eager to get their students talk.

Nowadays, even in good schools with high ability students, teachers find it difficult to elicit voluntary responses from their students. It is

even harder to see students initiate communication. The second author observes that among her academically and socially well-adjusted students, most are content to work independently. She assumes that her students' main concern is to pass their examination by remaining passive and quiet lesson after lesson.

The study

In order to help students to overcome the problems they might have in oral communication, teachers need to know the underlying reasons for their reluctance to speak up. To collect some possible reasons for students' willingness or reluctance in oral communication, one hundred Secondary Three students (56 girls and 44 boys) were approached (Sim, 1995) in the school where the first author is a teacher. They were asked to give freely three reasons why students

of about 15 to 16 years old are willing to speak up in class and three reasons why they are reluctant to do so. The responses could be reasons why some of them speak or do not speak up. They could be a projection of why others do so. Whatever they are, the reasons should shed further light in our understanding of students' oral communication. The free responses were coded and categorised as in Table 1.

Findings

Four factors were found to have caused the reluctance of students to speak up in class. The student factor was the highest cited reason for not speaking up. Reasons given by girls were quite similar to those given by the boys although significantly more girls than boys cited shyness as a reason for not speaking up. This is an obvious gender

Table 1: Reasons for students' reluctance to talk in class

Student Factor	Girls	Boys
1. shy	53	29
2. scared to be embarrassed	32	24
3. do not know/not sure of answer	20	13
4. nothing to say/not necessary to talk	9	5
5. don't want to share answer	5	9
6. not paying attention/can't be bothered	4	10
7. tired	4	4
8. don't want to show off	4	1
9. not used to speaking up	3	1
10. don't feel like talking	2	0
11. no confidence	1	2
12. soft-spoken	1	1
13. have speech deficiency	1	0
14. to act cool	1	1
15. can't follow lesson	0	3
Teacher Factor		
1. poor relationship with teacher	4	0
2. dislike teacher	3	3
3. fierce/strict teacher	1	2
4. not called upon	0	1
Subject Factor		
1. dislike subject	9	17
Others		
1. unless someone speaks first	3	0

difference in many cultures. In fact, shyness was the most frequently mentioned reason for reluctance to speak, followed by fear of being embarrassed. And when they were not sure of the answer, they would not speak up as well. These seemed to be valid reasons. Yet teachers should not adopt a "couldn't care less" attitude and hope that these students will speak up eventually. Teachers could help the extremely shy and quiet students to overcome their reluctance to speak up by reassuring them that "it is perfectly alright to make a mistake and it is also very good to make an attempt to answer even

though they are not sure whether or not the answer is correct."

The reasons for willingness to speak were fewer than those for reluctance to speak up (see Table 2). If students are confident, they will speak. Confidence was the highest cited reason for speaking up. Some students saw speaking up as showing off. No wonder some students were not keen to initiate to speak.

Comparing the data for willingness and reluctance to speak, the teacher factor as a cause for willingness was three times that for reluctance. This suggested that teachers could be a strong influence

to students' willingness to speak. Consistent with recommendations drawn from research, teachers who were approachable, likeable and conducted interesting lessons do encourage pupils to communicate in class compared to those who were fierce, strict and did not show enthusiasm in their subject. Teachers' classroom behaviour does have significant impact on pupils. Nussbaum (1992) discovered that effective teacher behaviours such as frequency and intensity of teacher praise, the frequency and type of teacher questioning, the wait time the teacher gives and the teacher's enthusiasm could produce positive pupil outcomes.

Nine girls and 17 boys cited disliking the subject to be the reason why they kept quiet in class. On the contrary, only two girls and three boys claimed that they spoke up because they liked the subject. This implied that liking a subject did not make students speak up, while disliking a subject led to reluctance to speak. This was more apparent among boys than girls. A handful of girls would speak up if someone spoke first while only two boys thought that to speak up was to impress girls. This is actually a characteristic of adolescents whereby they are interested in the opposite sex at this developmental stage.

Implications

To help students overcome their reluctance to speak up in class, teachers should be more aware of ways to help those who are reluctant to talk and sustain the interest and motivation of those who are willing. Activities suggested by Suid (1984) could be adapted for classroom teaching. Some of these include asking pupils only on topics they are knowledgeable, playing charades, and reading speech transcripts. In short, teachers could try

Table 2. Reasons for students' willingness to speak

	Girls	Boys
Student Factor		
1. confident	21	7
2. showing off	13	12
3. contributing to discussion	13	11
4. talkative	13	3
5. attention seeker	10	4
6. active students	9	11
7. seeking knowledge	7	9
8. sociable	5	0
9. not sure of the reasons	0	3
Teacher Factor		
1. interesting lesson	10	6
2. called upon by teacher	8	3
3. like teacher	5	3
4. to impress good-looking teacher	4	4
5. approachable teacher	2	2
Subject Factor		
1. like subject	2	3
Other		
1. to impress girls	0	2

providing alternatives to oral performance.

Teachers play a very important role in enhancing the students' self-esteem and helping them to speak confidently. They have complete control in setting the mood and structuring a task which will make a difference in student learning (Booth-Butterfield, 1986). Thus, teachers must be caring, cooperative and genuinely want to help their students. However, on top of the heavy workload in school, teachers must also be willing to spare time for these adolescents and intervene before the oral problem becomes too serious (Wong, 1988). This is especially so with strategies like desensitization (Booth-Butterfield, 1986) which could be very time-consuming. If this is not possible, teachers should at least use the basic principles underlying the strate-

gies suggested by Booth-Butterfield (1986) in their teaching.

Nevertheless the school and teachers should work towards a conducive environment in reducing reluctance among students to speak up in class or apprehensiveness in oral communication. In this way, it is hoped that schools can help produce confident, self-assured individuals who will eventually be able to contribute to the society. This is especially so when the majority of the students in this school are intelligent and conscientious and their potential should be tapped and maximized.

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Computing Technology in Mathematics Education : A Janus Look

Y. L. Cheung

Janus is represented as having two faces, one looking forward and the other backward. In taking a Janus look of computing technology, I shall describe the past leading to the existing technology, its current status in mathematics education and the future development of the technology use in schools and colleges.

The Past

By computing technology, I mean calculators and microcomputers. Long before we had the existing computing technology, there were calculating aids such as the abacus, slide rules, mechanical calculators and four-figure tables. We also had huge computers which have now been replaced by modern small-sized computers.

The history of calculators and microcomputers is not very long. It has a span of only about twenty-

five years. The first electronic pocket calculator appeared in early seventies and a few years later the microcomputer was also invented. In the 1980s we saw a widespread use of calculators in the classroom and in examinations. It was also marked with an increasing use of microcomputers and significant production of software for teaching and learning of mathematics. The rapid advances in computing technology have begun to influence both the content and the way we teach mathematics at all levels. In the early 1990s graphical calculators began to be available and improved versions of software in mathematics were used in schools and tertiary institutions. *Computer algebra systems* (CAS) have attracted considerable attention in recent years.

Current Status of Technology Use

Although there is widespread use of calculators at secondary level and above, they are not yet formally accepted in the primary classroom. Research on calculators shows that there can be great benefits for students in mathematics. Students using calculators develop a better attitude towards mathematics than non-calculator students. This applies across all grades and ability levels. The National Council of Teachers of Mathematics (NCTM) has recommended in the document *Curriculum and Evaluation Standards for School Mathematics* (National Council of Teachers of Mathematics, 1989) that

- Appropriate calculators should be available to all students at all times.
- Every student should have access to a computer for individual and group work.

- Students should learn to use the computer as a tool for processing information and performing calculation to investigate and solve problems.
- A computer should be available in every classroom for demonstration purposes.

The document *Everybody Counts* (National Council of Teachers of Mathematics, 1989) states that "The availability of versatile calculators and computers establishes new ground rules for mathematics education. Template exercises and mimicry mathematics - the staple diet of today's tests - will diminish under the assault of machines that specialize in mimicry. Instructors will be forced to change their approach and their assignments. It will no longer do for teachers to teach as they were taught in the paper-and-pencil era."

At this point, it may be interesting to take note of a research finding in the United States (Willoughby, 1990) that 90% of student's learning of mathematics in schools is with pencil and paper but in society, 90% of people's use of mathematics does not involve paper and pencil computations.

Before responding to the call for increasing use of calculators and microcomputers, we need to consider first the research findings that can help us to make informed decisions on the uses of these technological tools. There is a widely held belief that if students are permitted to use calculators and microcomputers to do mathematics, they will not be able to perform well without the tools. There is also a misconception that the technology hampers the learning of mathematics particularly the computational and manipulative skills.

However, research on the use of calculators has shown that their

use indicates no harmful effect on students' mathematical learning and achievement. The evidence is in favour of the use of calculators in the classroom. Rather than replacing some paper and pencil computations, calculators are more likely to reinforce them. A summary of some research studies (Hembree and Dessart, 1986) on calculators is as follows :

- Students who use calculators in concert with traditional instruction maintain their paper and pencil skills *without apparent harm*.
- The use of calculators in testing produces *higher achievements scores* than without the use of calculators.
- Calculator students have a *better attitude* toward mathematics than non-calculator students.

It is therefore no longer a question of whether calculators should be used or not but how they should be effectively used. It is not enough to have a policy of allowing students to use calculators in the classroom and in examinations. Teachers should teach students how to use calculators efficiently and intelligently. Students should gain confidence in using calculators by having sufficient practice.

With the availability of graphic calculators, teachers may experiment using this new technology to see how powerful a graphical calculator is and how easily it can produce graphs in mathematics.

Research on microcomputer use in mathematics is harder to interpret because of the different types of software employed in the studies. The software may be classified into categories such as for demonstration, for drill and practice, to promote concept learning, to support programming and for problem

Research on calculators shows that students using calculators develop a better attitude towards mathematics than non-calculator students.

solving. Research studies that have been conducted over the years support generally the following findings (Kaput, 1992):

- Students work *longer* on microcomputer activities than traditional activities.
- Microcomputer students behave *more independently* than before.
- Students complete the material *faster* with microcomputer than with traditional instruction.
- Microcomputer use is more effective at raising achievement among *capable students* than among other students (Hativa, 1988).

The generally positive findings suggest that as more and better software becomes available, the findings should become more pronounced.

During the last few years there has been tremendous interest in some new software known as *computer algebra systems* (CAS). The most popular ones are DERIVE, MAPLE and MATHEMATICA. CASs are programs that can manipulate mathematical objects not only numerically but also symbolically and graphically. The advantages of a CAS are its ability to handle exact arithmetic, large algebraic computations and graphic capabilities i.e. to draw 2-dimensional and 3-dimensional graphs and pictures. CASs are impressive in terms of the range and type of mathematics they can do, covering almost all mathematics such as algebra, calculus etc encountered in schools, junior colleges and tertiary institutions.

There has been much debate about the real benefits of CASs. Some argue that the use of CASs would lower standards in mathematics since there is an obvious danger

that the mathematical skills such as algebraic factorisation, equation solving, differentiation, integration, graph drawing and so on which are regarded as important might no longer be taught the same way as before, requiring a lot of practice for these skills. Those who are in favour of the use of CASs argue that these mathematical skills may not matter to engineering, science and other non-mathematics students. More time can be spent on conceptual understanding and relevant applications in their own disciplines. In fact, even for mathematics students, they often spend so much time and effort on algebraic manipulations and numerical computations that they have no inclination at the end to do some thinking about the results.

It is generally recognised that CASs have great and long lasting potential in problem solving, teaching and learning of mathematics (Thomas and Rickhuss, 1992; Judson, 1990; Ganguli, 1992). My personal experience shows that both teachers and students enjoy using the CASs and are impressed by their powerful.

These systems have been in existence for a few decades. Why have the systems taken so long to reach the classroom? The main reasons are:

- It is only in the last ten years that the software has migrated from the mainframe computers to microcomputers.
- Only the latest versions are user-friendly and powerful.
- The cost of the software is not as expensive as before.

The Future

Calculators and microcomputers are here to stay. We cannot ignore the vast potential that the technology can offer in the mathematics

We need to raise the level of awareness, confidence and competence among our mathematics teachers in the use of microcomputers and calculators in mathematics

classroom. However, if this potential is to be realised, it is vital that we address the two problems below:

- 1 *The problem of access of microcomputers with appropriate software by mathematics teachers and students.*

At present computers in schools are mainly if not entirely used for computer studies. Mathematics teachers have to compete with other subject teachers for the use of the computer laboratory. There is still a long way from the situation of having a computer (whether a micro or a laptop) for every student in the classroom.

- 2 *The problem of teacher confidence and competence in using the microcomputer and the calculator in mathematics.*

Many teachers are still not aware of how computers and calculators can be effectively used in teaching mathematics. Some may not even know that powerful software such as CASs are now available. We therefore need to raise the level of awareness, confidence and competence among our mathematics teachers in the use of microcomputers and calculators in mathematics (Cheung Y.L. 1990).

Hopefully as years go by, these problems can be at least partially overcome. By then, more powerful and cheaper software will be produced and made available for teachers and students. In the meantime, we need to rethink what mathematics should be taught and how it should be taught with the use of computing technology. Some topics will either be removed or deemphasized in the curriculum just as calculators have rendered obso-

lete the use of logarithms in computations and the use of trigonometric tables. Some topics such as graphs of functions will become more important whereas the techniques of differentiation and integration in calculus will not be so much emphasized.

It is likely that more real life applications of mathematics will be done with the use of calculators and microcomputers in schools and that computer-generated output will increase to become a part of classroom activities. Complicated and tedious algebraic or numerical computations will no longer be performed by hand as they can be easily done with CASs.

One limitation of the current CASs is the lack of intermediate output. For mathematics learning, it might be helpful to be given, for example, the method of integration used together with some of the essential steps involved. It is hoped that the next generation of CASs will incorporate options to allow the user to display such output.

Schools and students will, in the next decade, have access to powerful CASs. Teachers of mathematics have to adapt to this technology use or else mathematics taught will become increasingly irrelevant. This is because society nowadays uses technology to do mathematics whereas schools still use almost entirely pencil-and-paper methods to perform computations numerically, symbolically and graphically. The pace at which adaptations will be required is not easy to forecast at the moment. Although no one can completely or accurately make a prediction, the future for computing technology in mathematics is nevertheless very promising.

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Obesity: Concerns, Problems and Intervention

Lily Y. S. Wong, Bernard K. J. Foo, Koh Kim Chew, Mahiran bte Mohamed & Saw Jin Teik

Prior to the twentieth century, adiposity (excess weight) was valued as a mark of affluence, beauty and health. However, we no longer regard obesity with benevolence. Overeating and consequently obesity is often regarded as a behaviour maladjustment (Hafen, 1981). Obesity is now a major public health problem in Singapore. Studies (Ministry of Education, 1992) have shown that there is an increasing trend of obesity among young Singaporeans aged six to sixteen.

Definition

Obesity may be defined as the imbalance between caloric intake and energy expenditure. To a certain extent obesity may be hereditary, but there are many explanations for childhood obesity. In what is termed *hyperplastic obesity*, excessive fat cells accrue in the body during critical periods such as the end of gestation, the first year of infancy and the period just prior to

puberty. In view of the fact that two obese parents are very likely have obese children, this could be related to the eating patterns of the obese parents rather than to a genetic factor (Plimpton, 1987).

As a general rule, a child is obese if the proportion of fatty tissue to total body weight exceed 20 to 25 percent in males and 25 to 28 percent in females (Hafen, 1981). Obesity is the visible sign of the consequences of the ingestion of more calories than are being utilized. There are different causes for various people, but they all have the same final manifestation -- the increased storage of fat. Obesity most often stems from excess caloric intake combined with inadequate activity. Other contributing factors include metabolic and genetic differences; psychological, social and environmental problems and sometimes disease.

Concerns

Great emphasis has been placed

on the development of our human capital. In a human resource scarce country like Singapore, health is as important as education. The benefits of investing in efforts to promote and maintain a healthy lifestyle amongst the population are thus both obvious and compelling.

Obesity has to be addressed because:

- 1 Many experts (e.g. Dreyfuss, 1990) believe that "obesity is associated with a higher risk of heart disease, diabetes and other health threats." Hence pupils who are obese are generally deemed as less fit. A 1989 study conducted by Dr. Ho Ting Fei of the National University of Singapore also outlined the health hazards of obesity. The study (The Straits Times, 1990) which involved 600 students from the ages of six to sixteen showed that "the more obese the child the higher the blood pressure and

the blood cholesterol.”

- 2 “Obese children, Dr Ho’s study shows, have lower self esteem” (The Straits Times, 1990). They are likely to be more conscious of their physical appearance and are more inhibited than those who are not overweight. Hence, in Physical Education, the obese pupils are less likely to be leaders and have fewer opportunities to excel on sports with the exception of some who are good at specific areas such as shot putt and hammer events.
- 3 Obesity is a national concern and the Singapore government has long recognised (“Girth Control,” 1991) that “if the obesity trend is left unchecked, it will have adverse long-term consequences for the nation as a whole, and for the Singapore Armed Forces in particular!” The Ministry of Defence also fears that the increasing number of call-up National Servicemen are obese and not combat-fit for training.

Research studies have confirmed that many adult chronic disease like heart attack, diabetes and osteoarthritis are linked to poor health habits which begin in childhood (Ministry of Education, 1992). Schools therefore must work hard towards establishing lifetime dietary and exercise patterns in their students. Such good habits, if adopted during childhood, will help in maintaining a healthy and physically active lifestyle throughout adolescence and adulthood.

Problems

Obesity is clearly a multifaceted problem involving physiological, psychological and cultural factors. Overeating combined with inadequate levels of activity is the main

factor which causes obesity.

Obese children may suffer from both physical and psychosocial problems. They are usually labelled as lazy and clumsy by their friends and sometimes by their parents. Obese children are found to have a lower self-esteem. They are likely to be more conscious of their physical appearance and are more inhibited than those who are not overweight. Being physically less agile, obese children are usually not chosen to participate in a race or a game. This may have an effect on them as they may grow up thinking that they are no good or even useless.

Besides the social and psychological problems, obesity may predispose the child to a number of serious health problems. Obesity in adulthood is linked to higher risks of coronary heart disease, hypertension, breast and colon cancer, gallbladder diseases and diabetes. It is thus important that the obese children be helped.

Intervention

In this age of supreme concern for total physical fitness, the overweight children represent a frustrating block toward achievement of sound fitness levels for our youth. Should the teachers be concerned for them? Can teachers make a difference? The answer to both questions is an emphatic “YES!” Yes, we teachers can help this group of children, who are labelled “unfit,” “clumsy” and “lethargic” to maintain a body image which they can be proud of and gain self-confidence and self-esteem. Thus, they can stand and lift their heads high to face the world and feel good about themselves.

It is rare for a teacher not to have the opportunity to teach children who are obese. More often than not, the obese child experiences frustration in physical activities, is

ridiculed by peers and is chosen last for teams. This leads to a negative attitude toward physical activity. Ironically, it is this phase of the obese child’s education that is of utmost importance with regard to future health status.

Any teacher who has seen the frustration of the obese child trying unsuccessfully to accomplish physical skills or the tears in the eyes of the obese child being chosen last for a team or being chastised by peers for a team’s loss will become sensitive to the feelings of the child and must be prepared to help. Simply telling a child what should be done is not likely to help lose weight, but if the child is involved in the planning of diet and choosing of activities, it is more likely that the plan and activities will be followed till result is seen.

In 1992, the Trim and Fit (TAF) scheme was launched by the late Dr. Tay Eng Soon as part of a larger national effort to promote a healthy lifestyle in Singapore. Two major areas to look into are nutrition and physical activity. To ensure that this scheme works, the following strategies (Ministry of Education, 1992) are adopted:

Formal approach

- Health Education
- Physical Education

Informal approach

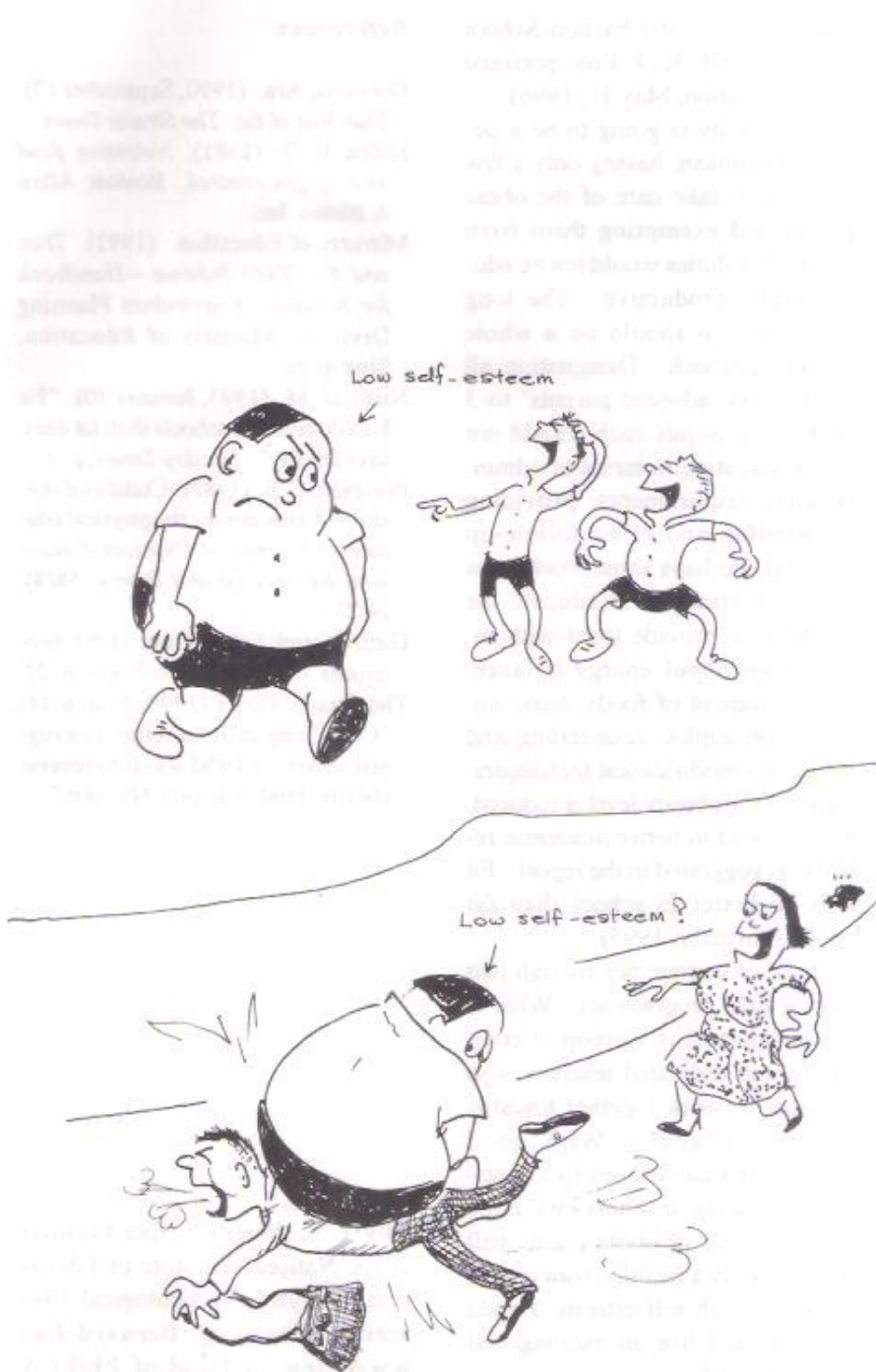
- Extra-curricular activities
- Health talks
- Exhibitions
- Notice boards
- Health corners
- Health pamphlets

Physical facilities

- Installation of water coolers

Healthier canteen

- Green-food labelling



- Unsweetened drinks

In addition to adequate physical exercise, the knowledge of food value and what to eat and not to eat form an appropriate intervention programme for obese children.

Effectiveness of TAF

Although the effect of the TAF scheme is immediate, the result is positive and encouraging. Pupils who have attended the Trim and Fit Scheme have this to say:

- It has helped me lose weight and choose my food correctly. (Pri 5 Female Student)
- I feel fitter and I am happy because I am stronger. (Pri 5 Male Student)
- By joining the TAF Club and by doing all the exercises, I have lost weight. Now I don't eat too much oily and fatty food. (Pri 4 Male Student)
- I know more friends from other classes. (Pr 4 Male Student)
- It teaches me how to cooperate with others and has helped me to reduce my weight a little. (Pr 4 Male Student)

Problems and Possible Solutions in the Implementation of TAF

To implement an educational and health programme is never as difficult as making it work. Problems encountered by the TAF scheme and suggestions for solutions are briefly listed below.

- 1 Other school activities such as especially remedial and supplementary lessons often clash with TAF activities. Owing to the

emphasis on academic achievement, the obese pupils in the club will attend these lessons instead of attending the TAF Club activities. To solve the problem the teachers in-charge of the TAF Club should finalise the TAF schedule in the beginning of the year and to make it known to all teachers. In this way teachers can plan their remedial or supplementary lessons appropriately.

- 2 The obese pupils from the lower levels (Primary 1 to 3) in the afternoon session are not able to come early for TAF activities because they depend on the school bus for transport. Therefore TAF activities can only begin at about noon which is not a very suitable time as the school hall and canteen will be crowded with other pupils. Thus, activities are conducted either outdoor when the weather is not too hot or in one of the empty classrooms.
- 3 Getting parental support in the TAF Club is also difficult. Many parents do not reinforce what is taught in school. Regular meetings with parents may make them more aware of the importance of joint partnership in helping the obese children.

Conclusion

Although obesity problem has been addressed in schools since 1992, there it is limited success. Perhaps the main reasons are the lack of understanding of the causes of obesity, the lack of parental support and the shortage of manpower in schools to tackle the problem. Obesity will continue to pose a problem as about 15% - 20% of pupils who enter Primary 1 each year already obese. This year, January 1996, 21.05 percent of the Pri-

mary 1 cohort at Charlton School was obese (B. K. J. Foo, personal communication, May 11, 1996).

As obesity is going to be a perennial problem, having only a few teachers to take care of the obese pupils and exempting them from other ECA duties would not be educationally productive. The long term solution should be a whole school approach. Designating all teachers as 'adopted parents' to 3 or 4 obese pupils each should not be too daunting in terms of administrative requirements, providing counselling and other follow-up matters. Perhaps some workshops could be arranged to educate the teachers or provide them with instructions about energy balance, caloric content of foods, basic nutrition principles, counselling and behaviour modification techniques. Hence if the obesity level is reduced, it could lead to better academic results, as suggested in the report 'Fit kids do better in school than fat ones.' (Nirmala, 1993)

It is, of course, not enough just having such programmes. What is more important is a group of committed and dedicated teachers who are able to work together towards a common goal. With good programmes carried out by conscientious caring teachers, we hope that the needs of obese pupils will be met. With a healthy, trim and fit body and high self-esteem, a child can plan and live an exciting and meaningful life.

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