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Education; Summer 2000; 120, 4; Research Library Core
pg. 744

FOSTERING CREATIVITY IN EDUCATION

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"EVERYBODY HAS A VASTLY GREATER POTENTIAL FOR CREATIVE AND INNOVATIVE THINKING THAN THE ROUTINE WORKDAY ALLOWS."

- Mark Sebell

Education has always been a key public-agenda item because the economy of any country requires changes in educational policies to match the changes in economic growth. Teachers, therefore, need to be constantly aware of new skills and be receptive to learning these skills so as to impart them to their students. Rapid changes in a knowledge-based and an information technology environment have led to an urgency in revolutionising some of the ways educational training has been for centuries. Creativity in education is addressed as a way to help educators in their journey into the next century.

Introduction

Education has always been a key public-agenda item because the economy of any country requires changes in educational policies to match the changes in economic growth. For example, in Singapore, more students will take up science and engineering to meet the challenges of a changing economy where technology and knowledge matter. The future is always uncertain but we will see:

1. more demand for teachers as some teachers quit due to increasing work demands on them,
2. lifelong learning for all who wish to remain in the workforce which has to constantly keep up with new changes and rapid technological advances,
3. growing emphasis on science, technology, and technical courses in an IT environment, and
4. flexible school scheduling to accommodate the varying demands for new courses and work hours.

In order to have a place in this exciting future, teachers need to be constantly aware of the new skills required for the next century and be receptive to learning these skills so as to impart them to their students. Some of the new skills are as follows:

1. Determining the relevance of information
2. Distinguishing between fact and opinion
3. Identifying unstated assumptions
4. Detecting bias
5. Coming up with reasonable alternatives
or solutions

6. Predicting possible consequences

Because changes are rapid in an IT environment, there is an urgency to revolutionise some of the ways educational training has been for centuries. It is hoped that the ideas in this paper will help educators in their journey into the next century.

Getting Outside Speakers

Schools and universities can invite lecturers and professionals from outside institutions and the industry to impart their knowledge to students. Presentations can be on interesting subjects or on creative thinking itself. If the presenter is someone of imminence, such as our Senior Minister, Mr Lee Kuan Yew, or our Prime Minister, Mr Goh Chok Tong, students tend to take the presentation seriously.

The university can also invite experts, such as Edward de Bono, from other countries to give talks to students on the importance of creative thinking in society. They can instill in students that it is not just the piece of certificate that determines their future job opportunities. Students must understand that companies employ people not only with paper qualifications but also who are able to think creatively.

Establishing a Creative Climate

It is important to begin by promoting a positive attitude towards creative education through talks, seminars, courses, and even campaigns. This attitude can only be sustained in a creative climate. In order to establish a creative climate where creativity can flourish, school principals need to:

1. improve communication by encouraging feedback of new ideas to colleagues,
2. encourage brainstorming at all levels, and
3. market new ideas introduced into the schools.

Changing the Classroom Environment

Classes need not be conducted in the traditional way. Students can have lessons outside the classroom in parks, on the road, or even in the canteen, so that they can use the surroundings to stimulate their thinking and come up with unexpected ideas. For example, seeing an artwork in a park may lead one to think of the effect it can have on an advertisement. Although this may sound silly, even observing a couple in a park can help one to generate new ideas for a new song.

Classes can be conducted in the communication laboratory where students use the internet to get more ideas instead of depending on lecture notes and textbooks.

The atmosphere of the learning environment is also important. Teachers should try to create a soothing atmosphere so that students feel at ease to think creatively. For example, at Assumption English School, Koor Siew Hwa, a physics teacher who recently won the Singapore Association for the Advancement of Science Outstanding Science Teacher Award, conjures magical moments in his science lessons. He shows students holograms, performs tricks with eggs, makes his hair stand on end, throws objects around to simulate radiation of heat in air, passes balls or chalk boxes to demonstrate heat conduction in solids, and uses himself as an electric conductor to light up fluorescent
tubes (The Straits Times, 25 October 1997). The movie ‘Stand and Deliver’ is an example of an actual situation that is more dramatic than any fictional tale could ever be. It portrays a teacher by the name of Jaime Escalante who could motivate a class of underprivileged high-school students, whom others believed were slow learners, to pass the College Advanced Placement Mathematics Examination. Although he used only the traditional chalk and board approach, it was his remarkable gift of teaching that made the difference. He helped his students realise the talent they did not know they had. His expectations of high performance from his students and his guiding spirit as mentor and friend affirmed and lifted students to their intellectual heights. He showed them how powerful their minds were as he boosted their sense of self-worth and self-confidence.

**Encouraging Class Suggestions and Questions**

In order to encourage learning, teachers must allow students to make suggestions freely. Teachers should never try to pinpoint their students' mistakes as this deters students from thinking creatively. Students may then think that whatever ideas they suggest will be marked down. Teachers should also not give students an outline or a set of guidelines to follow as this would restrict their creative thinking to what is given. Instead, students should be encouraged to question their teachers' viewpoints. This may sometimes embarrass the teacher but, like in the days of Socrates when students asked original questions, this can help to build up students' confidence in thinking creatively.

In Singapore, it is encouraging to note that in Kranji Secondary School suggestions are actively sought via the Internet, suggestion box, and notice board (The Straits Times, 29 September 1997). Good suggestions are rewarded while those not feasible are explained why they cannot be used. In this way, no suggestion is ignored.

**Organising Visits**

Visits are like explorations and should, therefore, be organised. Places like the Discovery Centre and Science Centre are the creative centres for students to explore. Seeing is believing. As they see the displays which are manifestations of creativity, they will begin to realise the impact of creativity on their life and society.

**Keeping Competition Healthy**

Although too much competition can be unhealthy, competitions requiring participants to use their thinking skills are healthy. Such competitions can be conducted in, say, orientation or holiday camps. This is because such camps are fun going as the participants make friends while sharing ideas and enjoy themselves in an outside classroom environment. They, therefore, see competition as a game and not another stressful school activity. Creativity competitions can be organised to prompt students to think of things that are unique and at the same time useful in their daily life. For example, a competition on using recycled materials to design robots or some other things can be organised during the Environment Week. Competitions involv-
ing the use of simple materials to make more complex things such as using ice-cream sticks to construct a bridge can invoke the imagination and creativity of the participants.

Other competitions like poster design competitions allow students the opportunity to show their creativity in their own ways. They could be asked to design a poster to promote the latest album from Michael Jackson, or to encourage the public to recycle cans, or to educate the public on the harmful effects of drugs. By allowing students to choose their own design topic, they will be more enthusiastic in displaying their creativity to the fullest.

Increasing Books and Programs on Creativity

Universities and schools should not be constrained by budget to increase the number of books and computer programmes on creative thinking. These should be easily accessible to students doing library research. Furthermore, information can be made more accessible to students if universities and schools have a page on creativity on the internet.

Reinforcing the Curriculum with New Disciplines and Courses

The growing complexities of the world today entrenched in a technological environment necessitate the learning of more sophisticated subject matter at an even younger age. Hence, new disciplines and courses are needed to vitalise the curriculum in order to meet the challenges and demands of a new world of teaching and learning. The following are some new disciplines and courses for consideration:

1. Innovation, Entrepreneurship and Global Management

These can help students to become more cross-functional so that they can do multi-tasks. In other words, students should be exposed to multi-functions rather than be restricted by early specialisation.

2. Critical Thinking

This will enable students to become effective workers who can contribute more productively in the workplace by taking on problems and proposing creative solutions rather than be overwhelmed by them.

Engaging students in crossword puzzles or spelling is a straight-thinking skill. Critical thinking involves zigzag thinking which is a more powerful thinking mode that can aid productivity in the workplace in the following ways:

a. Make small changes in an existing process or product like replacing security guards with video cameras or telephone operators with answering machines, powering a screwdriver, and offering self-service in supermarkets, etc.

b. Come up with solutions when straight-thinking cannot work. A good example of this is how Archimedes discovered that the artisan had cheated the King of Syracuse, Sicily, of the four pounds of pure gold used to make the crown. Archimedes did not have to analyse the contents of the crown in a laboratory as this would destroy the crown. Rather, he submerged the crown in water to determine the displaced water. By noting the
difference in the water displaced when a similar weight of pure gold was immersed in water, he could determine if the crown had contained some baser metal.

c. Revolutionaryise methods like what Federal Express did with the delivery system by delivering package overnight.

3. Customer-Oriented Skills

These are becoming increasingly important in business because customers are getting more knowledgeable and demanding on service. The retailers of tomorrow need to be more customer oriented rather than just profit oriented.

4. The Liberal Arts With a Focus on Human Community Issues

These can stimulate students to think of life issues and to think for themselves. It is not only a valuable skill for living but also a marketable business skill when applied to workplace situations. We often stress the importance of management and leadership training, not realising that the liberal arts is in fact an organic part of management training because management deals with people and not just things. Therefore, values, commitment, and convictions are essential in management training. The liberal arts can address such issues involving human communities.

Another argument for the liberal arts is that schools and institutions assume that learning is an individual process with a definite beginning and an end. We see teaching as a process and tool to help us realise learning. In this sense, teaching and learning seem divorced from our other life activities. This should not be the case. Otherwise, learners will perceive that they are learning things which bore them. Rather, learners should see the relevance of the things they learn in their lives. Learning should not be seen as participating in the paper chase. Meaning is best seen in the context of life. Learning should be seen as an activity as important as eating or sleeping which are life-sustaining activities. Therefore, a major reform in education is to make students realise that learning is a life-sustaining activity. Students must realise that learning is part of human nature and a social activity which can change us, engage us in practice, and reflect our participation in the society and the world as a whole.

5. Science and Engineering With Hands-on and Research-based Learning

These generate student interest and enable students to make connections to other fields. Science and engineering are hard core disciplines which by themselves are technical in nature but they have far-reaching applications in the world we live in. It is only natural, then, that these two disciplines be taught as having vital connections to other fields including the liberal arts.

However, students generally find the content in science and engineering courses dense and abstract, filled with quantification and rigorous analysis. It is even said that science and engineering graduates are boring. Why should such important disciplines and their graduates be labelled boring? Perhaps, this is because abstractness hardly excites, so when people cannot understand the abstractness in
these two disciplines they tend to label them boring. Therefore, such courses need to be redesigned to address this social issue. **Technology concepts need not be taught as dense and abstract concepts.** They can be made comprehensible to both technical and non-technical people. For example, such course materials can be redesigned to help non-technical people understand the use of technology in solving a familiar business issue. Analogies can be used like comparing a computer (unfamiliar to some) to a television (familiar). Technical descriptions can also be rewritten more interestingly. Footnotes and glossaries can be added to relate abstract concepts to life and business issues.

6. Ethics

Ethics is central to the issue of morals and values. People often lament the decline of moral and ethical standards in society since the 1960s. Many voice out the need for more rigorous ethics teaching to help save the young from becoming corrupted citizens. Schools can lay the foundation for an elementary course in ethics by focusing on issues which students can identify themselves with in the school, home, and environment. The university can then take on this responsibility further by conducting undergraduate and graduate courses in ethics. In other words, there should not only be a one-time exposure to ethics. Rather, students should be given a systematic exposure to ethics. If ethics is to be treated as an important subject, it should be taught at all levels from elementary, progressing to secondary, and finally to postsecondary and tertiary. The purpose of teaching ethics is to stimulate moral imagination, develop skills in recognising and analysing moral issues, elicit a sense of moral obligation and personal responsibility, and teach how to tolerate and resist moral disagreement and ambiguity. The teaching of ethics should also be incorporated in business programs because of increasing white collar crimes in the business world. Business programs should introduce students to applied ethics rather than theoretical ethics which should have been dealt with at primary and secondary levels. Graduate business programs should expose students to the kinds of moral problems they will encounter as professionals in their areas of specialisation. Cases are best for making the study of ethics relevant.

7. Intuitive Thinking

Albert Einstein once said, "I believe in intuition and inspiration; at times I feel certain I am right while not knowing the reason." Because the world has progressed from industries and manufacturing to entrepreneurship and service, it is beneficial to train students and employees to be intuitive. Research has shown a correlation between business success and intuition. Faced with pressures from competition, acquisitions, and cutbacks, companies are returning to logic and sequential, bottom-line thinking. However, intuition must be used in conjunction with rational, logical analysis to realise the full power of intuition in making difficult economic decisions. According to Jerome Bruner, "intuitive thinking, the training of hunches, is a much neglected and essential feature of productive thinking." The next generation of learners and workers need to be better equipped with intuitive skill in order
to handle the complexities and uncertainties of an unpredictable tomorrow.

8. Cultural Awareness

Students need to be trained from young in an awareness of the rich mix of thinking and perceptions of people from all walks of life in a more globalised economy. Student exchange programmes can help expose students to different cultures and ideas.

The fact is that organisations which are able to draw on a world brain pool are more responsive and flexible, make smarter decisions, and are creative at problem solving. They hire from a larger talent pool and can understand their customers better. For example, when General Electric designed appliances for the European market, it involved Europeans in the design teams. Coca-Cola acted on the suggestion of the employees in Japan that cold coffee in cans would sell in Japan. In contrast, the Americans ignored the preferences of Japanese auto buyers and therefore lost out in the car industry in Japan.

Executives with diverse overseas experiences are usually more prepared for the risks of international business. Such executives can easily spot new clients or customers and new opportunities. They are a real asset to any organisation worldwide.

9. Humour

Has anyone considered setting up humour clubs in schools or conducting courses on the art of being funny? I am sure children will love these ideas simply because children smile on average 400 times a day while adults smile only about 15 times.

Humour can be applied to all aspects of life. At the Moruya Hospital in New South Wales, there is a laughter room packed with comics, toys and funny videos for patients to laugh, so they can recover faster. We all know that laughter is the best medicine but how often do we laugh and really enjoy laughing? Even Anatoly Scharansky and Nelson Mandela admitted that humour was a powerful weapon that helped them survive the horrible conditions of their years in prison. In life and in business, humour can help us deal with absurdities. It lowers our stress, anger, pain, and tension. It rejuvenates us and renews the trust in ourselves, others, and our world. It may even reverse divorce trends.

Both humour and creativity require imagination and the ability to suspend judgement. In children, research has shown that there is a correlation between humour and intelligence. Indeed, smart people laugh. People who laugh feel extremely good.

10. Art

There is economic value in artistic talents especially in design, entertainment and the media. Art provides many of our symbols and, therefore, clues to the future. In fact, artists are usually the first to break with a declining style and establish a new form. Those familiar with fashion can testify to that.

11. History

History is relevant in that accurate knowledge of the past produces accurate knowledge of the present and a way to predict the future. The proof for this is that
John Naisbitt keeps journal records of what is happening in the world. That was how he wrote his much acclaimed 'Megatrends'.

12. The Curriculum as a Whole

If students have to concentrate on their core subjects in order to pass examinations, they will have little time to think creatively unless creative thinking is incorporated into the core subjects. Alternatively, educators and outside experts can conduct courses on creative thinking. These courses can deal with questions which do not have definite answers such as "Why do different races exist?". For instance, Jules Verne asked "What if?" a century before humans landed on the moon. These kinds of questions will force students to exercise their creative thinking rather than to come up with answers to what is right or wrong. Projects in such courses can further challenge students to express their creativity. Even better is a degree course on creativity in the university. Publicising such a course and encouraging students to enrol in this course will help to boost the level of creativity in the nation.

Implementing a Buddy System

Peer group influence is known among teachers and students. To make this influence more positive and productive for students, a buddy system can be implemented as a mechanism for peer support. Students already practise this informally among themselves but this can be implemented formally in the school system whereby students can work in pairs in helping each other in school work, studies, etc.

Rethinking About the Examination

According to Professor Leo Esaki, a Lee Kuan Yew Distinguished visitor, "exams are a pain in the neck." We may not agree with that but the truth is that the Singapore Institute of Management (SIM) will soon be a university fit for the 21st century where admission will not necessarily be based on examination results (The Straits Times, 23 August 1997). Moreover, the National University of Singapore will also introduce open-book examinations to test undergraduates' understanding rather than memory of facts. Even if examinations are here to stay, teachers should seriously consider setting challenging examination questions that not merely test students' knowledge but also encourage students to give creative answers through application and adopting a multi-disciplinary approach. Bonus marks should be given for creative answers and approaches.

Instead of having two examinations in a school year, schools may consider reducing this to one main examination at year end. The mid-year examination can be replaced by compulsory report writing, case studies, or workshops. This is a step towards experiential learning which enhances students' learning strategies through group behaviour as they interact during activities rather than through assessment in the form of examination.

Teaching Reading and Writing Skills to Reflect Their Importance

Reading

Students having reading difficulty is a real concern to both parents and teachers.
Even some three-year old children who are attracted to the colours and pictures of storybooks and therefore want to read but are unable to do so express their frustration by throwing tantrums. It is lamenting to note that some students try hard to read but fail, or have spent years in education but still have doubts about their reading in the working world. Reading difficulty needs to be addressed because reading should be a joyful experience, especially if we are to encourage students to read widely. Barbara W. Tuchman wrote: "Books are the carriers of civilisation. Without books, history is silent, literature dumb, science crippled, thought and speculation at a standstill."

One way to counter reading difficulty is to use all our senses. God gave us one mouth, two eyes, two ears, and a nose, so make full use of them. For example, hearing can complement sight. Students can listen to taped readings of books at their level until they can flawlessly read each sentence. Then they gradually advance through the levels as they gain confidence after each level.

In order to make reading even more fun, teachers may wish to consider having karaoke in the schools. Karaoke was invented by the Japanese two decades ago as a leisure activity which involves singing with the aid of a microphone and amplifier to the accompaniment of a prerecorded sound track. Since then, it has become so popular that it is Japan's most popular cultural activity. It is said that on a single day six million of Japan's 124 million people sing their favourite tunes in bars, hotels, or karaoke boxes (which are private small rooms). There are now more than 1.3 million karaoke machines in Japanese homes, 350,000 in bars and clubs, and 15,000 in hotels, with annual karaoke software sales totalling Y75.9 billion in Japan in 1992. Karaoke is the answer to enjoyable reading in the schools as teachers and students can sing their favourite tunes to their hearts' delight. Like chanting or the singing of hymns of praises and Christmas carols, karaoke can bring newfound joy and spirit into the reading process. In order to participate in the singing, students need to read the words of the songs. In doing so, they learn the words and so enjoy reading as the result unfolds before their eyes. Those who cannot yet read can still join in the fun by first humming the tune and then gradually learning the words through hearing the songs being sung, not painstakingly but to the sound of music. Now, isn't this wonderful?

To further enhance this wonderful feeling of reading joyfully, we need to determine the kinds of reading that our students need for the next century. The fairy tales of our youth may not be what our youths like. Children today are no long interested in cowboys, so even Desperate Dan, the cartoon cowboy, is not their liking. Children are now more fascinated by power struggles between the good and the evil, so they are naturally attracted to models of combat like The Ninja Turtles, The Mighty Morphine Power Rangers, X-men, Superman, etc. Old fairy tales like The Little Mermaid, Cinderella, and Red Riding Hood fascinated children of the past. They are still enjoyable tales which even adults enjoy reading to their children because these tales remind adults of their childhood days. At most, these tales teach children things of the past. The Little Mer-
maid is not assertive, so she lost her valuable voice to the evil one. Snow White ends up staying with seven male dwarfs. There are no wolves hiding in the woods today for children to relate to The Riding Hood. On the other hand, The Ninja Turtles, The Mighty Morphin Power Rangers, and X-men work as a team in combating evil. Superman represents individual effort in conquering all odds. These are the things that children can relate to in the real world.

Children can also be encouraged to read science fiction books. These contain stories that are not only thrilling but also inspirational as in Star Trek TV series and Star Wars. Jules Verne's 20,000 Leagues Under the Sea and H.G. Wells' First Men on the Moon, although written long ago, are still relevant in today's world because they depict the exploration of new worlds and this should inspire the young to be more venturesome and enterprising in a globalised world.

Writing
Like reading, writing is an important skill to be acquired in education. Writing is an art that need not be learned painstakingly. Although not every student will become a master writer in the true sense of the liberal arts, the aim of education is to give students ample opportunity to write, write, and write. Writing teachers have their time-tested writing methods but what is more important is to take the boring part out of the writing tasks assigned to students. To encourage students to write, there must be fun and relevance. Students should be made to realise the meaning of writing in their lives, much like learning a technical skill in order to use that skill to do the technical job for which the skill is needed. Here are some examples of how writing can be fun and relevant to the students.

Teachers can make writing relevant in business by asking students to write effective business cards. This activity offers students a chance to examine critically the micro-decisions in creating a business card that can generate business. With this experience of writing and designing business cards that sell, students can then enter the world of work confidently. Exposure to small scale projects like this can help students to venture boldly into designing larger, more complicated documents.

Furthermore, students can be asked to write essays on current topics like how the aged and the computer-illiterate cope in an IT environment, ways to enhance creative thinking, teaching ethics to students, ways to improve the school environment to enhance creative learning, etc. Such topics can engage students on thoughts which benefit the society as they are real life issues.

Finally, students can also be encouraged to express their ideas through written reports. In written reports, students can express their creativity in the layout and design, illustrating their ideas with graphics, diagrams and pictures. With the availability of desktop publishing software, students can engage themselves in hours of imaginative exploration.

Extending the Repertoire of Teaching Strategies
The teachers of tomorrow at all levels of learning, including tertiary institutions, will need a more extensive repertoire of teaching strategies. They will be a resource for innovation and problem solving in the community. As the world becomes more
entrenched in technology, they will need
to be well versed in applying technology.
Teaching students will be a more chal-
lenging task as teachers seek ways to
engage students in higher cognitive
processes based on breakthroughs in brain
and human cognition research. This works
both ways. As more research is being done,
more new findings will benefit the com-
munity and teachers will need to upgrade
their knowledge of the new advances
resulting from research. Thus, teachers
will need to adopt a "balanced brain"
approach in their teaching, that is, an
approach that goes beyond testing merely
students' ability to recall facts. Future
teachers will need multi-skills in organi-
sation, communication, and human
relations in order to participate in a new
world of teaching and learning. Their expe-
riences will enable them to draw on real life
examples to illustrate the principles and
concepts in their lessons.

In the classroom, teachers must reduce
students' reliance on textbooks for answers.
Teachers can emphasise creative thinking
during lessons by encouraging students to
think creatively for the answers to ques-
tions instead of copying them from
textbooks. Goal-oriented questions can be
set to challenge students to work out dif-
f erent ways of attaining the goal. This is
especially useful in developing skills in
product innovation.

In the past, students were confined to
reading from textbooks and lecture notes.
Their ideas were actually copied from these
learning materials. Now, teachers have to
find new ways to lead their students to
think creatively and come up with more
original and creative ideas. One way of
doing this is to minimise the use of stan-
dard textbooks so that students will have
to look for other resources for knowledge.
Students will have to read more and con-
sequently adopt different views to a
problem.

Teachers can also use current articles
from newspapers to prompt students to
think creatively. Articles on current hot
topics can easily catch the attention of stu-
dents. This also reduces the time and effort
teachers often spend on getting students'
attention in their lessons.

Students can be asked to list all alter-
 natives they can think of in a given task.
Not all alternatives may be workable but
at least some of them will be creative. This
activity enhances students' creativity by
leading them to areas which they probably
will never think of on their own.

Finally, teachers should realise that
there is no lack of thoughts for promoting
creativity in the classroom. Some sug-
gested ideas are listed below.

1. Allow students to design websites based
   on their desired themes.
2. Engage students in thought-inspiring
   activities like debates on both local and
   international issues.
3. Get students to role play real-life cases
   or problems.
4. Plan extracurricular activities that
   involve problem solving tasks like
   organising certain school events (inter-
   school or inter-class competitions,
   exhibitions, carnivals, fund-raising and
   charity projects, etc.).
5. Encourage students to share their inter-
   ests in class by getting them to talk or
   write about their hobbies, reading
habits, outside and family experiences. This can improve their knowledge of each other and help set the tone for group work which can inculcate group effort in generating ideas and sharing risks.

6. Reward class participation and creative answers with points or words of encouragement.

Encouraging Principals and Teachers to Make Decisions

To handle the radical measures dictated by the pace of a fast changing world, decision making at school level becomes relevant. Principals and teachers should be encouraged to become risk-takers. If they lack the time for planning; or the experience in budgeting, team-building, and other managerial skills, then they should be given the relevant training to help them overcome their limitations which arise from their lack of entrepreneurial and managerial skills. Schools need not function like companies where the bottomline is making profits. However, schools are entities like any organisation and they should, therefore, function as an entity. Moreover, schools will one day have to fund their programmes. Therefore, it is only timely that principals start preparing for this eventuality by recruiting teachers with the right skills and training the existing ones with the skills which will be in demand for the next century.

Speeding Ahead With IT Training

Stepping up on IT training is the way to success in a more digitised tomorrow. Stephen Hawking once said: "My body may be stuck in this chair but with the internet my mind can go to the end of the universe."

The impact of distance learning upon teachers and students is now being felt as a cheaper and effective kind of learning. It certainly has the potential for transforming higher education. By combining the best of our university and college systems with the vast opportunities in communications and information technology, distance learning is the answer to high quality, highly individualised instruction that our forefathers could never have imagined.

To facilitate the exchange of information among students, teachers, parents, and the outside community, schools can even be developed into electronic schools, like Apple's Electronic Campus (Laabs, 1993). Like a self-teaching tool, students enter the system and get from it what they need rather than going through courses. This is a revolutionary approach to learning and can completely change the whole scenario of the teaching world.

Having a potpourri of educational software in the schools or a central software library making software easily available to all schools will boost IT training. This is because educational software can help children learn difficult concepts at an early age. If you have played with an educational software and become fascinated by the imagination and creativity of the software writers, you will agree that learning in this way can be so much more fun than with the traditional chalk and board approach. Educational software can provide simulation and animated worlds where students can participate. Games and challenges engage students in learning key ideas which set the stage for learning more
difficult concepts. The promise of educational software is not teaching efficiency but fundamentally altering the curriculum. In effect, educational technology enables more students to be responsible for their own learning and this is a great relief to teachers who have been trying to achieve this for centuries.

However, constant exposure to computers and technology can be at a psychological cost. As we are aware, innovations in technology have affected society, teaching behaviour, our interactions with others, thought processes, and social norms, to name a few. What is even more alarming is the impact it has on our psychological being. Lynch (1987) studied this impact on 60 Massachusetts-based UNIX programmers and found that the programmers expect faster relationships and more intense ones. In a way, computers and technology can hinder communication and team work and lead to isolation. Also, the increased use of detached logic makes creativity more difficult. Hence, in order to strike a balance between competence in technology and creativity and better relationships, we need to rethink about the integration of these diverse aspects of human learning and activity. If we can strike this cord, we can say we have the best of both competencies.

Recognising the Need for Community Service

Learning how to serve is beneficial to the students’ learning process in terms of fresh ideas and work experience. It works best when community service is combined with formal study in relevant ways. For example, by applying marketing tools and concepts to social problems and issues, marketing students can appreciate their limitations. The students can act as marketing consultants. This also helps to save non-profit organisations from paying high consultancy fees to outside consultants.

Besides, community projects can engage students in interviews and discussions with senior citizens. This exposes students to the importance of support systems in the society, friendship, humour, acceptance of people regardless of their social status and who they are, patience, empathy, caring for others especially the neglected and needy, etc. This can help students become more responsible citizens in the workplace and in society. At the same time, it diminishes the blame by the public on schools, universities, and other educational institutions for the declining ethical standards in society and the lack of ethics courses in the curriculum.

Conclusion

Creativity is a beautiful buzz word. It is more than just a buzz word for creativity can help us go places if we only move away from our habitual domains and allow ourselves to be transported into the realms of the newer domains that tomorrow promises.

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Ten Commandments For Teenagers

1. Stop and think before you drink.
2. Don’t let your parents down; they brought you up.
3. Be humble enough to obey. You will be giving orders yourself, some day.
4. At the first moment turn away from unclean thinking - - at the first moment.
5. Don’t show off driving. If you want to race go to Indianapolis.
6. Choose a date who would make a good mate.
7. Go to church faithfully. The Creator gives you the week; give him back an hour.
8. Choose your companions carefully. You are what they are.
9. Avoid following the crowd. Be an engine - not a caboose.
10. Or even better - - keep the original Ten Commandments.