

## **Factors Contributing Towards Excellence Academic Performance**

**Assoc. Prof. Dr. Azizi Hj. Yahaya  
Faculty Of Education  
University Technology Malaysia**

### **ABSTRACT**

In the just release results of the STPM (Sijil Tinggi Pelajaran Malaysia) and the SPM (Sijil Pelajaran Malaysia) for the year 2003 respectively, only about 1% of students were top performers. The media also reported various comments from top performing students themselves on how they have managed so very well in these public examinations. Coincidentally, their comments are very much consistent with what the experts have put forth like the roles of teachers and schools, peers, family, and students themselves are important contribution towards achieving top academic results.

### **ABSTRAK**

Keputusan STPM dan SPM 2003 yang baru diumumkan menunjukkan hanya 1% pelajar memperoleh keputusan yang cemerlang. Pihak media juga melaporkan beberapa komen daripada pelajar yang memperoleh keputusan yang cemerlang dan bagaimana mereka berjaya memperoleh keputusan yang cemerlang dalam peperiksaan awam. Secara kebetulan komen yang diberi adalah selari dengan apa yang pernah diutarakan oleh ahli psikologi mengenai faktor yang menyumbang kepada kejayaan pelajar dalam bidang akademik seperti peranan guru dan sekolah, peranan rakan sebaya, peranan keluarga dan sikap pelajar sendiri

### **INTRODUCTION**

Just recently, on the 27<sup>th</sup> and 28<sup>th</sup> February 2004, the Malaysian Examination Council announced the results of the STPM (Sijil Tinggi Pelajaran Malaysia) and the SPM (Sijil Pelajaran Malaysia) for the year 2003 respectively. STPM and SPM are two public examinations, which are sat at every year-end by schooling adolescents in their late teens, in Malaysia. Those sitting for the SPM are in the age range of 17 to 19 years old while those sitting for the STPM are in the age range of 19 to 21 years old. The council announced that there were 715 students out of 56,602 STPM candidates who obtained straight 4As or better and 1,152 students out of 420,220 SPM candidates who obtained 1As in all subjects. In terms of percentage, only 1.26% of the total STPM candidates and 0.27% of the total SPM candidates were top students in term of academic excellence. These rather small percentages are like very thin cream spread on top of quite large birthday cake. These students appear to be special breed of people who seems to have superior capabilities than the other STPM and SPM candidates.

In addition to reporting the detail results of the STPM and SPM examinations, the national and state newspapers also reported various comments from top performing students on how they have managed so very well in these public examinations. For example, one student said it was her mother's life threatening illness and her love that has motivated and pushed her to excel and scored straight As. Another attributed her success to, first her parents who let her does her own thing and, second on her paying attention in class and working consistently. Another said his friends have helped him a lot as they worked together to solve whatever problems they had with their school works. Another said "I learned to study smart and not just to study hard. Studying hard is just burning the midnight oil, but studying smart means being consistent and working hard from day one." And yet another attributed his achievement to studying consistently and going for tuition in his weaker subjects. He also thanked his teachers for putting in a lot of time to help them like giving extra classes.

The factors mentioned by some of the high flying students above are very much consistent with what the experts and gurus have put forth. For examples, they have put forth factors like the roles of teachers and schools (e.g. teachers giving extra classes), peer (e.g. discussion group), family (e.g. mother's love) and self (e.g. own study schedule) are important contribution towards achieving top academic results.

Sitting for public examinations like the STPM and SPM is part of the journey to life-long learning. But just what is learning? From the view of behavior, learning is defined as a change in learner's disposition to behave in a certain way as a result of his experience. Some psychologists do not like this limiting behavioral process view but instead look at learning from a cognitive perspective that is, interested not only in behavior process but also in mental process. They define learning as actually a change in learner's behavioral disposition that is caused by his experience.

According to Bower and Hilgard (1981) learning can take place in three ways. The first way is learning by direct exposure to the events themselves. Second is learning things by watching others experience the events. And third is learning through language, either by being told directly or by reading. The following are discussions on the important role of teachers and schools, peers, family and learners' themselves towards contribution in achieving top academic performance.

## **A. ROLE OF TEACHERS AND SCHOOLS**

Teachers and schools have important role to play towards learning capabilities of students. Their roles includes promoting active learning, developing thinking skills, creating effective learning zones, promoting success, providing effective feedback, recognizing and creating learning windows, developing good relationship, developing learning pedagogy, enhancing motivation and accepting individual differences.

### **i. Promoting Active Learning**

Teachers in schools are the ideal people as well as in the best situation to promote active learning amongst students in schools. Active learning is about energizing and sustaining attention of students, who then become very interested in doing any classroom activities. A number of researches have been done on active learning. Among these is a research by Fitz-Gibbon (1996) which showed that acting on information leads to better recall because it requires the individual to understand the

information first. A research by Lazear (1994) showed that students learn best in the first part of a lesson, which implies that it is critical not to lose valuable time at the start of a lesson on activities that are not central to the lesson objectives. Other useful action-oriented active learning strategies include beginning a lesson by asking students to list five things from the previous lessons and then comparing the list with the other students and ending a lesson with an activity that sums up a key learning idea, like for example telling a partner the most important thing learnt from the lesson.

According to Noble & Bradford (2000) and West (2001) asking students for input into their assessment tasks and criteria is another learning strategy. Other strategies include learning through debates, role plays and doing research projects as well as visual construction of concepts for example mind maps. These strategies basically remind teachers of the importance of refreshing the class with the previous lessons and to link them with today's activities at the start of each lesson. Students' active participation through out the lessons is the trade mark of active action-oriented learning. Those students, who enjoy such learning styles and strategies conducted by their teachers, would surely benefit the most by retaining as much knowledge as possibly can.

## **ii. Developing High Order Thinking Skills**

The role of teachers and schools is not just imparting knowledge content but also to develop students in solving problems, making decisions and adapting to dynamic of the environment. These all require students to develop high order thinking skills. According to Sousa (1995), thinking skills can be mapped along a continuum which starts from knowledge level, then comprehension, application, analysis, synthesis and ends with evaluation level. By doing classroom projects, cases and exercises, students basically walked through the various level of thinking like reading to comprehend, analyze and evaluate the issue at hand until decisions to solve problems are made. As students practice often on more complex problem based learning, their thinking skills become more developed and enhance to reach the higher order level.

## **iii. Creating Effective Learning Zones**

One of the top students said that being given the freedom to choose and do what she likes is one of the reasons that contribute to her excellent academic results. This is about doing things or even learning things in ways or styles or zones that are comfortable and conducive to the students. Comfortable and conducive zones are those with which the student identifies or has some affinity with. Teachers can create effective learning zones in the classroom by seating, for example a verbally confident student next to a reflective student, or a student strong in mathematics with a student less confident in the subject or even a student who presents work well with a student who is not so careful or creative with presentation. The schools can, for instance group students by class according to their academic performance. For example, academically weak students are placed in one class and academically good students in another class. Whatever may be the seating arrangement; there are four key rules to observe when developing seating policy. First it must be emphasized to students at the outset that the policy is designed to enhance learning. Second, seating must be arranged in the context of a supportive and cooperative classroom. Third, seating arrangements must be very flexible and changed if they do not work. Fourth,

excessively incompatible or incongruent pairings must not be made. Ultimately, teachers are the best judges as to whether seating policy is appropriate and if so, which pairings to pursue. Applying the right learning zones can indeed give positive impact to students' learning capabilities.

#### **iv. Promoting Success**

All students strive for success, which is the most motivating outcome a student can experience. Preparing students for success is not easy tasks, but fortunately there are many ways for teachers and schools to prepare and promote success experiences in the classroom. According to McInerney (2000) there are nine core steps for teachers in promoting success in students' work as follows:

- a. Begin lesson with quick review of previous learning and outline goals
- b. Present material in small steps and allow application after each step
- c. Provide clear and detailed instructions and explanations
- d. Ask a large number of questions and check for student understanding
- e. Guide students in initial phases of learning and application
- f. Provide systematic feedback that is task-based
- g. Monitor students as they work
- h. Provide ample time for completing tasks
- i. Identify in advance what material/concept might be difficult

Other ways include first, educators and students must learn to break tasks into components and see each component as an opportunity for success. This not only provides ongoing motivation to complete the task but also increases opportunities for success. Secondly, to provide every student with opportunity to experience real success is to have students expand their definitions of success. Each student views success in many ways, which is to say a success to one student may not be for another. Definitions of success that make success accessible to every student cast success in terms of personal bests, skill development and improvement. When students see success in more personal terms rather than relative terms, success immediately becomes accessible to them. Success in year-end examinations is then within reach or achievable.

Ludowyke and Scanlon (1997) recommended that to promote success in the classroom, greater clarity be injected into the classroom and classroom tasks. This involves showing students examples of quality work in their complete form and providing very clear and detailed instruction to students regarding the quality and quantity of work expected. It is only the best, dedicated and resourceful teachers in schools that can prepare and promote success in academic excellence to students.

#### **v. Providing Effective Feedback**

One of the responsibilities of educators is giving feedback to students on their work and assessment tasks. Through feedback, teachers can determine whether students are success oriented, avoiding failure or accepting failure. By knowing such classification about students, teachers can tailor their teaching strategy and philosophy to suit the success category of students. They will try to treat success oriented student differently to failure adverse student or to student who accepts failure. There may be nothing wrong for a student who accepts failure because he wants to go on to improve himself to prevent failure in future. Examples of effective feedback to students are giving very

clear expectations on assignment or test, having very clear marking criteria, having greater focus on content and skill rather than presentation, and showing students previously completed examples of good work. The use of report cards is one medium of providing feedback on the historical academic performance of students and also provides an opportunity to launch students into future learning. Reports cards should not only be a balance sheet of past performance but also focus on recommendations for further improvement or overcome any academic weaknesses or even capitalized on academic strengths. Effective feedback must be regular, timely and useful to students. Teachers should try to make feedback as something that propels them to become better academically.

**vi. Recognizing and Creating Learning Windows**

Teachers through experience can create or even recognize learning windows. The learning windows can be part of the day or certain days of the weeks or even certain weeks of the month. Learning windows are opportunities where students are fully attentive, interested in learning and ready to learn. These learning windows may come and go and therefore teachers must exploit the learning windows to the fullest advantage for students. The more teachers are able to recognize and seize learning windows the more students are hooked into the lesson or learning activity. This is when teaching and learning becomes truly exciting and thriving. Exploiting learning windows may increase the number of students to achieving straight As results.

**vii. Developing Good Relationships**

Student interest on a particular subject can be influenced by the teaching style of teachers. There are comments like “If only I like my teacher, I could get A in his subject”. If the teaching style is liked and enjoyed by students, they tend to become good in the subject taught. Therefore student-teacher relationship is one of the most critical factors influencing students’ performance in schools. Teachers who are able to effectively relate to students, accept student individuality and teach in an inclusive and democratic environment are more effective teachers. Teachers should be approachable, firm, and assertive and discuss with students on their wants and needs to develop good, cordial and conducive student-teacher relationship for the benefit of students like excelling in their examinations.

**vii. Developing Productive Pedagogy**

Productive pedagogy is the “teaching” that brings out the best in students. Under such teaching style, students on their own free will start to display or show off ‘hidden’ attributes, skills and talents. If there is no productive pedagogy, students could not be bordered and would show no interest in learning under such teacher. To be high in productive pedagogy, a teacher should view all students as capable of learning, see themselves as facilitators of learning and also see student learning very much as his responsibility. He should also focus on skill development more than transmitting content, work more innovatively with curriculum to create learning windows and has higher extra-curricular involvement. Further more, he should engage in professional conversations with colleagues, be willing to talk about their failings and made

changes to respond to these. If the culture is to bring out the best of oneself in the class, then surely the best will also come out in the examinations.

### **viii. Motivation**

What and how much is learned is influenced by the learner's motivation. Motivation to learn, in turn, is influenced by the individual's emotional states, beliefs, interests, goals and thoughts. A student can be motivated by life threatening illness to his next of kin, or his belief that he can do as well as the smart student, or he wants to accomplish his ambition to somebody one day. Therefore, students' beliefs about themselves as learners and the nature of learning have a marked influence on motivation. Motivational and emotional factors also influence an individual's motivation to learn. Positive emotions, such as curiosity, generally enhance motivation and facilitate learning and performance. Mild anxiety can also enhance learning and performance by focusing the learner's attention on a particular task. However, intense negative emotions (e.g., anxiety, panic, rage, insecurity) and related thoughts (e.g., worrying about competence and failure, fearing punishment, ridicule, or negative labels) generally demoralize, disturb learning, and cause low performance. The learner's creativity, higher order thinking, and natural curiosity all contribute to motivation to learn.

Effort is another major indicator of motivation to learn. The acquisition of complex knowledge and skills demands the investment of considerable learner energy and strategic effort, along with persistence over time. Educators need to be concerned with facilitating motivation by strategies that enhance learner effort and commitment to learning and to achieving high standards of comprehension and understanding. Effective strategies include purposeful learning activities, guided by practices that enhance positive emotions and intrinsic motivation to learn, and methods that increase learners' perceptions that a task is interesting and personally relevant.

### **ix. Accepting Individual Differences**

Students have different strategies, approaches, and capabilities for learning that are related to prior experience. Individuals are born with and develop their own capabilities, skills and talents. In addition, through learning and social upbringing, they have acquired their own preferences for how they like to learn and the pace at which they learn. However, these preferences are not always useful in helping learners reach their learning goals. Therefore, educators need to help students examine their learning preferences and expand or modify them, if necessary. In general, educators need to be sensitive to individual differences. They ought to accept individual difference or niches. Students come from varied background and upbringing including culture, beliefs and traditions. They would surely behave and learn based on their heredity, traits and habits. There is no ideal or perfect learning strategy and this must be accepted as normal by teachers.

## **B. ROLE OF PEERS**

Students' friends also seem to influence their educational success. They tend to select friends with similar interests and goals. Students whose peers have higher educational

aspirations tend to have more positive academic self-concepts themselves. They are more engaged in schools and have higher hopes for their life long education than students whose peers have low educational aspirations. Students who spend a lot of unproductive time with friends tend to have lower achievement levels than those who spend less time hanging out with peers. So students who wish to excel in their studies should be selective when it comes to choosing friends to hangout with. There is no doubt that peers play an important role in academic achievement of students. Peers can either give academic leverage or synergy or academic doom to students. This is the very reason as to why many parents tend to be concerned about the types of friends that their children hang out with.

### **C. ROLE OF FAMILY**

The importance of the role of the student's family is discussed first from the context of attitude, then socio-economic status, and finally parenting approach and family size.

#### **i. Attitude**

Families play strong role in how students perform and adjust in schools. Parents' involvement is highly related to their children success in education. Students whose parents are more involved with their schooling are more likely to be motivated to achieve excellence in school, have higher educational expectations and do better academically and go on to higher levels of educational than their peers whose parents are not involved. One of the ways parent can get involve in schools is joining the Parents-Teachers Associations of the schools. Parents should show commitment, time and concern for the proper and effective management and running of schools to provide high quality education for their children. The association can sponsor or organize various talks on motivation, career guidance and counseling for the students. Therefore, the attitude and commitment of parents towards getting involved in their children educational well-being is critical to their achievement of academic excellence. The parents of students who do their best are interested in more than homework and grades. They make time to talk to their children and to be available. They go to PTA meetings. They take their children seriously both in and out of schools, and the children reward that interest through showing better results in their examinations.

#### **ii. Socioeconomic Status**

Some bibliography of successful men and women mentioned about how terribly poor their parents were financially, economically and educationally. This state of affair i.e. low income level, poor livelihood and lowly educated is the one that motivate them to be successful in their endeavor including in education. There are now sons and daughters of very poor people who are of prominent standing in the society. Socioeconomic status is an important factor in students' adjustment to and performance in school. The very fact that they were poor has given them the

motivation to strive harder and do their very best in schools for they believe that education is the key to good life later. On the hand, students, who live in more affluent families, have higher educational aspiration and expectations, do better academically and are more likely to continue their schooling than their less well off peers. The major influence on achievement is a student's home atmosphere; how much reading material is available, how the parents feel about education, what they want for their children, what they do for and done with their children, how and how much they talk with their children and how stable the family is. Both rich and poor families can create a climate that foster learning. "Even though family background does have a strong relationship to achievement, it may be how parents rear their children... and not the parent's occupation, income, or education that really make the difference" (K.R.White, 1982,p.471)

### **iii. Parenting Approach Or Style**

Parenting approach also may affect students' school experiences. Students whose parents are supportive yet provide rules and consequences tend to be more engaged in school and have higher educational expectations than those students whose parents are permissive or neglectful. Some parents even go to the extent of limiting the time their children can watch television or control their use of free time. Some parents couldn't care less for their children or have no time set aside for their children because they are busy earning their livelihood. There are three styles of parenting. Authoritative parents tell students to look at both sides of issues and admit that children know more than parents. Students receive praise and freedom if they get good grades; poor grade bring encouragement to try harder, offers for help and loss of freedom. Authoritarian parents tell students not to argue with or question adults and tell then they will know better when they grow up. Good grade bring admonition to do better and poor grade upset parents, who then punish by reducing pocket money or curfew. Permissive parents do not care about grades, make no rules about watching television, do not attend school program and neither help nor check their children homework. According to Steinberg, Lamborn, Dornbush and Darling (1992), Children of authoritative parents tend to do better in schools than of parents in the authoritarian and permissive groups

### **iv. Family Size**

The size of families has some effect of academic performance of students. Students who come from larger families tend to have lower levels of achievement and lower levels of secondary graduation, on average than children who come from smaller families. The argument is that parents of many children cannot afford to divide quality time with their children. Value added quality time is hard to set aside to oversee the academic aspect of the children. On the other hand, parents with two to three kids can afford the time to develop their children academic capabilities because their time is only shared with less number of children.

## **D. ROLE OF STUDENT**

The students themselves play critical role in making them to be high achievers. Their role is discussed from the aspects of the nature of the learning



process, the goals of the learning process, construction of knowledge, strategic thinking and finally on thinking about thinking.

**i. Nature Of The Learning Process.**

There are different types of learning processes, for example, learning that involves the generation of knowledge, or cognitive skills and learning strategies. The learning of complex subject matter is most effective when it is an intentional process of constructing meaning from information and experience. Learning in schools emphasizes the use of intentional processes that students can use to construct meaning from information, experiences, and their own thoughts and beliefs.

Successful students are active, goal-directed, self-regulating, and assume personal responsibility for contributing to their own learning. They participate actively in class, do their task diligently and submit them on time. They do task with some objective or goal in mind. They are self discipline and very responsible in whatever endeavor they do.

**ii. Goals Of The Learning Process.**

Learning process has purposes or objectives like gaining value-added knowledge to excel in examinations and to be better than the others. The successful students, over time and with support and instructional guidance, can create meaningful and coherent representations of knowledge. To construct useful representations of knowledge and to acquire the thinking and learning strategies necessary for continued learning success across the life span, students must generate and pursue personally relevant goals. Personal relevant goals include self satisfaction, more fluent on the subject matter and gain confidence and respect from peers.

Initially, students' short-term goals and learning may be sketchy in an area, but over time their understanding can be refined by filling gaps, resolving inconsistencies, and deepening their understanding of the subject matter so that they can reach longer-term goals. Educators can assist learners in creating meaningful learning goals that are consistent with both personal and educational aspirations and interests.

**iii. Construction Of Knowledge**

The successful student can link new information with existing knowledge in meaningful ways. They can recognize the relevant or connection of his current knowledge with new knowledge. He starts by having the trunk of knowledge and overtime his knowledge grows and spread like branches of a knowledge tree. Knowledge widens and deepens as students continue to build links between new information and experiences and their existing knowledge base. The nature of linkages between the student's current knowledge base and the new information can take a variety of forms, such as adding to, modifying, or reorganizing or reorienting existing knowledge or skills. How these links are made or develop may vary in different subject areas, and among students with varying talents, interests, and abilities. New knowledge should becomes integrated with the student's prior knowledge and understanding so that it can be used most effectively in new tasks and be transferred readily to new situations. Teachers can assist students in acquiring and integrating knowledge by a number of strategies that have been shown to be effective

with learners of varying abilities, such as concept mapping and thematic organization or categorizing.

#### **iv. Strategic Thinking**

Successful students use strategic thinking in their approach to learning, reasoning, problem solving, and concept learning. They understand and can use a variety of strategies to help them reach learning and performance goals, and to apply their knowledge in various situations. They also continue to expand their repertoire of strategies by reflecting on the methods they use to see which work well for them, by receiving guided instruction and feedback, and by observing or interacting with appropriate models. Learning outcomes can be enhanced if teachers assist students in developing, applying, and assessing their strategic learning skills.

#### **v. Thinking About Thinking.**

Successful student can reflect on how they think and learn, set reasonable learning or performance goals, select potentially appropriate learning strategies or methods, and monitor their progress toward these goals. In addition, successful students know what to do if a problem occurs or if they are not making sufficient or timely progress towards a goal. They can generate alternative methods to reach their goal or even reassess the appropriateness and utility of the goal. Instructional methods that focus on helping students develop this higher order (metacognitive) strategies can enhance student learning and personal responsibility for learning.

### **CONCLUSION**

There are various factors that influence the outcome of top academic performers. These factors are categorized into teachers and schools, peers, family and student own roles. Teachers and schools play the role of promoting active learning, developing thinking skills, creating effective learning zones, promoting success, providing effective feedback, recognizing and creating learning windows, developing good relationship, developing learning pedagogy, enhancing motivation and accepting individual differences. Students whose peers have higher educational aspirations tend to have more positive academic self-concepts themselves. They are more engaged in schools and have higher hopes for their life long education than students whose peers have low educational aspirations. Students who spend a lot of unproductive time with friends tend to have lower achievement levels than those who spend less time hanging out with peers. Peers can either give academic leverage or synergy or academic doom to students. The students themselves play critical role in making them to be high achievers having effective learning strategies or styles, learning goals, ability to build on knowledge and strategic thinking.

Teachers play a major interactive role with both the student and the learning environment. Group influences on students can impact many educationally relevant variables, such as motivation, orientation toward learning, and ways of thinking. Technologies and instructional practices must be appropriate for students' level of

prior knowledge, cognitive abilities, and their learning and thinking strategies. The nurturing classroom environment can also have significant impacts on student learning.

Learning is influenced by social interactions, interpersonal relations, and communication with others. Learning can be enhanced when the learner has an opportunity to interact and to collaborate with others on instructional tasks. In interactive and collaborative instructional contexts, individuals have an opportunity for perspective taking and reflective thinking that may lead to higher levels of cognitive, social, and moral development, as well as self-esteem. Quality personal relationships that provide stability, care and trust can increase students' sense of belonging, self-respect and self-acceptance, and provide a positive climate for learning. Family influences, positive interpersonal support and instruction in self-motivation strategies can offset factors that interfere with optimal learning such as negative beliefs about competence in a particular subject, high levels of test anxiety, and undue pressure to perform well. Positive learning climates can also help to establish the context for healthier levels of thinking, feeling, and behaving to help students feel safe to share ideas, actively participate in the learning process, and create a learning community.

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