EXCELLENCE AND EFFICACY IN THE DELIVERY SYSTEM AT PRE-UNIVERSITY LEVEL

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ABSTRACT

In the current educational climate in Malaysia, the very relevance of pre-university programmes of study is increasingly being questioned. As such, a concerted drive by pre-university educators towards excellence and efficacy is vital if such programmes are to resist the eventual slide into oblivion. This paper aims to take a critical look at the delivery system. It identifies and discusses some inherent weaknesses in the system and emphasizes the role of the educator in shaping an environment that is conducive to effective learning whilst taking cognizance of the numerous factors outside the orbit of the educator that can compromise the effectual delivery of subject matter. The paper also makes recommendations towards the attainment of excellence and efficacy in the delivery system, drawing conclusions from a survey conducted amongst past and present students as well as actual classroom experience. These recommendations are based on personal opinions and broad pedagogical philosophies rather than on actual teaching methodologies.

Keywords: Excellence and efficacy, delivery system, pre-university level.

INTRODUCTION

Enrolment in a course of pre-university studies to bridge the gap between secondary and tertiary education has become the norm in this country. However, the emergence of some rather attractive alternatives during the last two decades has occasioned a shifting tide against this established practice. The Geneva-based International Baccalaureate Program offers a diploma that has more credence than a standard pre-university certificate. American degree transfer programs, requiring only SPM qualifications and thus bypassing the pre-university link altogether, are becoming more popular. In this ever-changing scenario in which British dominance wanes in the face of growing preference for other alternatives, the future of pre-university education is at stake. A few years ago, a debate arose in the United Kingdom about the long-term relevance of the iconic A-Levels. While that debate seems to have lost steam, it indicates that the pre-university concept as we know it may see an eventual slide into oblivion. The onus is thus on its purveyors and promulgators to ensure its continued relevance.

This paper does not question the relevance of pre-university courses of study in Malaysia. It merely predicates the principle that any doubt about continued relevance can be rendered a non-issue if such programmes exude excellence and efficacy as their twin hallmarks. With enrolment peaking at over 3000 for the five pre-university courses available at Sunway University College, the immediate term looks secure. Yet, we cannot afford to sit on our laurels. We must put as much sparkle as possible into our 'diamond' so that the world of aspiring young people will find themselves bedazzled enough not to look elsewhere!

DEFINITION AND EXPLANATION OF TERMS

At the day-to-day *operational* level, the delivery system would mean the imparting of information, knowledge, concepts and understanding by lecturers, inclusive of the processes and methodologies employed. But what we do with our students must surely be the outworking of something more intrinsic and inherent. Thus, at the *philosophical* level, the delivery system would involve the aptitude for teaching that we possess as well as the attitudes that we hold in our hearts toward our fellow human beings. In this paper, I wish to exclude any role played by our students in rendering the classroom experience an efficacious one. By taking this position, I can keep the onus entirely on the lecturers.

Excellence refers to the quality of what the lecturer imparts. It includes the technical accuracy and relevance of what is being taught as well as the quality of the printed material supplied. More broadly, it refers to how strongly the lecturer exemplifies excellence in its many facets and thus inspires students towards the attainment of the same. Efficacy refers to how effective the lecturer is in the transmission of subject matter. Technically speaking, this would involve the command of the audience's attention, the approach to concept development and the overall teaching style. More broadly, it would encompass everything the lecturer does to shape an environment that is conducive to effective learning and intellectual development whilst taking cognizance of those factors that would run contrary to the same. In a nutshell, excellence is the essence within while efficacy is the outworking of that essence. Excellence without efficacy is like a beautiful song being 'murdered' by a poor performer.

In this paper, pre-university level would refer primarily to the five bridging courses offered at Sunway University College. The words lecturer and teacher are used synonymously throughout except when a clear distinction is attempted in the section titled "recommendations".

WEAKNESSES AND HINDRANCES IN THE DELIVERY SYSTEM

The Malaysian Problem

We are a nation beleaguered by a pathological contentment with mediocrity. Despite the constant rhetoric on excellence, we remain decidedly Third World. This is evidenced by our penchant for celebrating superlative achievements of dubious value and routinely indulging in meaningless comparisons with the poorly performing democracies around us. We smugly re-define excellence in monetary and material terms, often sacrificing quality for quantity. Despite this glaring flaw in the national psyche, I believe that we have the raw talent necessary for the attainment of excellence on a world stage. But a culture of mediocrity prevails nation-wide and our laissez faire acceptance of it is so endemic that it has become institutionalized. This is our core problem. Naturally, this has had a huge detrimental effect on the delivery system in every one of our endeavours as a nation. This is especially true in education.

Education Prior To Pre-University Level

Pre-university lecturers have to continually struggle with the consequences of a national education policy gone awry. *The mindset of the average SPM 'graduate' is hamstrung by gross ignorance and misinformation.* Much of what has been learnt is loosely held and horribly subject to inaccuracies. Even amongst the cream of our school leavers, the capacity to think and reason is grossly deficient.

At the heart of this national problem lies the change in the medium of instruction effected one generation ago. While there seems to be tacit agreement that this change was a grave error, the damage has already been done. The standard of spoken and written English is very poor. Vocabulary is miniscule in scope. Despite distinctions in SPM-level English, most students are unable to construct the kind of sentences needed to articulate a body of information, let alone present a coherent argument. *In short, effective communication across the board has become immensely limited in scope and in depth.*

It comes as no surprise, then, that pre-university students today suffer from communication handicaps on several fronts. These compromise the delivery system from the very outset. Thus, the task before each one of us becomes tantamount to that of a Sherpa guide leading a team of mountaineers up Everest's slopes without pick-axes and oxygen tanks!

Syllabus Changes Enacted By Examining Authorities

All pre-university syllabuses have undergone a transformation from "deeper but narrower" to "wider but shallower". This signals a worldwide paradigm shift from the need to know less and understand more to an emphasis on knowing more and understanding less. Despite this new shallowness, present-day examiners continue to set questions that "dig deep". It appears, therefore, that the expectations of examiners have changed little over the years while the 'tools' delivered to the students to meet those expectations have actually declined in efficacy. The situation here is akin to that of raising an edifice thirty years ago with a small set of efficient tools versus attempting the same task today with a larger set of less efficient appliances. This decline poses a major intrinsic hindrance in the delivery system that must be dealt with in any drive towards excellence and efficacy.

Socio-Economic Factors

During a recent laboratory-based examination at Sunway, a co-invigilator noticed some candidates struggling with simple apparatus. "I think it is a socio-economic problem," she remarked, "prevalent in urban communities." I found myself in agreement with her. We lamented the decline – probably due to a sheltered upbringing – of the basic human instinct to adapt. Months later, with the generous financial backing of this institution, it was my privilege to launch an ambitious hovercraft construction project. To my astonishment, I found that some of my brightest Physics students knew very little outside the textbook! (The project is ongoing but it will take a far longer time to complete because of this severe limitation.) Generalising from these two anecdotes, it is clear that innovation and

improvisation have taken flight. Quite possibly, it is the price we are paying for greater affluence. With a general apathy and sense of complacency pervading the student community, there is no longer much urgency amongst students about getting the best out of their education. Under these circumstances, the exuberance that a gifted lecturer might bring to the classroom goes largely unappreciated. This constitutes a major setback to the attainment of excellence and efficacy in the delivery system.

A SHORT RESEARCH PROJECT

The Relevance of a Survey

If asked what constitutes excellence and efficacy in the delivery system, experienced teachers are likely to pontificate on the subject, confident about time-tested styles and methods employed over the years. But we need to take cognizance of the reality that students today are generally not ready to be led like sheep – they have opinions and valid preferences, and many are ready to contribute to the learning process, craving the opportunity to show their mettle.

Realising this, a questionnaire was designed and a survey conducted amongst preuniversity students. Respondents were told that the survey was being conducted to garner information for a conference paper titled, "Excellence and Efficacy in the Delivery System at Pre-University Level". Each phrase in the title was clearly defined in the simplest possible terms. The target audience in the survey was past and present students of various pre-university programmes; those that were specifically under my tutelage went as far back as 1989. Respondents were cautioned to refrain from focusing on any particular lecturer or subject, and to consider their overall pre-university experience. The questionnaire did not delineate the respondents in accordance with ethnic origin, religious orientation, current position or social status.

The Questionnaire

The questionnaire was designed to elicit three kinds of responses.

1. The Guided Response Section

Here, respondents were invited to provide a numerical rating of 1 to 4 on the level of importance they attached to each criterion used to assess excellence and/or efficacy in the delivery system. No distinction was made between the terms excellence and efficacy. Respondents were, however, alerted to the fact that some criteria were closely inter-related with possible overlap.

2. The Simple Response Section

Here, respondents were invited to provide Yes/No answers in two fields: attributes of the

lecturer and *features of teaching style* which they deemed important contributors to excellence and/or efficacy. As before, no distinction was made between the two terms.

3. The Free Response Section

In this section, respondents were invited to write some of their thoughts about excellence and efficacy in the delivery system employed by their lecturers.

The Raw Results of the Survey

Table 1. The Guided Response Section

		Critically important	Rather important	Of some value	I couldn't care less			
Crit	erion	4	3	2	1	\sum f	∑fx	Mean
1	The lecturer must clearly demonstrate competence in handling his/her subject.	168	33	5	0	206	781	3.8
2	The lecturer should possess further degree(s) i.e. Master's, PhD, etc. (You may assume that every lecturer who teaches at pre-university level has at least a Bachelor's degree.)	11	89	81	25	206	498	2.4
3	The lecturer must be in control of everything that happens in the classroom during his/her lessons.	43	101	53	8	205	589	2.9
4	The lecturer must be seen to care for his/her students.	98	86	22	0	206	694	3.4
5	The lecturer must have a drive in his/her job that is independent of factors such as environment, working conditions, etc.	68	95	36	7	206	636	3.1
6	The lecturer must demonstrate a strong passion for the teaching of his/her subject.	124	68	12	2	206	726	3.5
7	The lecturer must be hardworking in helping his/her students to maximize their potential.	120	70	14	2	206	720	3.5
8	The lecturer must be resourceful in getting his message across to weaker students.	144	48	13	1	206	747	3.6
9	The lecturer must come across as a nice person.	50	89	57	10	206	591	2.9
10	The lecturer must check that his/her students have completed the tasks assigned to them.	33	78	82	13	206	543	2.6
11	The lecturer must clearly state his/her expectations for every individual student.	33	68	80	25	206	521	2.5
12	The lecturer must show students how to apply knowledge and concepts to actual situations in which these will be needed.	120	71	13	2	206	721	3.5
13	The lecturer must sacrifice time to assist students who are clearly weak in his/her subject.	72	87	43	4	206	639	3.1

Table 2. The Simple Response Section - Attributes of the Lecturer

Attributes of the Lecturer		Y	N	\sum f	% Y	% N
1	The lecturer has a loud voice.	158	48	206	76.7	23.3
2	The lecturer is friendly.	194	12	206	94.2	5.8
3	The lecturer is professional.	190	14	204	93.1	6.9
4	The lecturer maintains a serious atmosphere in the classroom.	56	149	205	27.3	72.7
5	The lecturer shows no bias against weak students.	185	21	206	89.8	10.2
6	The lecturer favours the top scorers.	6	200	206	2.9	97.1
7	The lecturer concentrates his/her attention on weaker students.	133	72	205	64.9	35.1
8	The lecturer does not belittle students for silly questions or answers.	182	24	206	88.3	11.7
9	The lecturer is a humorous person.	173	32	205	84.4	15.6

Table 3. The Simple Response Section - Features of the Lecturer's Teaching Style

Features of the Lecturer's Teaching Style		Y	N	\sum f	% Y	% N
1	The lecturer is systematic in developing subject matter.	205	1	206	99.5	0.5
2	The lecturer limits teaching to one new concept per lesson.	50	154	204	24.5	75.5
3	The lecturer uses analogies as often as possible.	168	37	205	82.0	18.0
4	The lecturer provides sufficient time in between explanations for students to take notes.	191	15	206	92.7	7.3
5	The lecturer provides notes with blanks to be filled so that students can focus on key words/concepts.	126	80	206	61.2	38.8
6	The lecturer devises interesting questions to test the student's understanding of concepts taught.	196	10	206	95.1	4.9
7	The lecturer devises questions at progressive levels of difficulty.	192	14	206	93.2	6.8
8	The lecturer provides specimen/model answers for every question asked in a test/examination.	176	30	206	85.4	14.6
9	The lecturer provides a full explanation of why the student failed to score well in a test/examination.	169	36	205	82.4	17.6
10	The lecturer modifies and twists examination-style questions to test the student's ability to apply concepts/ideas.	196	9	205	95.6	4.4
11	The lecturer encourages presentations by individuals.	110	96	206	53.4	46.6
12	The lecturer encourages presentations by groups.	122	84	206	59.2	40.8
13	The lecturer encourages participation in relevant projects beyond textbook knowledge.	172	33	205	83.9	16.1
14	The lecturer utilizes modern presentation techniques beyond the conventional marker-and-whiteboard method e.g. OHP, Power Point, Smartboard, etc.	118	88	206	57.3	42.7

Analysis of the Survey / Overall Impressions

A total of 206 persons responded to the survey.

1. The Guided Response Section

The table below shows the 13 criteria in this section re-arranged and ranked according to the mean value of the ratings returned. Criteria with mean ratings of 3.5 and above were

2.6

2.5

2.4

considered to be critically important, those rated 2.5 to 3.4 were rather important, and those receiving less than 2.5 were of some value only.

Rank	Criterion	Mean Rating
1	Is competent	3.8
2	Is resourceful	3.6
3	Has passion	3.5
4	Is hardworking	3.5
5	Shows how to apply	3.5
6	Is caring	3.4
7	Is sacrificial	3.1
8	Has drive	3.1
9	Exercises control	2.9
10	Is nice	2.9

Checks on tasks assigned

States expectations

Is highly educated

Table 4. Criteria Re-arranged According to Ranking Received

With the mean value of the *suggested* numerical ratings of 1, 2, 3 and 4 being 2.5, Table 4 clearly shows that 12 of the 13 given criteria were considered important contributors to excellence and efficacy. As expected, competence (3.8) and resourcefulness (3.6) emerged at the top. The third-place rank (3.5) given to passion and the 3.1 rating scored by drive were pleasant surprises: these, being extremely subjective, are not easy to measure. The importance attached to caring (3.4) was heart-warming – I had lately been of the opinion that students today do not really bother about whether their lecturers care for them, and I am glad that I have been proven wrong! Last of all, the matter of further education appeared to carry little significance for most students: clearly, as long as their lecturers "get the job done", paper qualifications are largely irrelevant.

2. The Simple Response Section

11

12

13

The two tables below represent the stated preferences of the respondents, duly re-arranged and ranked according to the "% Yes" affirmative response.

Rank	Attribute	% Yes
1	Is friendly	94.2
2	Is professional	93.1
3	Is unbiased against weak students	89.8
4	Upholds students' dignity	88.3
5	Is humorous	84.4
6	Has a loud voice	76.7
7	Focuses attention on weak students	64.9
8	Maintains a serious atmosphere in class	27.3

Table 5 Attributes of the Lecturer

Rank	Feature	% Yes
1	Employs a systematic approach	99.5
2	Modifies past-year questions	95.6
3	Gives interesting questions	95.1
4	Gives time for students to take notes	92.7
5	Gives progressive questions	93.2
6	Provides specimen answers to questions	89.4
7	Encourages project work outside the syllabus	83.9
8	Analyses each student's performance in tests/examinations	82.4
9	Uses analogies in teaching	82.0
10	Provides notes for students' completion	61.2
11	Encourages group presentations	59.2
12	Utilises new presentation methods	57.3
13	Encourages individual presentations	53.4
14	Teaches one new concept per lesson	24.5

Table 6. Features of the Lecturer's Teaching Style

The respondents clearly had a high regard for lecturers who know how to strike a balance between friendliness (94.2%) and professionalism (93.1%). Weak students must not be the target of bias (89.8%) but neither do they deserve too much attention (64.9%). It is important that lecturers preserve the personal dignity of each student (88.3%) while humour always wins the day (84.4%). In teaching, a systematic approach is vital (99.5%) while providing questions of varying scope and depth (95.6%, 95.1% and 93.2%), with answers to these in written form (89.4%), constitute the fulfilment of students' needs. The fact that 83.9% desired project work outside the syllabus indicates the strong yearning of our young people for hands-on applications.

3. The Free Response Section

Of the 206 respondents to the survey, 95 posted comments in this section. Due to space constraints, just 6 of these have been presented here, in part only.

- "A lecturer must have a clear goal for each student based on individual ability and must be able to deliver according to that goal. He/she must also be able to transfer key ideas that stay foremost in students' minds."
- ~ Harith Menon, Head, Customer Marketing (Asia-Pacific), Nokia Siemens Networks.
- "I do not think it is an absolute must for a lecturer to use high-tech teaching methods. A good ol' whiteboard would suffice. A lecturer's best visual aid is himself/herself."
- ~ Sindhu Carmen, JPA Scholar, Johns Hopkins University, Baltimore, U.S.A.

"In my opinion, excellence basically means the lecturer has mastered the subject he/she is teaching. Effectiveness is being able to express it in a manner that is easy for his/her students to understand. It also means a lively presentation."

- ~ Dr Tan Teik Wooi, Medical Affairs Manager, GlaxoSmithKline.
- "An uncompromising spirit towards his/her craft and a genuine interest in imparting knowledge. These would be the fundamental pre-requisites for excellence. The desire to provoke and excite students as opposed to teaching them. A good lecturer teaches; a great one inspires."
- ~ Vijayaratnam Tharumaratnam, Corporate Affairs Manager, BMW.
- "Please don't come into the lecture hall and just pour out every single sentence in (an extract from) the reference book. Talk to me, communicate, share your knowledge. Show me that you believe in what you say! Show me that every detail is coming from what you really understand."
- ~ Ranchini Murgan, JPA Scholar, Manipal Medical College.
- "I believe that I do not need to memorize knowledge. If you empower me to understand a concept, its applications and its relevance to my world, my mind automatically remembers. All I need to do is understand. So, teach me concepts clearly, without compromise."
- ~ Yap Ke Lip, Software Architect and Senior Vice-President, Products and Technology, ePetrol.

SOME RECOMMENDATIONS FOR THE IMPROVEMENT OF THE DELIVERY SYSTEM

The recommendations that follow are based primarily on notions and opinions, some personal and some garnered from others. A good number of these seem to be strongly corroborated by the survey results.

Excellence and Efficacy re-visited

On the question of excellence, let us consider what some well-known personalities have had to say.

- "I am careful not to confuse excellence with perfection. Excellence I can reach for; perfection is God's business."
- ~ Michael J Fox, Canadian Actor (Marty McFly in Back to the Future).
- "If you want to achieve excellence, you can get there today. As of this second, quit doing less-than-excellent work."
- ~ Thomas J Watson, First President, IBM.
- "We are what we repeatedly do. Excellence, then, is not an act but a habit."
- ~ Aristotle, 4th Century BC Greek Philosopher.

The position of Michael J Fox is abundantly clear: there will be no excellence without our striving for it. We must be perfectionists in attitude, knowing full well that perfection in itself is exclusively a divine attribute, unattainable in this life. Thomas J Watson's stance is complementary: at some point in time, we must make a decision that excellence is what we want. From that moment on, we must act accordingly. *Thereafter, excellence becomes a daily feature of our lives, a habit so deeply ingrained that it transcends even our thought processes.* When we achieve this, we begin to re-capture something of the excellence and glory of Aristotle's ancient Greece.

We now turn our attention to two great thoughts on effectiveness, or efficacy.

- "We immediately become more effective when we decide to change ourselves rather than asking things to change for us."
- ~ Steven Covey, American Self-Help Guru, Author of *The Seven Habits of Highly Effective People*.
- "People, like nails, lose their effectiveness when they lose direction and begin to bend."
- ~ Walter Savage Landor, 19th Century English Writer and Poet.

Here, both Steven Covey and Walter Landor seem to strike the same resonant chord when they trace a person's effectiveness to almost the same starting point. The American's focus is the individual's resolve to adapt self to circumstances rather than circumstances to self. The Englishman's emphasis is the individual's resolve to stay focused on the mission at hand. Applying this joint Covey-Landor perspective to the delivery system in education, the message to educators is clear: our effectiveness is largely a matter that is squarely in our own hands.

Lecturing Versus Teaching

- "Pre-university level is the first and last level at which students have a chance to really understand what they are being taught."
- ~ Tan Kay Siong, Chemistry Teacher Extraordinaire.

While not everyone will agree with this great colleague of mine, I believe that there is much truth in his statement. The teaching-by-rote philosophy that pervades the national school system forces students to memorize entire chunks of subject matter. Judging from my university experience, lecturers at tertiary level tend to operate in the same way. This puts a tremendous burden on pre-university educators to build a strong conceptual foundation in each discipline. Those who take their vocation seriously soon realize the need to teach rather than lecture. Indeed, there should be a clear distinction between these two core pedagogical activities. Lecturers tend to dispense volumes of information in each lecture, leaving their hapless recipients to grapple with the onslaught. Teachers have a different approach: they seek to develop in their young charges an entire mindset that is consistent with their subject matter.

Raising the Proficiency of English

The clarion call to restore English to a position in this country commensurate with its status as the *lingua franca* of the world has been made time and again. While some quarters are heeding the call, the education system in the country is beset with political overtones which could cloud its ability to respond in an effective way. *The onus is thus on us to do something*.

Streamlining the SPM subject, English for Science and Technology, to meet our needs might be one step in the right direction. Subject teachers can work hand-in-glove with English teachers to develop a broad-based curriculum that can encompass the technicalities of language necessary to communicate elaborate concepts and ideas. In this way, we can make good on one of the weaknesses of the delivery system in our schools.

Peer Evaluation for Staff Recruitment.

One hugely successful programme at Sunway that regularly shines on a world stage employs a novel method for ascertaining if prospective new lecturers can really deliver the goods. The hopeful applicant is invited to deliver an entire lesson on a selected topic to an audience that includes would-be subject peers. Who else is better equipped to evaluate the efficacy of the delivery and to identify conceptual errors, if any, in the subject matter disseminated? Such a system of peer evaluation might appear to be punitive when employed to reject aspirants who falter. But if this is an evil in itself, the greater evil would be to expose unsuspecting students to the 'atrocity' of erroneous instruction.

Peer Observation for Appraisal and Subject Development

Annual appraisals by superiors have become standard fare in the working world. No one would deny the necessity of such evaluation exercises, especially the inestimable value of the feedback communicated by the evaluator, even if this is sometimes distasteful.

Consider the extension of this concept with subject peers as evaluators. This practice, if adopted, can have a tremendous salutary effect for two reasons. First, a subject peer is not an authority figure and hence poses no direct threat. Second, peer appraisal is likely to be deeper and more reliable than that by a superior who has no background in the subject. This is because every discipline at pre-university level has sufficient depth to either showcase a lecturer's grasp of subject matter and delivery skills or expose conceptual errors that the lecturer is bound to transmit to students who do not know any better!

Equally salutary would be the practice of peer observation applied in a remedial way for the purpose of subject development. Imagine an atmosphere in which subject lecturers freely attend each other's classes with a view to gaining from each other's strengths. Such a practice will undoubtedly spur the development of a powerful and unbeatable team of lecturers in each discipline. This, of course, requires mutual respect and humility without which the practice could result in discord and rivalry. Some of us who teach Physics at Sunway have already been doing this in a casual way. I have been personally enlightened through the observations I have made of colleagues who are comfortable with my presence.

Competence

- "The least initial deviation from the truth is multiplied later a thousandfold."
- ~ Aristotle, 4th Century BC Greek Philosopher.

A vast majority of our students come to us with mis-information, over-simplifications and conceptual errors lurking dangerously inside their heads. These aberrations of truth can be as insidious as viruses in a computer program – they paralyze critical and analytical thinking. How assiduously we seek to identify these aberrations and deal with them at pre-university level becomes a measure of our competence in our respective disciplines.

Let me exemplify the problem with three commonly touted premises in Physics. (1) "Batteries store charge." (2) "A body thrown upwards first decelerates, then comes to rest, then accelerates downwards." (3) "An inelastic collision is one in which the bodies involved coalesce on impact." Any competent expositor of Physics should be able to spot the error or weakness in each of the above assertions. The fact that these premises continue to corrupt the pages of popular SPM Physics textbooks speaks volumes about all the rhetoric we hear on "quality assurance". Such errors are often propagated at pre-university level and become ingrained in the collective memory of hapless victims who do not know any better. The first issue in competence, then, is getting it right. Aristotle clearly recognized this core pedagogical value more than two millennia ago.

- "It takes less time to do a thing right than it does to explain why you did it wrong."
- ~ Henry Wadsworth Longfellow, 19th Century American Educator and Poet.

Longfellow advises us to be pro-active about those things that we *may* have got wrong. We need to ascertain the accuracy of what we teach since it is more cost-effective, time-wise, to avoid making an error than to correct one already made. In short, total competence – even excellence – at pre-university level is a moral imperative for everyone engaged in preparing young minds for tertiary education. And it is certainly attainable by the careful investment of the necessary time and effort to become intimately aware of all the nooks and crannies of our subject. The added blessing of total competence is enjoyment of the delivery process.

- "The secret of joy in work is contained in one word excellence. To know how to do something well is to enjoy it."
- ~ Pearl S Buck, 1938 Nobel Laureate for Literature.

Caring

- "Only a life lived for others is worth living."
- ~ Albert Einstein, 1921 Nobel Laureate for Physics, Time Magazine's *Person of the Century*.

"I expect to pass through the world but once. Any good therefore that I can do, or any kindness I can show to any creature, let me do it now. Let me not defer it, for I shall not pass this way again."

~ Stephen Grellet, 19th Century French Quaker Missionary.

The value of being cared for is inestimable in every facet of human life. Naturally, therefore, caring should play a vital role in education. This is more than a worn out cliché. A competent educator nurtures the mind; a caring educator nurtures the heart. A teacher who is both competent and caring thus embodies the fundamental principle of the 'total education' concept. Any delivery system that is devoid of vital elements of caring is a non-starter on the road to excellence and efficacy. The sense of well-being created by an educator's caring stance could persuade an otherwise lethargic or apathetic mind into a state of greater receptivity. In this connection, the survey clearly indicates that students place a rather high premium (3.4) on the demonstration of care in the classroom. While I have no statistics to prove that a strong correlation exists between good academic performance and a caring environment, my personal history of interaction with hundreds of pre-university students convicts me beyond any shadow of doubt that this is certainly the case.

Control

It is this author's belief that educators at pre-university level must exercise total control over everything that transpires in the classroom. *The principle is simple: if we do not take control, someone else will.* Let me illustrate with a real-life scenario. A lecturer is renowned as a 'gold mine' of knowledge, understanding and coherent reasoning that comes with vast experience. During one-to-one sessions, the interaction is rich and replete with anecdotes, analogies, and the like. But in the classroom, a problem arises. The first few minutes are fine. Thereafter, things deteriorate. The do-your-own-thing agenda which originates in the back row spreads like a cancer through the room. The lecturer notices that something is amiss but does not continue to demand the full attention of the class. Text messages fly. Students begin to engage in long, drawn-out conversations, sometimes even on their cell phones. 'Pearls' continue to fall from the lecturer's mouth but few bother. The lecturer's position of authority has been usurped and the 'mob' is now in control.

We need to take cognizance of the fact that the blame for the development of such a situation must lie entirely with the lecturer. Exercising control at pre-university level is an easy matter because we are dealing with young adults. We need make no apology for keeping strict control for as long as is necessary to impart the intended essence of a lesson. Failure to exercise control is essentially gross dereliction of duty, and the measure of respect students afford a lecturer is often proportional to the measure of control the lecturer exerts over the classroom. The failure of competent educators to enforce the core discipline of paying attention while a lesson is in progress is always lamented by responsible students who value good instruction.

Calling

- "The ancient Greek definition of happiness was the full use of your powers along lines of excellence."
- ~ John F Kennedy, 35th US President.
- "We have this treasure in earthen vessels, that the excellence of the power may be of God and not of us."
- ~ Paul of Tarsus, 1st Century Apostle.

The word excellence is "huperbole" ('υπερβολη) in classical Greek, derived from "huper" (beyond) and "ballo" (to throw). Hence, excellence is literally a "throwing beyond" of oneself in the realm of human endeavour. To excel, then, is to strive and to reach beyond the norms of human limitations. Kennedy espoused the notion that the Greeks of old derived much of their happiness from pursuits that were linked to excellence. Little wonder, then, that a victor's crown in the ancient Olympics was a mere olive wreath, for happiness was the sole reward for winning. For educators, emulating those who gathered at the foot of Mount Olympus translates into bursting through the bounds of personal and circumstantial limitations to deliver excellence and efficacy in our teaching. A noble enterprise, indeed! But for how long can we sustain it?

Enter the mystical element. To regard teaching as a divine calling is to both humble the profession as well as exalt it. For the "treasure" in the Apostle's premise refers to what is ours to impart – knowledge, understanding, values, convictions – divine in origin, and thus exalted. The "earthen vessel" is the teacher, raw in spite of some refinement and of the same lowly human essence as the student. The divine calling to teach, when recognised and obeyed, then becomes an empowerment from on high. This empowerment becomes the source and the secret of drive and passion, so excellence must flow. Since the excellence is of God, there is a limitless supply! Off in search of a divine calling, anyone?

SOME CLOSING THOUGHTS

- "Truth be told, there are no bad lecturers; just irresponsible students."
- ~ Adeline Wan Siew Mei, Valedictorian, A-Level Graduating Class of 2008.

These are gracious words, articulated by one but echoed by many who have passed through our corridors. Indeed, the finest of the young men and women we have mentored refuse to blame any insufficiency in the delivery system on those whose responsibility it is to deliver. Rather, they are quick to look within themselves and within their ranks for the origin of any shortcomings. Their resounding chorus goes something like this: "All lecturers, in varying degrees, have something good to offer. We simply have to do what it takes to receive." Such amazingly gracious words!

Let us ponder a hypothetical antithesis: "Truth be told, there are no bad students; just irresponsible lecturers." How many of us would dare claim authorship to this slogan, let alone operate by it? To do so would require us to take an even more gracious and humble position. For honestly, there *are* bad students, and we *have* met them! *But if the best of those*

who have come under our tutelage can demonstrate the graciousness exemplified by our 2008 Valedictorian, surely we can go further! Too often have I heard a colleague attribute a set of poor examination results to "a bad class" instead of looking within to see the inherent flaws that compromise excellence and efficacy. When will we have the graciousness and humility to say of our non-performing students, "They failed because we failed to deliver?"

One afternoon, I walked into a Physics laboratory at Sunway to behold an elderly-looking Caucasian gentleman. I deduced that he was a member of the team that handles the Canadian International Matriculation Program (CIMP). I introduced myself and asked for his name. "Anton Gillich", he said. I continued, "So, you teach CIMP Physics?" He paused for a moment, then replied, "I try." His utter humility floored me. I have been trying to teach Physics ever since!

REFERENCES

With the exception of direct quotations, all the material presented in this paper is original, having been gleaned largely from classroom experience and close interaction with students over the years.

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