Title	Singapore students are rote learners: Fact or myth?
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SINGAPORE STUDENTS ARE ROTE LEARNERS: FACT OR MYTH?

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HOW IS ROTE LEARNING DEFINED?

Rote learning refers to a style of learning which involves the memorisation and regurgitation of facts for a specific purpose. It has to do with the ***quality*** of the learning: It involves a reproduction of information without a clear understanding of the underlying concepts. It is not a style of learning that is going to be cognitively or educationally productive.

For the purpose of this study, rote learning is defined in terms of the "learning process complex" formulated by Biggs (1979) in which a student's motive and strategy for learning constitute a distinct approach. These approaches have been identified and labelled, as explained in the table below:

Table 1 Motive and Strategy in Approaches to Learning and Studying

Approach	Motive	Strategy
Surface	Surface Motive (SM) is instrumental: The main purpose is to meet requirements minimally; a balance between working too hard and failing.	Surface Strategy (SS) is reproductive: Limit target to bare essentials and reproduce through rote learning.
Deep	Deep Motive (DM) is intrinsic: Study to actualize interest and competence in particular academic subjects.	Deep Strategy (DS) is meaningful: Read widely, inter-related with previous relevant knowledge.
Achieving	Achieving Motive (AM) is based on competition and ego-enchancement: Obtain highest grades, whether or not material is interesting.	Achieving Strategy (AS) based on organizing one's time and working space: behave as a model student.

Source: John Biggs, *Student Approaches to Learning & Studying* (1987)

To elaborate on the concepts: the ***Surface Approach*** is based on extrinsic motivation, in which learning is perceived as a means to, for example, passing an examination or getting a job. The effort is directed towards achieving the goals in limited time and with little stress, and in the circumstances the strategy chosen is usually confined to memorization through rote learning.

On the other hand, the ***Deep Approach*** is derived from interest in the subject matter of the task. As a result of this interest, the strategy adopted is aimed at maximising understanding of the concepts and the relationship between them.

Achieving motivation is the key to the ***Achieving Approach***. The intention is to do well and be competitive, normally through receiving high marks and grades. The related strategies centre on time management, making full use of the learning environment and syllabus coverage.

This conceptualisation of the learning process has given rise to and serves as a framework for an active area of research, which addresses the learning strategies adopted by students and university undergraduates.

WHAT HAS THE RESEARCH SAID ABOUT THE ASIAN LEARNER?

In particular, the work of Biggs (1991) and Watkins et al. (1991) has thrown some light on the learning strategies of students in Hong Kong, Nepal and the Philippines in an attempt to counter the stereotypical view that Asian students by and large employ low-level rote-based learning strategies, ie the Surface Approach. The view (that Asian students depend largely on rote learning) has prevailed (Samuelowicz, 1987) despite the fact that in cross-national comparisons of achievement in Mathematics and Science, for example, the efforts of students from Hong Kong, Japan and other participating Asian countries were far superior to those from non-Asian countries. The contradiction may be explained by the fact that observations of the rote-learning approaches were usually made of samples of Asian students studying overseas, who encountered English as the only medium of instruction.

Biggs (1991) administered the Learning Process Questionnaire (LPQ) to 1,500 Form 4 and 630 Form 6 Chinese students studying in English-medium schools in Hong Kong, and the results were compared with those of Australian student samples (n=1300) at age 14 and 120 students in Year 11. The results did not support the characterisation of the Asian rote learner among Hong Kong students of both sexes. In fact, Hong Kong students depended much less on the low-level Surface Approach than the Australian sample; they favoured the Deep Approach generally, except for the girls in upper secondary who showed no difference. Data taken from tertiary-level students in Hong Kong and Australia in 1988 supported the observations based on the secondary school data.

To test the validity of the Asian-student-as-a-rote-learner stereotype, Watkins et al. (1991) administered the LPQ to 509 Nepalese and 184 Filipino girls of 15-16 years of age in another study. The results of these two studies were compared with those of 1366 Australian and 1490 Hong Kong secondary school students of both sexes. Taken together, the results from these four (quite distinct) cultural groups show evidence of cross-cultural similarities in the factors that make up the learning processes. In the main, those students who adopted Deep and Achieving Strategies tended to be the more successful students academically in each of the cultural groups. While the results cannot be said to be conclusive, they did raise doubts about the rote-learning stereotype associated with Asian students. By and large, The Asian students were not inferior to the Australian students in terms of the learning approaches they reported adopting. And among the Asian groups, the Nepalese students were as a group most inclined to report both Deep and Achieving Approaches.

The LPQ was also used, as reported by Chang (1991), with a Singapore sample of students. Unlike other studies using the LPQ, the Singapore studies investigated use of approaches in two subject areas, English and Mathematics. In the case of English, the students in the grade level comparable to Grades 8 and 10 in the US system showed a strong preference for the Achieving Approach followed by that for the Deep Approach. In Mathematics, students in Grades 8, 10, and 12 preferred the Achieving and Deep Approaches. Nonetheless, the lower grade students inevitably were more prone to the Surface Approach than the higher grade level students. In summary, the Singapore students did not quite exemplify the rote-learning stereotype.

OTHER SINGAPORE STUDIES

In the next Singapore study to be analysed more fully here, the students were drawn from nine secondary schools, two Junior Colleges and two Pre-University centres. Altogether 1393 students from Secondary II (Year 8), Secondary IV (Year 10) and Junior College 2/Pre-University III (Year 12) participated in the survey. Secondary II (point of streaming), Secondary IV ("O" Level Exam) and Junior II/Pre-University III ("A" Level Exam) are significant years in the schooling life of Secondary students. Intact classes were used to minimize disruption to classes and lessons.

The ability factor was introduced by taking subjects from the Special Assistance, Express and Normal Streams. Students from the Special Assistance classes are allowed to take English and the mother tongue at the first language level and they are among the top ten percent of the Primary School Leaving Examination (PSLE) candidates. While the Express students can complete the secondary studies in four years, the Normal students take their "O" level examination only in their fifth year. Likewise, Junior College students take their GCE "A" Level examinations in their second year while the Pre-University students sit for the same examination in the third year.

THE INSTRUMENT

The belief that there are differences in the strategies adopted in the learning of different subjects (Mulcahy et al., 1986; 1990) was taken into account when three Questionnaires were developed separately for Languages, Social Studies, and Mathematics and Science. There are three sections in each questionnaire. Section A consists of the 36 items from the Learning Process Questionnaire (Biggs, 1987); Section B contains generic strategies and motives common to all academic subjects while Section C focusses on specific strategies for each subject domain. Items in Sections B and C were constructed by members of the Learning Strategies Project Team.

Table 2 Structure of Questionnaires on Learning

TYPE / Section	Languages	Mathematics & Science	Social Studies
A	36 (LPQ)	36 (LPQ)	36 (LPQ)
B	35	35	35
C	13	25	30
Total	84	96	101

As each questionnaire is quite long, matrix sampling was practised. One third of each intact class was administered one of the three Questionnaires. Questionnaires were printed in three different colours for identification. Students were told to respond only to subjects taken by them. For example, a Chinese student would respond to items on English and Chinese in the Languages Questionnaire. Similarly a Secondary two girl responded only to items on Mathematics, General Science and Home Economics in the Mathematics and Science Questionnaire.

For this paper, only data on Mathematics and English were analysed and discussed as these two subjects were taken by all subjects at the Secondary II and IV levels and the General Paper (called English for the convenience of discussion) by all JC II/Pre-U III students. In Singapore, an "O" level student must score a credit in English and a pass in Mathematics to gain admission into the Junior College or Pre-University Centre. The basic differences in the nature of the two subjects would offer possible contrasts in the learning approaches employed by the subjects. In trying to find out whether or not Singapore students are rote learners, the learning approaches adopted for the two key examination subjects should provide some powerful evidence.

RESULTS OF THIS STUDY

Factor Structure Analysis

Biggs' LPQ consists of six subscales, namely, Surface Motivation, Deep Motivation, Achieving Motivation, Surface Strategy, Deep Strategy and Achieving Strategy. The motivation and strategy subscales can be combined to form three Approaches; Surface Approach, Deep Approach and Achieving Approach. But the factorial structure obtained by Biggs (1987) from the Australian responses shows a two factor system. The Surface Motivation and Surface Strategy are significantly loaded under one factor while the Deep Motivation, Achieving Motivation, Deep Strategy and Achieving Strategy are under the other factor. Factor analyses carried out on Nepalese (Watkins & Regmi, 1990), Hong Kong (Biggs, 1989) and Filipino (Watkins et al. 1986) students recorded similar findings. Two factor solutions emerged for the test and retest on a group of Secondary III gifted students in Singapore when the subscales of the LPQ were factor-analysed (Leong, 1990). The compositions of the two factors based on the Singapore study are slightly different. The factor with heavy loadings on Surface Motivation and Surface Strategy also has a significant loading on Achieving Motivation. The Achieving Motivation loading is more significant with the Surface Approach Factor than with the Deep-Achieving Factor.

From the factor analyses, it appears that two Learning Approaches, the Deep-Achieving Approach and the Surface Approach, rather than the three Approaches based on the LPQ subscales, are more commonly identifiable with secondary learners.

Table 3 Subscales and Items of LPQ

SUBSCALES	APPROACH		
	SURFACE	DEEP	ACHIEVING
MOTIVATION ITEMS	1	2	3
	7	8	9
	13	14	15
	19	20	21
	25	26	27
	31	32	33
STRATEGY ITEMS	4	5	6
	10	11	12
	16	17	18
	22	23	24
	28	29	30
	34	35	36

Three factor rotated analyses were carried out on the English and Mathematics responses to the LPQ. The distribution of LPQ items after the analyses is given in Table 4. The three- factor solution was selected on the assumption that there are three Learning Approaches.

Table 4 Rotated Factor Pattern of LPQ Items for Mathematics

	Factor I	Factor II	Factor III
LPQ ITEMS	6 26 29 35	2 3 5 8 9 11 12 14 15 17 18 20 21 23 24 27 30 32 33 36	1 4 7 10 13 16 19 22 25 28 31 34

Table 5 Rotated Factor Pattern of LPQ Items for English

	Factor I	Factor II	Factor III
LPQ ITEMS	2 8 11 14 15 17 20 21 23 26 32 33	5 6 9 12 18 24 27 29 30 35 36	1 4 10 13 16 19 22 25 28 31 34 3*

It is interesting to note from Tables 2 and 4 that Factors I and II are dominated by Deep and Achieving Motivation and Strategy Items while Factor III is almost purely loaded with Surface items. The only exception is an Achieving Motivation item (3*) which is significantly loaded on Factor III for English. The results of the factor analyses confirm the findings from responses of other nationalities that the Achieving and Deep items tend to combine to form the Deep-Achieving Approach rather than a discrete Achieving or a discrete Deep Approach. In contrast the surface items are quite homogeneous and unidimensional.

For comparison purposes, a two-factor oblique solution of LPQ responses was carried out for English and Mathematics. An inspection of Table 5 shows a similar pattern for both academic subjects with the Singaporean responses and this also matches those from Hong Kong, Australia and Nepal. Factor I is dominated by the Deep and Achieving subscales while Factor II is almost exclusively loaded with the Surface Subscales. The two-factor solution supports the earlier findings of the three-factor solution.

Table 6 **Factor Loadings from Two Factor Oblique Solution of Responses to LPQ by Country**

Country / Factors	Australia		Hong Kong		Nepal		Singapore (English)		Singapore (Mathematics)	
LPQ Subscales	I	II	I	II	I	II	I	II	I	II
Surface Motivation	0.24	0.35	-0.07	0.86	0.04	0.38	0.49	0.67	0.44	0.68
Surface Strategy	-0.12	0.82	-0.07	0.66	-0.07	0.64	0.15	0.86	0.11	0.86
Deep Motivation	0.80	-0.14	0.79	-0.13	0.57	0.08	0.77	-0.20	0.78	-0.06
Deep Strategy	0.73	-0.02	0.83	-0.02	0.63	-0.14	0.82	-0.26	0.82	-0.17
Achieving Motivation	0.65	0.00	0.28	0.58	0.61	0.07	0.74	0.16	0.80	0.00
Achieving Strategy	0.57	0.15	0.53	0.17	0.65	-0.03	0.73	-0.30	0.79	-0.27

APPROACH PREFERENCE OF DIFFERENT GRADE LEVELS.

English

The scores for the three Approaches show the preference of Singapore secondary students for the Achieving and Deep Approaches. The two younger cohorts of students at Secondary II and IV favoured the Achieving Approach over the Deep Approach. The more mature JC/Pre-U students scored the highest for Deep Motivation, Deep Strategy and Deep Approach and the lowest for Surface and Achieving subscales among the three cohorts. Except for the JC/Pre-U students, it is noticeable that the respondents were higher on the Surface Motivation than the Deep Motivation. This is especially true for the Secondary IV students. However, the high extrinsic motivation to pass examinations did not influence these students to depend largely on Surface Strategy. Approach differences between the grade levels were significent only for the Surface and Achieving Approaches ($p < .001$).

Table 7 **Means, (Standard Deviations) and F-ratios of LPQ Subscale Scores in English for Sec II, Sec IV and JC II/Pre-U III Students.**

SUBSCALE	8 (n=199)	10 (n=354)	12 (n=164)	F	P Level
Surface Motivation (max = 30)	21.20 (4.67)	21.54 (4.52)	19.49 (4.65)	11.40	0.000
Surface Strategy (max = 30)	15.70 (4.60)	15.95 (4.01)	15.07 (4.32)	2.38	0.0932
Surface Approach (max = 60)	36.90 (8.00)	37.49 (7.14)	34.57 (7.83)	8.55	0.0002
Deep Motivation (max = 30)	19.95 (4.26)	19.92 (4.24)	21.12 (3.80)	5.20	0.0057
Deep Strategy (max = 30)	18.71 (5.16)	17.94 (4.66)	18.72 (4.74)	2.28	0.1026
Deep Approach (max = 60)	38.66 (8.46)	37.86 (7.94)	39.84 (7.71)	3.42	0.0331
Achieving Motivation (max = 30)	21.31 (4.71)	20.51 (4.57)	19.84 (4.65)	4.61	0.0103
Achieving Strategy (max = 30)	19.68 (4.67)	18.87 (4.90)	17.05 (4.78)	13.99	0.0001
Achieving Approach (max = 60)	40.98 (7.89)	39.38 (7.86)	36.88 (7.79)	12.35	0.0001

Mathematics

The general pattern of preference of Approaches for the learning of Mathematics is similar to that for English. The Achieving Approach and the Deep Approach have a definite edge over the Surface Approach. Except for Deep Motivation, the JC/Pre-U respondents scored the lowest for all the Subscales including the Deep Subscales. The young respondents from Secondary II scored the highest for Surface and Achieving Motivation and Deep and Achieving Strategy. Despite the high scores for Surface Motivation, the accompanying strategy did not find favour with the Singapore students. Differences between grade levels were only significant for Achieving Strategy ($p < .001$) and Achieving Approach ($p < .002$).

Without doubt the stress on achievement and examination has influenced the Singapore students in their motivation in learning. This is reflected in their high scores for Surface and Achieving Motivation. But this did not necessarily mean that the rote-memorization Strategy of the Surface Approach was favoured by the students. Instead they wisely chose the Deep and Achieving Strategies to achieve the motivation of passing well in their examinations. The unusual phenomena here is that the trend is repeated for the three cohorts of different ages and for two vastly different academic subjects.

Table 8 **Means, (Standard Deviations) and F-ratios of LPQ Subscale Scores in Mathematics for Sec II and JC II/Pre-U III Students**

SUBSCALE	8 (n=207)	10 (n=331)	12 (n=138)	F	P Level
Surface Motivation (max = 30)	20.97 (4.37)	20.76 (4.77)	19.58 (4.95)	4.08	0.0174
Surface Strategy (max = 30)	15.36 (4.31)	15.78 (4.47)	15.30 (4.16)	0.87	0.4201
Surface Approach (max = 60)	36.32 (7.12)	36.53 (7.64)	34.88 (7.69)	2.46	0.0864
Deep Motivation (max = 30)	19.57 (4.52)	19.85 (4.41)	20.06 (4.59)	0.54	0.5846
Deep Strategy (max = 30)	18.51 (5.17)	17.58 (4.74)	17.08 (5.07)	3.93	0.0201
Deep Approach (max = 60)	38.08 (8.70)	37.43 (8.00)	37.14 (8.58)	0.61	0.5413
Achieving Motivation (max = 30)	21.07 (4.82)	20.40 (4.86)	19.99 (4.57)	2.34	0.0972
Achieving Strategy (max = 30)	19.89 (5.14)	19.07 (4.98)	17.61 (5.27)	8.37	0.0003
Achieving Approach (max = 60)	40.97 (8.99)	39.47 (8.48)	37.59 (8.16)	6.42	0.0017

APPROACH PREFERENCE OF DIFFERENT ABILITY GROUPS

Gifted Students

Leong (1990) made a comparative study of the LPQ responses of three groups of gifted Secondary IV students. These gifted students were grouped according to their "O" Level Examination results: Outstanding (those with 8 A1s and more), Superior (those with 6 and 7 A1s) and Able (those with 5 A1s or fewer).

Table 9 **Means and (Standard Deviations) of LPQ Scores of Three Achievement Groups of Gifted Students (Leong, 1990)**

Achievement Groups / Subscales	Outstanding (N=30)	Superior (N-27)	Able (N=30)	Comparison between outstanding & able t-values	P Level
Surface Motivation (Max=30)	18.3 (3.8)	18.8 (4.8)	19.1 (4.0)	-0.78	ns
Surface Strategy (Max=30)	13.7 (2.7)	14.9 (4.8)	15.5 (4.1)	-1.98	<0.05
Surface Approach (Max=60)	32.0 (5.1)	33.7 (8.2)	34.5 (7.0)	-1.55	ns
Deep Motivation (Max=30)	21.3 (3.6)	20.1 (3.8)	19.9 (14.1)	1.38	ns
Deep Strategy (Max=30)	16.8 (3.8)	18.0 (4.3)	17.0 (4.1)	-0.19	ns
Deep Approach (Max=60)	38.1 (5.3)	38.2 (7.0)	37.0 (7.6)	0.60	ns
Achieving Motivation (Max=30)	20.0 (4.0)	18.7 (5.0)	18.8 (4.4)	1.08	ns
Achieving Strategy (Max=30)	14.8 (4.4)	15.3 (4.2)	14.2 (4.6)	0.51	ns
Achieving Approach (Max=60)	34.8 (6.8)	33.9 (7.1)	33.0 (7.2)	0.98	ns

The trend is common across the three gifted achievement groups. They scored the highest for the Deep Approach. The Outstanding Group had the lowest scores for the Surface subscales but the highest for Achieving Motivation and Achieving Approach. In contrast, the Able group topped the scores for the Surface subscales but hit bottom for the Achieving Strategy and Achieving Approach. Differences between the Outstanding and Able groups were non-significant for most subscales except for Surface Strategy ($p < 0.05$).

Table 10 **Means, (Standard Deviations) and F-ratios of LPQ Subscales Scores in English for SAP, Express and Normal Students**

LPQ SUBSCALES	SAP (n=160)	Express (N-251)	Normal (N=185)	F	P
Surface Motivation (Max=30)	19.79 (4.77)	21.37 (4.49)	22.54 (4.16)	16.33	0.0001
Surface Strategy (Max=30)	14.01 (4.30)	15.84 (3.93)	17.51 (3.86)	32.68	0.0001
Surface Approach (Max=60)	33.80 (7.65)	37.22 (7.03)	40.05 (6.58)	33.57	0.0001
Deep Motivation (Max=30)	20.36 (4.32)	20.1 (4.34)	19.67 (3.95)	1.21	0.2988
Deep Strategy (Max=30)	18.21 (5.02)	18.27 (4.94)	18.15 (4.67)	0.03	0.9710
Deep Approach (Max=60)	38.58 (8.46)	38.38 (8.37)	37.83 (7.51)	0.41	0.6651
Achieving Motivation (Max=30)	20.96 (4.57)	20.88 (4.62)	20.36 (4.74)	0.91	0.4029
Achieving Strategy (Max=30)	19.29 (4.83)	18.47 (5.12)	19.21 (4.70)	1.82	0.1622
Achieving Approach (Max=60)	40.25 (7.64)	39.35 (8.13)	39.56 (8.02)	0.65	0.5243

Special Assistance, Express and Normal Students

It may not surprise anyone to find the gifted students showing preference for the Deep Approach towards their learning. But it is evident that their choice of learning strategies has yielded rewarding results at the "O" Level Examination.

The comparison of the SAP (Special Assistance Project), Express and Normal students' choices of Learning Approaches would give us a fair idea on the Learning Strategies adopted by the general Singapore student population as there are distinctive differences in the ability of the three cohorts of secondary students (refer to Tables 10 and 11). Both the SAP and Express students showed a preference for Achieving and Deep Approaches towards the Learning of English and Mathematics. The Normal or weaker students favoured the Achieving and Surface Approaches in their learning. Except for the SAP students in the learning of English, the respondents in the three cohorts had high scores for Surface and Achieving Motivation. Here again, the powerful influence of the examination-oriented educational system is evident. However, closer examination of the strategies employed by the respondents shows consistently the lowest scores for Surface Strategy, even for the Normal

students. This finding is identical to the earlier results on the strategies adopted by students at the different grade levels.

It is of interest to note that the Approach differences between the three ability groups are highly significant for the Surface Approach in the learning of both English and Mathematics. The Normal students were leading in both English and Mathematics for the Surface scores. Though the SAP students topped the scores for the Deep Approach for both academic subjects, the differences between groups are non-significant. For the learning of Mathematics, the Achieving Approach shows significant differences among the three ability cohorts, too, with the SAP students in the lead.

These findings should provide compelling evidence that Singapore students are achievement and examination-oriented but they are not necessarily rote learners. Rote learning does not reward them with the high grades they would hope to get for the effort spent.

Table 11 **Means, (Standard Deviations) and F-ratios of LPQ Subscales Scores in Mathematics for SAP, Express and Normal Students**

LPQ SUBSCALES	SAP (n=166)	Express (N-227)	Normal (N=168)	F	P
Surface Motivation (Max=30)	20.34 (4.62)	21.37 (4.69)	20.85 (4.39)	2.46	0.0866
Surface Strategy (Max=30)	14.14 (4.13)	15.59 (4.22)	17.10 (4.29)	20.61	0.0001
Surface Approach (Max=60)	34.48 (7.06)	36.96 (7.40)	37.95 (7.24)	10.27	0.0001
Deep Motivation (Max=30)	20.08 (4.58)	19.63 (4.51)	19.55 (4.28)	0.72	0.4876
Deep Strategy (Max=30)	18.05 (5.05)	17.99 (4.86)	17.52 (4.98)	0.58	0.5601
Deep Approach (Max=60)	38.13 (8.57)	37.62 (8.21)	37.07 (8.23)	0.68	0.5077
Achieving Motivation (Max=30)	21.69 (4.65)	20.77 (4.61)	19.40 (5.04)	9.81	0.0001
Achieving Strategy (Max=30)	20.11 (5.27)	19.12 (4.85)	18.76 (5.09)	3.23	0.0402
Achieving Approach (Max=60)	41.28 (8.83)	39.89 (8.01)	38.17 (8.99)	7.54	0.0006

DISCUSSION

The factor structures provide evidence of cross-cultural commonalities across four different nationalities (Australia, Hong Kong, Nepal and Singapore) in terms of learning processes.

Research findings show that the academically better Asian students adopt Deep and Achieving Approaches in their learning (Biggs, 1987, 1990; Watkins and Regmi, 1990; Watkins, Hattie and Astilla, 1986). This is also very true for the Singapore students, as evident in the findings for the different ability groups. The Gifted, SAP and Express students tended to adopt the Deep and Achieving Approaches in learning both English and Mathematics. The weaker Normal students had higher scores for the Surface Approach than the Deep Approach. This is not unexpected as poor achievers generally favour the Surface Approach (Svensson, 1976, 1977; Watkins, 1983; Van Rossum and Schenk, 1984; Chew, 1988; Chang, 1989). The achievement goals of these poor achievers are performance-oriented rather than learning-oriented.

But careful examination of the Surface subscale scores of all the three ability cohorts of respondents reveals high scores for Surface Motivation but low scores for Surface Strategy. The Surface Strategy scores are the lowest among the three strategy subscale scores. This is gratifying as the intense drive to achieve excellent results in examinations has not turned our students into rote learners as the myth created by certain Western academics would like the world to believe of Asian learners (Ballard and Clanchy, 1984; Biggs, 1989, 1990; Murphy, 1987; Samuelowicz, 1987).

Data on the Learning Approaches preferred by the different grade levels give further support in debunking the myth that Asian learners are rote learners. For both English and Mathematics, the Achieving and Deep Approaches were favoured by the Secondary II, Secondary IV and JC/Pre-U students. Though the respondents were keen to pass their examinations, they did not resort to blind memorization techniques to achieve their goals. Hence they achieved high scores for Surface Motivation but low scores for Surface Strategy.

CONCLUSION

The substantial research evidence gathered locally and that from Nepal, Hong Kong and the Philippines suggests that the misconception of Asian learners needs rectification. An educated guess at the source of the misconception could be one of miscommunication because of the lack of (English) language fluency on the part of some Asian students. Another possible reason could be the different cultural beliefs of the western academics and the Asian students. It is generally considered rude to argue with one's seniors and teachers in the Asian culture. Though you may disagree with your lecturer, it is not considered proper to challenge your lecturer in class. The golden rule is to defer to your seniors as they are wiser. This may give rise to the notion that Asian students are without opinions and are not questioning or thinking.

As learning is influenced by social, emotional, cognitive, physical as well as political factors, it adds credibility to a piece of research if the cultural background of the subjects is carefully examined. This is especially important if comparison is to be made. There is a wide gulf of cultural and value differences between Asian and non-Asian students. Making hasty judgements based on superficial observations can result in gross misconceptions.

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