ABSTRACT NUMBER: PA1

Contribution Of Formal In-Course Assessment Towards Student's Performance In End-Of-Semester Examination

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Introduction: The objectives of assessment in a curriculum are to evaluate the students' understanding of the knowledge and competence in a particular field, as well as their extent of learning. The knowledge component is usually assessed in written examinations. In order to encourage continuous learning throughout a course, in-course assessments are often included into the curriculum and they can take the forms of written assessment in a formal setting (i.e. formal assessment) or informal assessment (e.g. take-home assignments, reports etc). The aim of this study is to evaluate whether formal in-course assessment will enhance students' performance in End-of-Semester written examination.

Materials and Methods: Two modules in the International Medical University Pharmacy programme were chosen for this study. Both modules are of the similar nature (both are integrated courses on body systems) and they are offered to the same students in the same semester. Module A has a class test component as the formal in-course assessment, together with the other informal components of in-course assessments (portfolios of learning, Problem-Based Learning, practicals and logbook), whereas, the in-course assessments for Module B comprise of only informal components (portfolios of learning, Problem-Based Learning, practicals) without class test. The class test for Module A was held in mid-semester. The scores of the in-course assessments, End-of-Semester examinations as well as the final board marks for the two modules were compared using the t-test.

Results: The students' performances in the End-of-Semester examinations for the two modules, Modules A and B, are not significantly different, despite a significant difference in their in-course assessment scores. Besides, the final board marks for these two modules are significantly different. For Module A, there is no significant difference in the End-of-Semester examination scores between the high-scoring and low-scoring students based on class test scores; however, their final board marks are significantly different. The Pearson Correlation between the class test scores and in-course assessment scores is 0.966, indicative of a positive correlation between the two scores. The Pearson Correlation between End-of-Semester scores and final board marks is 0.976, indicative of a positive correlation between these two scores.

Discussion: The students' performance in End-of-Semester examination is not affected by whether or not there is a formal in-course assessment (i.e. class test in this study) in the module. The high-scorers and low-scorers in the class test show comparable performance in the End-of-Semester examination. This study shows that the students are better prepared for the End-of-Semester examination compared to the class test, which suggests that the End-of-Semester examination is more effective in assessing the student's acquisition of knowledge. This is further supported by the high correlation between the End-of-Semester scores and the final board marks.

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ABSTRACT NUMBER: PA2

Drug Safety Bulletin As An Educational Tool On Adverse Drug Reactions – Its Development And Evaluation

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Introduction: Continuous update on various aspects of drug therapy is of utmost importance for practicing clinicians as well for the emerging professionals that include postgraduate students and interns. Distribution of bulletins focused on drugs and therapeutic aspects in general is often practiced by many hospitals and the same may benefit in continuous education on drugs. (Alderman 2002 Denig P *et al* 1990 and Weekes LM *et al* 2003) In a teaching hospital set-up, such bulletins will be having the dual role as a medium for continuous education of the practitioners as well as an educational tool for the students. Bulletins with the specific aim of educating on drug safety issues are also published. (Castel 2003) We would like to share our experiences with a drug safety bulletin published by the adverse drug reaction (ADR) reporting unit of a tertiary care teaching hospital in India.

Objective: To describe the development, implementation and initial evaluation of a drug safety bulletin published in an Indian teaching hospital as an educational tool in providing update information on drug safety issues as well as to facilitate the dissemination of information on ADRs reported in the hospital.

Methodology: Kasturba Hospital, Manipal, is a 1400-bedded tertiary care teaching hospital in South India. The hospital has various specialties and the student population attached to the hospital includes post graduates of various medical specialties, undergraduate medical students, and post graduate and undergraduate students of various allied heath science disciplines. An ADR monitoring and reporting unit is functioning in the hospital from 2001. Clinicians and medical post graduates participate in the ADR reporting programme by reporting ADRs observed. Further, they seek information on drug safety from the ADR reporting unit for better patient care and updating their knowledge.

A drug safety bulletin was developed and published in the year 2006 as a half yearly publication with the above mentioned objectives. The targeted population who may benefit substantially from the bulletin includes the clinicians, post graduates of various medical disciplines, medical interns, pharmacists and post graduates in pharmacy. A simple and attractive graphic design was chosen for the bulletin which is published as a 6-page bulletin. Two issues have been published till now and hard copies of the bulletins are distributed. Along with the second issue, the bulletin is made available as a read only print down loadable form in the hospitals intranet to ensure easier and wider access.

The distributed drug safety bulletin has different sections. The sections included are a) data on ADRs reported in the hospital which also includes selected reports, 5-6 in number, which is presented with relevant additional information on the same. b) case report any interesting drug reaction will be presented in detail with brief review of literature c) drug safety article the topic is chosen considering the information needs of the readers d) drug reaction overview the topic is chosen considering the pattern of ADRs noticed and where in a need for educational intervention is observed and e) drug safety news; findings from any latest publication related to drug safety will be briefed or any information on drug withdrawal or labeling changes will be included. In addition to the dissemination of technical information on drug safety issues, the drug safety bulletin is utilized as a medium for increasing the awareness of the ADR reporting programme in the hospital, it's functioning, and educate regarding the importance of ADR reporting among clinicians and medical students.

Results and Discussion: A simple evaluation form was designed to obtain the feed back from the readers of the bulletin and the same was distributed along with the second issue of the bulletin. A total of 54 responses (response rate, 61.6%) were received and evaluated. Respondents included practitioners (n=34) and medical postgraduates (n=20). With respect to the overall impression regarding the bulletin, 30 respondents (55.5%) opined the bulletin as a useful source of information followed by those who opined the same as a very useful (40.7%) source. Seventy five percent of the respondents rated the bulletin as good followed by 22.2% who gave a rating as very good. With respect to the frequency of the bulletin, a quarterly publication was suggested by many (44.4%) of the respondents. Evaluating the reader's opinion on the ultimate benefit of the bulletin majority (77.7%) of them opined that it helps in sharing of information on ADRs observed in the hospital, followed by those who opined that it helps in providing specific and detailed information on ADRs. General suggestions from the readers included suggestion for including more information on methods to prevent ADR, establishing a casuality relationship, updates on banned drug and ADR profile of new drugs.

Conclusion: Drug safety bulletin was well accepted by the target audience, including the practitioners and medical students and they find it quite useful and a good medium for sharing of information on ADRs observed in the hospital and updating their knowledge and obtaining specific information on drug safety. Such bulletins will serve as a tool for continuing education of practitioners and as an educational assistance in the training of the medical postgraduates, medical interns and students of other discipline on drug safety issues.

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ABSTRACT NUMBER: PA3

Discrepancy In Performance Score: A Comparison Between Two OSCE Groups

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Introduction: Objective structured clinical examination (OSCE) assesses the medical students' competency in clerking, diagnosing and managing patient within a stipulated time.[1] This standardized clinical examination maintains fairness as all students go through the same clinical case.[2] Marks are awarded according to the standard item check list. Students sitting for clinical OSCE in Seremban Clinical School are subdivided into 2 groups. Each group goes through the same questions but with different examiners and patients. When real patient is used for physical examination, patient selection is done carefully in order to get almost similar clinical findings in the two patients. If a simulated patient is used for history taking , training of the simulated patient is done at least during 2 sessions before the OSCE so as to standardize elements of history and expected clinical response.

Aim: The aim of this paper is to document any significant difference in the performance of two groups of semester 9 students sitting for OSCE.

Materials and Methods: A total of 40 Semester 9 students at the end of semester 9 (February 2007) sitting for the morning session of OSCE were divided into 2 groups (group A and group B) each comprising 20 students. Each student went through six (6) long OSCE stations. (Station 1 to station 6) At the end of the examination, the mean score for each station were calculated and compared between group A and group B. t-test was used to determine any significant difference in the mean score between group A and group B.

Results: Two out of the six OSCE stations were found to have significant differences in mean score. In station 1 (real patient

with physical findings) students in group A obtained higher score (mean 70.5 + 5.5) compared to group B (mean 57.5 + 3.0), p=0.013 (95%CI: 2.91-23.17). Station 4 was a history taking station using a simulated patient. Students in group A obtained higher scores (mean 74.0 + 4.5) compared to group B (mean score 65.2 + 2.5), p=0.022 (95%CI: 1.42-17.42). The other 4 stations did not show any significant difference in mean score.

Discussion: Despite OSCE being a standardized clinical examination; there are factors which lead to discrepancies in the final score between the two groups.[3] Getting two identical patients in all aspects of the physical findings is almost impossible. Simulated patients may vary in their role play. Different examiners may have different levels of expectation. All these factors could contribute to the discrepancy of the final score.

Conclusion: Clinical OSCE can be improved further in order to minimize any discrepancy caused by patient factor or examiner factor. Selection of patients, training of simulated patient and training the examiners are paramount importance in attempting fairness in OSCE.

Key words: OSCE, Discrepancy, mean score, simulated patient, examiner

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ABSTRACT NUMBER: PA4

Assessing Biomedical English Competency: A Fair, Valid, Sensitive And Reliable Approach

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Introduction: As medicine become more international, there is a need for a fair, valid, sensitive, and reliable assessment of biomedical English ability. With this goal in mind, the Test of English for bioMedical Purposes (TE^{b}MP) was created.

Methods: TE^{b}MP endeavors to insure fairness by using objective marking systems and validated marking schemes. It strives to insure validity by testing current usage of English in authentic biomedical situations as determined, for example, by a computer analysis of corpora of the biomedical literature. The sensitivity of individual TE^{b}MP questions is determined within the context of each pilot examination. For each question, the ratio of correct answers among the upper and lower quartiles of each cohort is taken as a measure of the question's ability to discriminate between test-takers of higher and lower ability. Questions with low sensitivity are culled from the question bank. The reliability of TE^{b}MP is monitored by the comparison of question performance between cohorts, and by the comparison of whole-test performance where different versions of TE^{b}MP are taken by comparable cohorts.

Results: Piloting of TE^{b}MP with thousands of students over the past three years has proven the test reliable and sensitive in the domains of vocabulary, grammar and usage, and reading comprehension. Development is ongoing in the domains of written composition, speech and hearing.

Discussion: In this poster presentation, members of the TE^{b}MP working group will be available to discuss the past, present, and future of the Test of English for bioMedical Purposes, as well as the trials and tribulations of designing an effective online test.

Key Words: Medical, Biomedical, English, Testing, Assessment, Validity, Fairness, Reliability, Sensitivity

ABSTRACT NUMBER: PA5

Assessment Tools: How Strong Are They?

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Introduction: Assessment is an integral part of the teaching-learning process. Assessments when properly planned and implemented, have a strong positive effect on student learning. It helps to determine whether the learning objectives are achieved at individual level. Thus the assessment tools should be able to discriminate the high achievers from the low achievers. Different assessment tools are used to assess different levels of competence. While written examinations such as structured essay questions (SEQ), Short answer questions (SAQ), Problem cases (PC) and multiple choice questions (MCQ) assess the knowledge, objective structured practical examinations (OSPE) assess the ability to integrate the knowledge in concept building and understanding. In objective structured clinical examination (OSCE) the competence to perform a skill using standardized patients are assessed. In an integrated curriculum, a combination of the above tools can be used to assess medical undergraduates in pre clinical years. When different assessment tools are used, it desirable to have a comparable difficulty level between them.

The International Medical University (IMU) uses SAQ (semesters 3) and problem cases (semester 5), OSPE and OSCE to assess students at semester 3 and semester 5 levels.

The objective of this study is to compare the strength of different assessment tools in relation to their ability to discriminate high achievers from low achievers and to

compare the magnitude of difficulty level of the different assessment tools.

Materials and Method: Performance of the students of two cohorts who sat for the semester 3 and 5 assessments was retrospectively studied. There were 177 students in semester 3 and 174 students in semester 5. The marks obtained by each student at SAQ or problem case, OSPE and OSCE were analysed using a standard SPSS package. The mean, coefficient variant, difficulty index and discriminative index were calculated for each assessment tool in each semester.

Results and Discussion: The semester 3 students obtained slightly higher mean score for OSPE(76.14) followed by SAQ(73.62) and OSCE(72.01) In semester 5 examination, students did much better in the problem cases component, and their mean scores were significantly higher(82.40) than the OSPE(74.40) and OSCE(72.66) assessment scores. The coefficient of variation (CV) for all the scores is well below 15%, indicating the scores obtained in different assessment tools are fairly consistent. (Table 1) .

Table 1: Mean scores, coefficient of variation (CV), difficulty index and discriminative index

	Semester 3			Semester 5		
	SAQ	OSPE	OSCE	Problem cases	OSPE	OSCE
Mean Score	73.62	76.14	72.02	82.40	74.40	72.66
CV	11.38	10.20	7.08	7.19	10.22	7.62
Difficulty Index	0.545	0.539	0.590	0.702	0.501	0.594
Discriminative Index	0.446	0.512	0.437	0.522	0.611	0.579

The difficulty as well as discriminative indices for the written examination, OSPE, and OSCE for the semester 3 examinations are close to each other suggesting that all the three assessment modes have comparable difficulty level and ability to differentiate between poor and weak students.

For the semester 5 examination, the problem cases component seems to be more difficult than the OSPE and OSCE. However, the students have performed better in this component. In terms of discriminative property, all the three assessment modes portray similar level. In general both the semester 3 and semester 5 examinations have good test properties.

The results indicate that the different modes of assessment fit in well as a comprehensive examination set with comparable difficulty levels. They were able to differentiate the high achievers from the low achievers while maintaining their uniqueness in assessing different competence levels.

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ABSTRACT NUMBER: PA6

Course Assessment In The Haematology System: Assessment Of Core Knowledge And Competence In The Undergraduate Medical Course

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Introduction: There have been concerns expressed over the process and content of assessment in the haematology system for undergraduate medical students. Changes in curriculum and teaching strategies may be contributing factors to the methods of assessment. There is little evidence to evaluate the degree to which these concerns are justified.

Objectives: To evaluate the different assessment procedures that test the progress of medical students in achieving a core level of knowledge in haematology during the course.

Participants and Setting: Four cohorts of undergraduate students of the medical course at International Medical University.

Methods: The examination pattern of the 4 cohorts of students was obtained to provide a view of student knowledge gain and overall performance during each year of the course. Two cohorts had been exposed to an examination system consisting of MCQs and BCQs only, and two cohorts exposed to MCQs, BCQs, SAQs and OSPEs. In each of the cohorts, the performance of the students in terms of success and their scored grades A and B in each category was observed. The data was analyzed for any difference using the Chi square test statistics. A p value less than 0.05 was taken as statistically different.

Results: The number of students who scored grades A and B for the above, in both the cohorts showed a highly significant difference ($p < 0.01$).

The group of students who passed before implementation of OSPE, SAQ, MCQ and BCQ, when compared with that of students after implementation of OSPE, SAQ, MCQ and BCQ, showed a highly significant difference ($P < 0.01$). Similarly, the number of students scoring grades A and B in two categories was highly significant ($p < 0.01$) after implementation of OSPE.

Conclusions: This short test was a feasible method of estimating student knowledge acquisition in haematology across the undergraduate curriculum. Tested students in the second category appear to have acquired a satisfactory knowledge base and good performance by the end of the course, when compared to the first. Knowledge gain and performance were enhanced when the students were exposed to SAQs and OSPEs with MCQs, rather than MCQs and BCQs alone.

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ABSTRACT NUMBER: PA7

Assessing The Biomedical Literacy And English Language Skills Of Malaysian Health Sciences Students

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Introduction
Despite having met general English language requirements, students from non-English speaking countries entering health sciences programs delivered in English often appear to encounter considerable difficulty with language tasks. This suggests that there is a need for more precise assessment of the language competencies and needs of international students.

Method
Three pilot versions of the Test of English for bioMedical Purposes (TEbMP) were administered to incoming health sciences students at IMU and UKM in Malaysia. Comparisons were made within the cohort, examining biomedical language abilities in relation to first language and the language of instruction prior to entering university. Additionally, comparisons were made with cohorts of health sciences students in Japan and Australia.

Results
On the basis of TEbMP, little relationship could be found between biomedical language ability and either first language or language of instruction prior to university entrance. In general, the biomedical language abilities of Malaysian students were on par with those of their Australian counterparts and substantially higher than the abilities of matching cohorts from Japan.

Discussion
Notwithstanding diverse linguistic backgrounds, students entering health sciences programs in Malaysia appear to have high levels of ability in biomedical English, comparable to those of native English speakers. Additionally, they consistently score higher than Japanese students who have had at least six years of formal English instruction prior to university entrance. The high levels of ability among Malaysian health sciences students from diverse linguistic backgrounds may reflect the convergence of a number of influences including the social milieu, pre-university education and effective screening of entrants.

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ABSTRACT NUMBER: PA8

Assessing IMU Communication Skills Training Programme: Tools And Reliability

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Introduction: In Malaysia, communication skills training (CST) programme is given increasing attention with more and more medical schools integrating communication skills teaching as part of the medical education (Ng & McCarthy, 2002). However, to date, there is limited published information on how CST is being implemented in Malaysia. Even fewer reports describe the reliability and validity of the tools used to assess the efficacy of CST programmes. Recognizing that ongoing evaluation using reliable tools are important for ensuring the efficacy and quality of any training programme, the International Medical University (IMU) has developed a number of tools to evaluate the CST programme in this medical institution. The tools comprise of the Interpersonal Communication Inventory (ICI) measuring students' perceived competency in interpersonal communication; the Communication Skills Attitude Measures (CSAM) that assesses students' attitude towards the need for good doctor-patient communication; and the Communication Skills Training Evaluation (COSTE) survey assessing students' acceptance of the training programme. The present study aims to investigate the reliability of the aforementioned tools.

Materials and Methods: The participants in this study consist of medical students in the pre-clinical phase. 552 students completed ICI, 684 students completed CSAM and 329 students responded to COSTE. All three assessment tools are self-reported. ICI is an eight-item inventory developed to investigate students' perceived competency in eight basic interpersonal skills. Students were asked to rate their ability (perceived self-efficacy) to perform the behaviour encompassed in each skill using a four-point Likert scale. CSAM is a 32-item scale developed to assess medical students' attitude towards the need for good doctor-patient communication, specifically on the need for building rapport

and showing empathy. Each item is scored on a four-point Likert scale with a higher score represents a more positive attitude towards the need for good doctor-patient communication. Lastly, Communication Skills Training Evaluation (COSTE) is a tool developed to assess students' acceptability of the training programme. The 30-item scale is an adaptation of DREEM (Dundee Ready Education Environment Measure, Roff *et al.*, 1997), comprises of 3 subscales measuring students' perception of the training process, staff and training atmosphere. With the exception to COSTE, ICI and CSAM were distributed to students prior to their CST in semester 1. COSTE was distributed after a 2-week CST. The Internal consistency of the three assessment tools was established using Cronbach's Alpha coefficient.

Results and Discussion: The results demonstrate that the tools have adequate internal consistency in measuring students' perceived competence in interpersonal communication (Alpha = 0.745), attitude towards the need for good doctor-patient communication (Alpha = 0.872) and acceptance of the CST programme (Alpha = 0.857). This finding provides substantial assurance that the tools aimed to evaluate the IMU CST programme are reliable.

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ABSTRACT NUMBER: PA9

Correlation Between English Language Requirements And English Placement Test (EPT) – Do We Need An EPT?

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Introduction: An English Language proficiency requirement has been established for admission in the International Medical University (IMU) in Malaysia. Majority of the students (90%) who apply for the course in medicine have either the International English Language Testing System (IELTS) or Malaysian University English Test (MUET) scores which are indicators of their English language skills. The English placement test (EPT) is administered to all students at the point of entry regardless of their scores for MUET and IELTS. The cut-off score for exemption from the English modules is 68 out of 100. The students who fail to reach the expected minimum score are provided additional language skills for the subsequent semester until they reach the desired score.

Objective: To analyse the association between EPT and IELTS / MUET scores of medical students at IMU with a view to gauge the usefulness of EPT.

Method: The MUET and IELTS scores were correlated with the EPT scores of the incoming first year medical students of cohorts M105 and M205. The data were analysed by Statistical Packages for Social Sciences (SPSS).

Results: The respondents for this survey comprised first year students from two cohorts of Medical course, M105, and M205 namely. The majority of the students from both the cohorts had taken MUET as the English language pre-requisite for entering to the medical programme followed by IELTS. Out of the total of 264 students from M105 and M205 who had MUET qualifications, 17.8% obtained Band 4, 68.6% had Band 5 and 13.6%, Band 6. The IELTS results of 199 students from both cohorts indicated that 18.1% had Band 6 or 6.5, 51.3% Band 7 or 7.5 and 30.7% Band 8, 8.5 or 9.

Upon registering to the medical programme, these students took the English Placement Test (EPT). Comparisons were made to determine the differences in the EPT scores, if any, between students with the different MUET bands. The results showed that those with Band 4 scored an average of 63.5 whereas students with Band 5 obtained an average of 73.3. Those with Band 6 scored an average of 79.6. To further explore whether MUET grades were able to gauge the required English language proficiency of students for the medical programme, the cross tab analysis between the MUET grades and the EPT scores was done. The EPT scores were categorized into two categories; proficient and not proficient using a cut off point of 68.

The results showed that there were a significantly higher percentage of students (66.0%) with MUET Band 4 who scored low marks in their EPT examination. This indicated that the MUET can actually gauge the English proficiency of the students. However this evidence cannot be used to rule out the importance of EPT, as there were also a fair percentage of students (24.3%) with MUET Band 5 who did poorly in the EPT.

Similar comparisons were made to determine the differences in the EPT scores between students with the different IELTS bands. The results showed that those with Bands 6 and 6.5 scored an average of 66.17, Band 7 and 7.5, 73.85 and those with Band 8 and above, 79.80. Likewise, a further investigation as to whether IELTS bands were able to gauge the required English language proficiency of students for the medical programme was done. The cross tab analysis between the IELTS grades and the EPT scores was employed. The results showed that 66.7% of the students with Bands 6 and 6.5 did poorly in the EPT. This indicated that the IELTS can in fact measure the English proficiency of the students. However there were also a fair percentage of students (16.0%) with IELTS Band 7 and 7.5 as well as Bands 8 to 9 (4.9%) who did poorly in the EPT.

Conclusion: The aim of this paper was to validate the relevance of EPT. If the EPT is meant to screen the students' language ability other than those assessed by the standard examinations like MUET and ELTS, there is a valid reason for students to attempt this test. Evidently, the results are able to identify that a higher percentage of students from MUET

Band 4 and IELTS Bands 6 and 6.5 did not acquire the stipulated mark compared to those with better MUET and IELTS scores. Since the English requirement is viewed as important for medical students, this finding supports the wisdom of IMU which has considered accepting students with only IELTS qualifications and has raised the minimum entry requirement from Band 6 to 6.5 for the 2008 intake.

Furthermore, there are fair percentages of students from MUET Band 5 and IELTS Bands 7 and 7.5 who did poorly on their EPT examination. This provides evidence that the EPT does assess skills that may not be sufficiently tested in the MUET or the IELTS examinations. Gaengler et.al.(2002) states that "Students who drop out of the programme because of language difficulties not only represent a lost opportunity, but also a waste of time, effort and precious resources." Therefore, the results from this paper have provided data to support the retention of the EPT as a means of allocating students for the English module. In a similar study, Chur-Hansen (1997) successfully used the Screening Test for Adolescent Language (STAL) for allocation of students into language proficiency courses. Although the EPT is not identical to the STAL, it cannot be denied that other forms of measurements can be used to identify the language proficiency required by medical students. However, for the EPT to be easily administered in an economical manner, we suggest that students with Band 6 for MUET and Band 7.5 and above for IELTS be exempted from being tested. The EPT can further be used as a diagnostic tool to identify students who may have problems with specific English language skills.Through this test, intervention programmes which address the specific needs of the student can be developed to help the student cope better with the language of instruction in the medical programme.

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ABSTRACT NUMBER: PA10

Are English Language Requirements, Valid And Reliable Entry Criteria That Determine Expected Academic Performance In Phase 1 Of Medicine Course At IMU?

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Introduction: At the International Medical University (IMU), in Malaysia, English Language scores obtained from English Language Proficiency tests are used as one of the criteria for entry into the Medical Programme. The medium of instruction at IMU being the English language, requires students to have a proficiency level, that would not disadvantage them in their academic performance. Undergraduate students enrolled at IMU comprise Malaysians as well as international students. The students from Malaysia would have received formal education in Bahasa Malaysia with English as a second language on an average of 11 years. Both Malaysian University English Test (MUET) at a band of 4 for Malaysians or International English Language Testing System (IELTS) with a band of 6.5 for international students are accepted as minimum language criteria for entry into the Medical School. Although the MUET and IELTS have been used as criteria for entry into IMU, the impact of these requirements have not been assessed in relation to the student's academic performance. This study investigated the effectiveness of these criteria as reliable and valid indicators of expected student performance after entry to the university.

Method: Academic performance of two cohorts of 362 students who have entered the first year medicine course in IMU in 2004 (M104 & M204) were studied. The correlation of English Language skills as determined at entry (MUET and/or IELTS) were compared with their academic performance at the end of semester 1 (EOS 1), semester 3 (EOS 3) and semester 5 (EOS 5) examinations. A Cross-tab and chi-square analysis was used to determine the impact on academic progress after neutralizing the effects of aptitude as measured by their academic banding at entry. The correlation between IELTS and MUET with academic performance was measured separately.

Results: A total of 311 or 80.8% of the students from the two cohorts had taken the MUET while 109 or 28.02% used the IELTS as their English Language entry requirement. There were also a fair number of 97 or 24.94% who had done both the above mentioned tests. Although other English language tests such as the Test of English as a Foreign Language (TOEFL) was also accepted, the study did not include these as the numbers were too small to be of any significance.

Since IELTS is a widely recognized assessment used globally as compared to the MUET which is used only for Malaysian Universities, the English Language proficiency of the students were tested by using a cross tab analysis on those who had taken both the MUET and IELTS tests. The results revealed that a greater number of students achieved higher IELTS scores (Bands 7.0 – 9.0) compared to their MUET scores.

To further explore the relevance of both the English Language Proficiency tests entry requirements to the Medical programme, a comparison was made between the students' English grades and their academic performance as assessed at the end of Semesters 1, 3 and 5 of Phase One in IMU. As for the MUET, there was no significant correlation between the students' English Language proficiency and their academic performance. Similarly, the IELTS too mirrored similar results in that the students' performance in the IELTS tests did not seem to influence the academic performance of students in the preclinical years.

Conclusion: This study aimed to investigate the effectiveness of the English Language criteria as reliable and valid indicators of expected student performance after entry to the university, both analysis of the MUET and IELTS with the

students' academic performance in Phase 1 didn't indicate any significant association. One possible limitation is that the final assessments do not capture language skills in the written form as questions are constructed in the forms of Multiple Choice Question, (MCQ), Short Answer Question (SAQ) and True/False options.

However, in an earlier survey conducted on the Partner Medical School (PMS) Evaluation and Self-Preparedness, (Lee 2007) it was reported that a greater importance be given to communication skills and English proficiency for students in PMS and Clinical school. Therefore, more research is warranted to explore other possible admission variables that might affect academic performance. A further study on the required language skills in answering the test items for clinical school performance should bear some interesting results.

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ABSTRACT NUMBER: PA11

The Effectiveness Of The English Course In Improving The Students' Language Proficiency

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Introduction

With a diverse language background profile in a Malaysian medical student population, providing an English Language support system is important for those students whose English language proficiency is inadequate for the study of medicine. Students identified as experiencing language problems are screened from an English Placement Test (EPT) given to undergraduate students coming into their first week of the first semester. The students identified are then allocated to a language support programme undertaken concurrently with their medical studies for a maximum of 90 minutes per week for a total period of 13 to 26 weeks after which the whole cohort is given the second EPT.

Aim

This study aims to evaluate the effectiveness of the language intervention, ie.the English language course provided to students identified as experiencing language difficulties in terms of improvement in language proficiency over the two semesters before which all the students of the same cohort are tested again at the beginning of Semester 4.

Method

First, the English Placement Tests are given at the start of Semester 1 to the new undergraduates of cohorts M105 and M205 respectively. Then those students whose scores are of 68 out of a possible total of 100 (the cut-off score) and below are identified to be given language assistance by following on a language support course for at least 13 to 26 weeks until Semester 4. All the students of the same cohort are then tested by the same EPT in the first week of Semester 4. The results are then compared to see whether there is any statistically significant improvement after the language support is given. A comparison is also made with those students who have not received any sort of language support classes from the commencement of the medical programme.

Results

As for the M105 cohort, the students' English proficiency at the entry point can be considered fair with a mean score of 73.92 obtained at the first EPT and 144 out of 185 students (77.8%) scored above 68 marks. The results also indicate that their proficiency level improved significantly during their preclinical years as seen from the higher mean score of 80.72 obtained at the second EPT and only 5.9% of the 169 who took the second EPT did not make the grade of 68 marks.

A total of 185 students of the M105 cohort sat for the first EPT while for the second EPT the number was 169. This is due to attrition or students repeating their semesters. A cross tab analysis was done to ensure those students who did not proceed to Semester 4 are not the same ones who performed poorly in the second EPT. Results showed that 31 out of 45 students who scored below 68 in the first EPT managed to perform better in the second EPT whereas 2 students who did better in the first EPT performed poorly in the second EPT. This does indicate that the English language support course does contribute in improving students' language proficiency. Besides, the EPT also proves to be a good test as the concurrent validity was established by using the confidence intervals, comparing the differences in the EPT scores on the Malaysian University English Tests (MUET) as well as the International English Language Testing System (IELTS) scores. (Both the MUET and IELTS are the accepted English language entry criteria by IMU)

Conclusion

The English language course offered in IMU has contributed significantly in improving the students' proficiency in English. However, it is of the researcher's opinion that students with more specific needs identified from the performance in the various sections of the EPT could be offered modules in particular aspects of language, such as report or reflective writing, case presentations, oral questioning and other communication skills.

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ABSTRACT NUMBER: PA12

Assessment Of Outcome-Based Curriculum

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Introduction
The shift toward outcome-based education is analogous to the total quality movement in business and technology. In outcome-based education the educational outcomes are clearly and unambiguously specified. These determine the curriculum content and its organisation, the teaching methods and strategies, the assessment process, the educational environment and the curriculum timetable. They also provide a framework for curriculum evaluation. The end of semester exams is a valuable yardstick of measurement of the outcomes. IMU has an 8-outcome based curriculum.

Objective
To make a critical evaluation of the assessment process in addressing the 8 IMU outcomes.

Material and Methods
The study was conducted in January-February 2007, evaluating the Sem 5 and Sem 3 exams(EOS), both main and resit. The 3-tier approach of assessment for EOS which includes problem cases, OSPEs and OSCEs for Sem 5, SAQs, OSPEs and OSCEs for Sem 3 were all analyzed critically. Both the main and resit questions were analyzed in depth to know as to what percentage of the 8 IMU outcomes were addressed. The 8 IMU outcomes assessed were: 1. Application of basic sciences in the practice of medicine, 2.Clinical skills, 3.Communication skills, 4.Disease prevention and health promotion, 5. Family and community issues in health care, 6.Professionalism, ethics, and personal development, 7.Self directed life-long learning and information management, 8.Critical thinking and research.

Results
The first outcome of application of basic sciences was addressed in all the questions. Clinical skills and communication skills (outcome 2 and 3) were addressed in OSCE stations but in a very few in the OSPE or problem cases or SAQ. Outcome 6, 7 and 8 were also addressed in only a smaller percentage of questions (<10%). Outcome 4 and 5 were addressed in a major proportion of the questions (>50%).

Discussion
IMU curriculum is spiral in nature and all the 8 outcomes are addressed in the later years of phase 2 in the clinical school. However, there is a greater need to address some of the outcomes in the End of Semester (EOS) exams in phase 1 in Bukit Jalil and remedial measures to be taken accordingly.

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ABSTRACT NUMBER: PA13

Missed Psychiatric Morbidity among Primary Care Patients: Training Models To Address It

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Introduction
There is substantive evidence of significant psychiatric morbidity among primary health care (PHC) patients, mainly in the form of anxiety and depressive disorders(1). Co-morbidity of physical and psychiatric illness lead to more complexities of the clinical presentation. Missing such psychiatric morbidity by primary care medical practitioners will inevitably lead to unnecessary, probably costly and hazardous investigations and medications, on top of the continuity of suffering for patients and families. Al-Ain study was described as a demonstration to the magnitude of the problem of missed psychiatric morbidity among PHC patients(2).

Aim
The aim of the study was to make a comparison of the assessment of anxiety and depression by PHC practitioners with assessments made by a consultant psychiatrist on the same study subjects.

Material and Methods
Study subjects (16 – 65 yrs) randomly sampled from PHC patients were screened by a 3-pages questionnaire. The first was on sociodemographic variables, and this was administered by a research technician, before the patient presented to the PHC practitioner. The second and third were simple forms for assessing clinically significant anxiety and depression, to be completed by the PHC physicians and consultant psychiatrist consecutively. In each of these forms anxiety and depression assessments were scored on a four – point scale: non-case (0), mild (1), moderate (2) and severe (3). The psychiatrist completed the third sheet blind of the scoring of the PHC physicians the second sheet.

Results
The assessments by the PHC practitioners recorded a false positive rate of 60% for anxiety and 64% for depression.

Discussion and conclusion
Implications of missed psychiatric morbidity and some examples of educational and training programmes for addressing it problems are outlined and critically evaluated. The programs discussed, included infrequent formal short intensive courses, continuous regular educational programs and videos and computer assisted programmes.

It is concluded that before designing a programmes, careful assessment of the weaknesses/strengths of the targeted PHC

practitioners group should be carried out. The proposed programmes should be tailored in such a way to address the weaknesses and foster strengths. It should be a realistic, practical and down-to-earth program, because it is clear that there is no ideal model for all places and situations. This is substantiated by the finding of this study which demonstrates that although the studied group of PHC physicians had the advantage of access to psychiatric CME programmes and a psychiatry clinic in their same premises giving them the opportunity for case discussion, their psychiatric skills proved to be unsatisfactory(2).

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ABSTRACT NUMBER: PA14

How Closely Do In-Course Assessments Correlate With End-Of-Semester Exams?

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Background: Unlike the End-of-Semester exams (EOS) which are usually structured and objective, the in-course assessments which comprise exams after individual discipline postings (or End-of-Posting exams, EOP) maybe more variable and subjective. We aim to evaluate if EOP exams correlate with EOS exams scores.

Methods: From a batch of ninety 3rd year medical students, we compiled retrospectively the scores of their Internal Medicine End-Of Posting exams (Int Med EOP), overall in-course assessment over 1 year (In-Course), and their performance in the EOS exams at year's end (both total marks and Internal Medicine related-questions only marks)

Results: The mean and range of marks are given in Table 1. Using Pearson's correlations, the Int Med EOP correlated well with In-Course assessment ($r=0.73; p<0.001$), EOS total marks ($r=0.43; p<0.001$) and EOS Internal Medicine related questions marks ($r=0.37; p<0.001$). The In-Course assessment results correlated even better with EOS total marks ($r=0.64; p<0.001$). The scatter plots of EOS total marks plotted on y-axis plotted against Int Med EOP (Figure 1) and In-Course Assessment (Figure 2) on x-axis are shown.

	Minimum	Maximum	Mean	1 S.D.
Int Med EOP Exams Marks	46.8	75.8	59.1	5.4
In-Course Assessment Marks	52.7	68.9	60.2	3.5
EOS Total Marks	61.2	92.6	76.2	7.0
EOS Int Med-related questions Marks	32.8	77.6	58.6	9.0

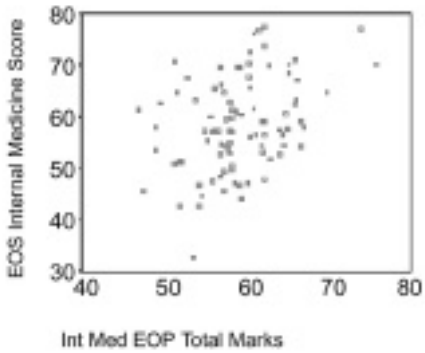

Figure 1

Figure 2

Conclusion: Individual End-of-Posting and overall In-Course assessments correlate with students' performance at the End-of-Semester exams.

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ABSTRACT NUMBER: PA15

Assessment Of Module-Integrated System Efficiency In Medical School

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Introduction: In 2001 for the first time in the Central Asian region according to the Standards in Basic Medical Education the pilot curriculum due to module-integrated system (MIS) in Kyrgyz State Medical Academy (KSMA) was implemented. The aim of the present research is assessment of MIS in KSMA within the period from 2001 to 2005, to reveal problems, and search for ways to solve them.

Material and Methods: We developed indicators for assessment of efficiency of curriculum and carried out the situational analysis of MIS by the example of pilot curriculum, and then received results were compared to indicators of the traditional curriculum in KSMA. Quantitative methods: testing of students, questioning of students and teaching staff, data processing on evaluation scales, the analysis of exam results and practical tests. Qualitative methods: interview, observation, case study, and documentary analysis. The students of the pilot curriculum were studied. The control group included students of the traditional curriculum. Members of teaching staff of KSMA were also involved in the study.

Results: According to exams since 2002 the average rate of the pilot curriculum students has increased by 0,1-0,37 points (maximal rate is 5.0 points). In 2006 the testing of students of pilot curriculum had been carried out. The average rate was on 0,4 points is less than one of exams results. For students of traditional curriculum the average rate in practical tests was 0,1-0,2 points less than one of pilot curriculum students, and according to exam results of the traditional curriculum students the average rate was 0,47 points less than one of pilot curriculum students.

Students of pilot and traditional curriculums filled in questionnaires. The 26 students participated in questioning. 1. Opinions of students about quality of educational process in _S__. (a) Conditions in which students study. The average rate has made 3,3 points. 84 % of students consider, that practical lessons in pilot curriculum are well enough equipped with demonstration materials. On the other hand lectures, according to the opinion of 73 % of the students, are insufficiently illustrated. Also low estimations (3,2 points) are characteristic for hardware of educational process. 34 % of the students estimated a level of library maintenance as good, and 31 % as excellent. (b) Quality of educational process. The average rate was 3,9 points. 69 % of the students learn lectures well, as teachers state the information clearly and easily. Probably, excellent and on the contrary unsatisfactory comprehensibility of teaching material by 12 % and 19 % of students accordingly refer to their personal features. 12 % of the students rate practical lessons as excellent, 72 % as good, and 12 % as satisfactory. 85 % of students consider, that teachers objectively estimate a final knowledge on practical tests and exams. However, 65 % of students evaluated data traffic in pilot curriculum as high, and 22 % as even excessively high. (c) Quality of educational process results. The average rate has made 3,8 points.

For the general estimation of quality of curriculum data were processed on evaluation scales. By results of questioning students the general estimation has made 1445 points. It according to an evaluation scale means that the situation in the pilot curriculum in general is favorable, but demands improvement on some directions. For specification of a degree of a problem on various directions of educational process additional evaluation scales have been used. The received results specify that the majority of students were not satisfied with conditions of study.

2. Opinion of students concerning educational process in _S__. To improve the educational process 15 % of students consider, that application of new of teaching technologies is necessary, 61% - improvement of hardware of educational process (multimedia lectures, work practical skills through moulages, application of interactive electronic educational programs), 19% - improvement of professional skills of teaching staff, 23 % - improvement of manuals, 46 % of the students understand, that they should be interested in success, and 42 % of students consider necessary to give more time for working practical skills through real patients.

The opinion of teaching staff was simultaneously investigated. In the opinion of all teachers the successful curriculum is prevented by poor base knowledge, received on some fundamental sciences of KSMA, 62 % - mention absence of the uniform conceptual approach to pilot curriculums, 37 % - consider, that students are overloaded with information, 25 % consider, that because of very short and irrationally constructed pilot curriculum students have no time to prepare a teaching material. In opinion of teachers an application of new teaching technologies (75% of opinions) and presence of the modern qualitative training appliances (62 % of opinions), undoubtedly, would allow to improve quality of educational process.

Discussion: The complex quantitative and qualitative methods of collection of the data and their analysis allows carrying out both the situational analysis of quality of educational process and monitoring the basic indicators. The received data demonstrating the positive dynamics in progress of students in pilot curriculum in comparison with 2002-2003 academic years. And students of pilot training had higher point on exams. _IS in _S__ demands these further improvement: improvements of conditions of study, developments of the uniform concept of pilot curriculum, application of electronic education programs, maintenance of educational process with moulages and patients. Creation of uniform electronic medical database in KSMA, for amplification of integration of chairs which participate in MIS under "customer (clinical disciplines) - the executor

(fundamental sciences)" circuit is planned. The possibility for training teachers at leading medical universities of Europe and Asia is necessary for interchange by experience by a monitoring of quality of educational process.

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