# "Implementing quality learning for higher education purposes"

# Conference on Higher Education in Sri Lanka

Jointly organized by

**Staff Development Centre (SDC)** 

**University of Colombo** 

and



Sri Lanka Association for Improving Higher Education Effectiveness (SLAIHEE)

Friday, 13<sup>th</sup> May 9 am to 2 pm

Faculty of Graduate Studies University of Colombo

2011

### 7<sup>th</sup> Joint SDC – SLAIHEE Conference 2010

#### Implementing quality learning for higher education purposes

Friday 13<sup>th</sup> May 2011, 9 am to 2 pm Faculty of Graduate Studies, University of Colombo

#### Message from the Executive Committee of SLAIHEE and the conference organizing committee

We welcome all the participants and presenters of research papers to the 7<sup>th</sup> Joint SDC – SLAIHEE conference and wish you all a very productive experience, either as presenters or as participants ready to listen and engage in interactive discussions on the research papers.

The Sri Lanka Association for Improving Higher Education Effectiveness (SLAIHEE) is an association of higher education professionals, dedicated to improving teaching and learning effectiveness by actively supporting educational developers and leaders in higher education in Sri Lanka. The Staff Development Centre in the University of Colombo, too, joins SLAIHEE in its commitment to improve the life skills and performance capabilities of university teachers and students. Today SLAIHEE is staging one of its main activities, that of conducting a research conference in Higher Education.

We are honoured to have with us today the Vice Chancellor of the University of Colombo, Prof. Kshanika Hirimburegama, who is our guest of honour. She is committed to uphold the aims and values of SLAIHEE and has been a source of strength and support to SLAIHEE in its endeavours.

Our key note speaker is Prof. W D Lakshman, former Vice Chancellor of the University of Colombo and no stranger to many of you in the audience. Prof Lakshman is at present Chairman, Institute of Policy Studies and Honorary Chairman of International Centre for Ethnic Studies (ICES). He was the driving force behind the initiation and establishment of staff development in the universities and was deeply involved with the Staff Development Center, University of Colombo, together with Dr SUKE Ekaratne.

The theme of the conference "Implementing quality learning in higher education" follows from our last years' theme of the many challenges that we face in sustaining best practices in higher education. Implementation of good practices is the final outcome which needs the attention not only of us, as teachers, but also the commitment of those in authority and the administrators.

We in the ExCo are happy to note, that due to our efforts in reaching out to the universities outside the Western Province to disseminate information on SLAIHEE and conduct workshops on higher education practices, many academics from these universities are presenting papers at today's conference. The abstracts have been peer-reviewed, and were invited on the stated conference theme based on experiences which are supported with evidence. We congratulate our presenters for believing that they are committed to evidence based improvement of higher education in Sri Lanka. Abstracts of previous conferences could be viewed at the SLAIHEE website. (www.slaihee.org)

We acknowledge the efficient work and long hours spent by ExCo members during review of the abstracts. The staff of the SDC needs special mention and acknowledgement for all the work done behind the scenes. We are deeply indebted to the Dean, SAR and staff of the Faculty of Graduate Studies and SAR, General Administration for their ready support in lending their facilities, year after year to make every conference a success.

Enoka Corea Nelun de Silva Shrinika Weerakoon Nilukshi Abeyasinghe Hasitha Pathirana Prasanna Ratnaweera Sajeevani Somaratne Anton Arulraja Kandaiah Sriganesh Ruvini Pathirana

#### Programme

8. 30 am - Registration

#### Session 1

9 am - Welcome by Prof. Nelun de Silva, President SLAIHEE

9.10 am - Address by the Guest of Honour Prof. Kshanika Hirimburegama,

Vice Chancellor, University of Colombo.

9.30 am - Keynote Address by Prof. WD Lakshman ,

Chairman, Institute of Policy Studies.

Honorary Chairman of International Centre for Ethnic Studies

(ICES). Former Vice Chancellor, University of Colombo

10.00 am - Vote of Thanks by Ms Shrinika Weerakoon,

President Elect SLAIHEE

Acting Director, SDC, University of Colombo

10.10 am - Tea

### Session 2

10.30 am - Presentation of scientific papers

1.00 pm - Annual General Meeting of SLAIHEE (for registered members only)

1.30 pm - Lunch - College House Board room 1 & 11

Staff Development Centre, University of Colombo, Colombo 3.
Tel / Fax. 011 5337207 Web: <a href="www.slaihee.org">www.slaihee.org</a> E-Mail: <a href="mailto:slaihee@gmail.com">slaihee@gmail.com</a>

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| 10.30- 10.45 am | P 2 A  Perception of Teachers on the Ability of Teaching Methods to Improve the Employability Skills of Students   |
| 10.45 – 11 am   | Arulrajah A A, Department of Management, Eastern University, Sri Lanka P 3 A   |
| 11 – 11.15 am   | Improving Quality of Group Work: Reflections on Module - Colour (AD 1030/DD 1030)  Hettiarachchi A, Department of Architecture, University of Moratuwa.  P 4 A                                   |
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| 12.15-12.30     | University of Jaffna.  P 9 A  The Role of Frameworks in Facilitating Quality Learning in Higher Education Setting: with  |
|                 | Special Reference to CTHE  Weerakoon S, Staff Development Centre, University of Colombo.   |
| 12.30-12.45 pm  | P 10 A Balancing Trust and Risk by Introducing a Student Honor Code Weerawarana S M, CSE Department, Faculty of Engineering, University of Moratuwa, Sri Lanka.                                  |
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| 10.45 am           | Information Technology Supported Approach to Large Class Assessment for Active Learning Fernando W. M. N.*, Department of Information Technology, Faculty of Management Studies and Commerce, University of Sri Jayewardenepura, Nugegoda               |
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|                    | <sup>1</sup> Department of Psychiatry, <sup>2</sup> Department of Paediatrics, Faculty of Medicine & Allied Sciences, Rajarata University of Sri Lanka, <sup>3</sup> Postgraduate Institute of Science, University of Peradeniya.                       |
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|                    | Sandika A L <sup>1</sup> , Atapattu N.S.B.M.**, Weerasinghe W.M.C.B <sup>2</sup> , <sup>1</sup> Dept. of Economics, <sup>2</sup> Dept. of Animal Science, Faculty of Agriculture, University of Ruhuna, Mapalana, Kamburupitiya.                        |
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|                    | <sup>1</sup> Department of Psychiatry, <sup>2</sup> Department of Paediatrics, Faculty of Medicine & Allied Sciences, Rajarata University of Sri Lanka, <sup>3</sup> Postgraduate Institute of Science, University of Peradeniya.                       |
| 12.30-<br>12.45 pm | P 10 B Enhancing the Quality Learning Process of Undergraduates of the Faculty of Science by Incorporating an Information Skills Development Programme into the Curricula   |
|                    | Somaratna S D, Senior Assistant Librarian, The Library, Faculty of Science, University of Colombo   |

<sup>\*</sup> presenter

#### **ABSTRACTS**

#### HALL A

#### P 1 A

### Impact of Assessment Criteria on Student Attitudes: an evaluation of student feedback

Shantharuby B, University of Colombo

Assessments play a pivotal role in the process of education. The effect of assessment on learning is usually deleterious if the students do not know what the assessment criteria are and how they will be used in allocating marks. Marking Criteria increases the validity and reliability of assessments. This study offers ways to help students internalize criteria to make learning effective. Students need to be made aware of the benefits of reviewing criteria before they prepare for assessments as they will have a positive influence on the learning process and on their performance.

The objective of this study was to examine student attitudes to the use of assessment criteria with a view of maximizing their use.

A survey was conducted to identify student attitudes to the use of assessment criteria. Final year students of Finance specialization degree of University of Colombo were chosen for the survey. 51 questionnaires were returned by the students. Questionnaire was analysed using MS Excel.

The results revealed that about 96 % of students agreed that assessment criteria should be provided for all assignments and it was proof of their awareness of the utility of using marking criteria for assignments. Nearly 94 % of students surveyed believing that it was useful to review criteria before starting assignment work, while about 88 % of students-already practice review of criteria before they start their assignment work. This shows the highly positive attitude of students towards using and reviewing of assessment criteria. However around half of the students (48 %) perceived that the assessment criteria provided at the university were not easy to follow. Over 60 % of students had the opinion that the marking criteria for assignments cannot be substituted for teacher's feedback. This may be linked to the fact that assessment criteria provided by the university were not easy to follow. Due to this, about 86 % of students expected the instructor to review the criteria. Further, one fourth of students felt no need for detailed criteria. The majority of students believed it was useful to compare the marks with others.

Almost all the students think criteria are important for all assignments. They also show the importance of using marking criteria for assignments to improve student performance. However the teacher should review the criteria in order to be familiar with them to use them effectively.

ashantharuby@yahoo.com

#### P 2 A

### Perception of Teachers on the Ability of Teaching Methods in Improving Employability Skills of Students

Arulrajah A A, Department of Management, Eastern University, Sri Lanka

The objectives of this study are to identify the employability skills of graduates expected by the organisations, the teaching methods used by the university teachers and their perception towards improving the employability skills of the students.

In order to achieve the first objective, secondary data were collected and analyzed from the organizations' entry level job advertisements (200) and for the second objective, interviews and discussions were conducted with 20 teachers.

Result for the first objective shows that organizations frequently mentioned 29 types of skills which they expect from the graduates or entry level job seekers.

For the second objective, results revealed that 100% of teachers use lectures as a primary method of teaching to deliver the subject knowledge but, they are not sure about to what extent this method is useful to improve the employability skills of the students. At the same time 55%, 40%, 30%, 20% and 10% of teachers apply presentations, problem based teaching, resource based learning, small group based teaching, and case study methods respectively in addition to the lecturing method. According to the opinions of the teachers these methods have relatively moderate to high level of possibilities to improve certain types of employability skills except lecturing method.

From the perspectives of the teachers and students in their teaching and learning processes both must clearly know what are the skills required by organisations in addition to subject knowledge. This will help them to achieve the objective of the learning. At the same time teachers must use effective methods of teaching which are useful to achieve dual purposes such as delivery of knowledge and improving employability skills of the students. Therefore it can be possible to conclude that teachers as well as undergraduates must have a clear picture about required employability skills and teachers must cross-check their teaching methods and usefulness of those methods in enhancing employability skills of the undergraduates in addition to the delivery of subject knowledge.

#### P 3 A

### Improving Quality of Group Work: Reflections on Module - Colour (AD 1030/DD 1030)

Hettiarachchi A

Department of Architecture, University of Moratuwa.

Working in groups has been established as beneficial to handle large numbers in higher education. It facilitates working collaboratively with others to accomplish a common goal. Yet, its effective execution to achieve the expected outcomes in terms of quality against individual work has always been a challenge.

Lack of cohesiveness, commitment, enthusiasm, uneven contribution of group members and uncertain learning outcomes, were found to affect the expected quality of a group activity carried out for the final assessment of colour module (AD 1030/DD 1030) shared by B. Arch and B. Des level one students in academic year 2009. Only 16% out of 104 students were able to produce quality work obtaining above 70 marks, meeting the expected learning outcomes.

To assure quality group work in the subsequent academic year, a few techniques were implemented. The students were free to form their own preferred groups to sustain interest throughout the process. The groups were encouraged to sit and learn together during lectures to improve cohesiveness. Assessment criterion and expected outcomes were explicitly and transparently communicated beforehand and frequently reviewed. The groups which met the outcomes at interim submissions were promptly praised to create a sense of challenge and motivation. To ensure equal contribution of group members, the group mark (80% of the final mark) was awarded to each member and adjusted for individual contributions via a peer assessment (20%). Ground rules were established to unleash creativity and to facilitate an enjoyable learning experience. Written feedback was obtained from students at the end of the session via a questionnaire.

Ninety nine % of 104 students scored above 70 marks and 90% of students commented very positively on the group activity as an effective, enjoyable learning experience which should be continued in future academic years.

A remarkable improvement in the quality of group work beyond expectations was observed.

Anishka\_h@yahoo.com

#### P 4 A

Peer Observation and Student Feedback as Effective Tools for Improving Quality Learning in Higher Education Shamuganathan S, Department of Bio-Science, Faculty of Applied Science, Vavuniya Campus, University of Jaffna

A review by Peiries (2007) proclaims that most of departments in Sri Lankan universities are still very weak in two aspects — a. peer observation and b. student feedback.

This paper focuses on evaluating peer observation and continuous student feedback as measures for adapting new teaching strategies in the form of a case study in the Faculty of Applied Science (FAS), University of Jaffna in Aug 2010. Two different styles of teaching procedures ('with break' and 'without break' during the lecture session) were tested on a group of students (n=12) from the FAS. Performances of the teacher and students during both pre and post testing were collated via a 'composite quality monitoring tool' consisting of peer observations and student feedback. For peer observation, the 'peer' was assigned to evaluate various teaching qualities of the teacher. Student feedback was obtained and evaluated against their performances observed in two mini exams conducted at the end of both pre and post testing lectures. Student's (paired) t-test was performed for the quantified results of matched samples (obtained from both peer observation and student feedback) at  $\alpha = 0.05$  in df 10.

A significant difference between matched data sets was found and it explains that the break given during a continuous lecture has posed a significant difference in the teaching (P-Value = 0.030) and learning qualities (P-Value = 0.009) of both the teacher and the student respectively – this has been well documented by the peer observations and student feedback.

Thus, peer observation and student feedback contribute as effective quality assurance tools in enhancing the teaching and learning qualities of teacher and the student in higher education. As a 'carry on' function of the methods tried, a questionnaire survey was conducted among the academics of the FAS to evaluate generic opinions. Accordingly almost 95% of the academics of the FAS prefer the peer observation and student feedback although 23% of the academics (mostly junior staff who may not have had much exposure to teaching) had never taken student feedback. It was concluded, that the incorporation of peer observation and student feedback as tools to evaluate positive improvements in the delivery of lectures as part of the staff development programme can enhance the quality of teaching/learning processes. s sukanyah@yahoo.com

#### P 5 A

#### Identifying Student Positions in "Perry Model" in a Sri Lankan Medical School

Abeyrathna B, Department of Psychiatry, Faculty of Medical & Allied Sciences, Saliyapura, Sri Lanka

Perry model of intellectual development is a hierarchical model developed to describe students' gradual 'maturation' in the learning process. It claims that adult students pass through recognizable and predictable stages of epistemological growth. Over the years Perry model has become a guideline in curriculum development/mentoring and assessing curricula. Academics have tried to structure their courses in a way which help students to reach towards more complex forms of thinking.

Assessing the students' positions in the Perry model was done using a sample of 18 randomly selected final year medical students at Rajarata University. The aim was to get an idea about the curriculum and teaching practices at the Rajarata Faculty of Medicine.

Several instruments are available to measure Perry stages. Some are subject-specific. Some are expensive hindering their use in a continuous manner. Furthermore, a majority of Sri Lankan students learn in their mother tongues during school years & are not very fluent in English. Therefore developing a freely available instrument in Sinhalese/Tamil was necessary.

9 statements were constructed each of which represented one of the 9 stages (positions) in the Perry model. The statements were arranged in a random order and students were asked to select the best statement, according to their opinion.

The number of students in each position in the model was as follows: position 01, 02 and 04(no students), positions 03, 05,06,07,08 and 09(3 students each) the average position of the sample was 6.9.

A majority of the sample (12 students -66.7%) was in a position above 05 .i.e. commitment in relativism developed.

The research instrument needs to be further improved including more than one statement representing each stage (position) in the model and also the number of students to whom this instrument is administered should be increased.

#### P 6 A

### Student Perception on the Use of Case Studies in Teaching and Learning in Applied Sciences

Priyadarshani W P E \*, Ekanayake E M P, Information Communication Technology Centre, Wayamba University of Sri Lanka, Kuliyapitiya.

The need to convert conventional teaching practices into modern methods is crucial. The effects of using case studies in teaching and improving students' soft skills were the main focus of this study. The inactive participation of students in more theoretical lectures conducted in afternoons was another concern.

The System Analysis & Design Module consists of 40 lectures plus 20 hours of laboratory work. After one lecture hour, each group of students was assigned a case study. They would discuss the problem and analyze the given part with the assistance of the lecturer where necessary. Then each group would explain its work and the other groups would ask questions.

Each group was required to submit a project report based on a real world problem and each student had to make an oral presentation on his/her contribution.

A questionnaire was given to all the students and three peer lecturers evaluated their presentations.

According to student feedback, 97% agreed that such case studies improved their soft skills and 94% identified case studies as an effective learning method. All the students stated that this approach provided a pleasant learning environment. The best out of four group projects was even put into practice at the faculty office in handling examination admissions.

The active participation, team work ability and high percentage of attendance were observed in all students throughout the semester.

The students were more confident to express their ideas during the presentations, thus improving their communication and presentation skills. With the positive outcomes, this method was identified to be effective at the Faculty of Applied Sciences to achieve their learning objectives. However, one limitation was the time allowed for group discussions.

epriyadarshani@yahoo.com

#### P 7 A

### Virtual Timer to Notify the Teacher the Attention Span of Students

Sivakumar T\*

Department of Transport and Logistics Management, Faculty of Engineering, University of Moratuwa

In spite of the fact that students' attention span is limited to 20 minutes on average (Gibbs and Habeshaw, 1989), the current generation seems to have a very shorter attention span. In the UK, the attention span has come down to 10 minutes (BBC report, January 2010). This depicts today's students do not get much out of long lectures, no matter how well they are constructed (Jerry, 2008).

The researcher intends to study if prominence is given by teachers to the attention span of students in the classroom which will ultimately lead to quality learning. Data was collected from a group of lecturers (n=42) who participated in an email questionnaire survey to identify how attention span limitation is handled by lecturers. It is found that 61% of them are aware of this limitation and 53% of them tried some ways to handle this problem. Interestingly, about 60% of those who tried often forgot the time span and continued to offer longer lectures unintentionally. It was also noted that, among the later group, all (100%) positively responded on the need for a tool to notify the time spent at a lecture.

Since many of the lecturers, these days, use the aid of PowerPoint for presentations, the researcher has developed a virtual timer which will be triggered automatically when a PowerPoint slideshow is started. An intended notification in the form of a message at the bottom-right corner of the slideshow along with beep sound will be provided at every pre-set time (i.e. 15 min) to notify the teacher.

The students were also requested use it to time their presentation rehearsals and 30% improvement on presentation assessment on the rubric of 'timing' has been observed. In future, this application could be made freely available via a website to all lecturers.

tsivakumar@uom.lk

#### P 8 A

### Stresses among Applied Science Students of Vavuniya Campus and Their Effect on Academic Performance.

Nimalan J, Dept of Bio Science, Faculty of Applied Science, Vavuniya Campus of the University of Jaffna.

Stress among students is a major challenge to their health and academic performance and hinders students in their learning process. This study focuses on identifying the major stresses among the applied science students of Vavuniya Campus and to measure their effect on academic performance.

The first questionnaire survey was conducted among 48 students from both Biological and Physical Science Departments in the first, second and third years to identify major stresses and the second questionnaire survey was conducted among 61 students of both departments to measure the stress level of each identified major stress. In the second questionnaire, each major stress was divided

into sub ten factors which were valued by the students from no stress level to extreme stress level with 0 to 5 points scale. The effect of major stresses on academic performance was evaluated based on correlations with the GPA of the student and stress level.

The results show that time management, academic work and university environment are major stresses. Students were moderately stressed by academic work and time management and they feel that the university environment is very stressful. The mean stress values were 25, 26 and 31 for academic work, time management and environment respectively. Time management(r=-0.205) and environment(r=-0.155) has negative correlations with GPA, while academic stress (r=0.14) has a positive effect on GPA for the stress value ranges from 10 to 20 and it shows the negative correlation(r= -0.32) for GPA ranges from 10 to 50 value. This reveals the fact that students should have right level of stress (eustress) for better academic performance and above this level, it (distress) has negative influence on performance. According to the result, the identified major stresses have negative influences on the academic performance of the students. Therefore it is necessary to reduce the stresses via remedial measures including better academic guidance and introducing time and stress management practices as lessons. Having temporary buildings in a confined space is one of the reasons for students to feel that the university environment is very stressful. Therefore, a well structured university environment can also reduce environmental stress.

#### P 9 A

The Role of Frameworks in Facilitating Quality Learning in Higher Education Setting: with Special Reference to CTHE Weerakoon S, Staff Development Centre, University of Colombo

This case-study looked at the role of frameworks in getting lecturers to implement quality learning for higher education (HE) purposes. The use of frameworks in education can link to constructivist viewpoint on learning and teaching as those facilitate *assimilation* and *accommodation* (*sensu* Piaget). The focus of the study was on three specific frameworks (namely Contract Learning, Bloom's and SOLO Taxonomies) used in Certificate in Teaching in Higher Education (CTHE) to identify how those frameworks enhanced quality of learning in HE setting.

Enhancing learning has been acknowledged as a purpose of HE (e.g. Schwartz, 2003; Stockton 2004; Kingston 2007; Gibbs 2010). In enhancing learning in HE settings, Active Learning plays an important role as shown by the Principles of Adult Learning (e.g. Goodlad; Knowles 1973). Document Analysis and interviews were used to collect data (both qualitative and quantitative) from a sample of CTHE participant-lecturers (n=80) to identify the impact of the selected frameworks on implementing quality learning in HE. Out of various teaching learning improvements those lecturers undertook during the CTHE course, the focus of the study was on the improvements designed as their first Contract Learning. It was found that 85% of such improvements were on generating Active Learning to

improve quality of learning in HE. Only 5% were not intended to generate Active Learning and the remaining 10% were rejected on the basis that they do not meet the criteria of the study. The findings show the importance of providing frameworks to facilitate quality learning.

Studying the impact of other frameworks used in CTHE and in other courses is suggested as useful. The presentation will elaborate on how *assimilation* and *accommodation* was made possible through those frameworks and the audience will be facilitated to identify how they can use frameworks in the HE settings to generate quality learning.

#### P 10 A

### Balancing Trust and Risk by Introducing a Student Honor Code

Weerawarana S M\*, CSE Department, Faculty of Engineering, University Of Moratuwa, Sri Lanka.

Sri Lankan universities have institutionalized measures to uphold academic integrity, such as strictly invigilated exams and stringent monitoring to detect plagiarism. Furthermore, many universities have practices such as 'sign-in sheets to record attendance at lectures' and 'discounting marks for late submission of assignments'.

Such practices are generally associated with a 'Theory X' learning environment which is considered to be counterproductive towards enabling quality learning. In contrast, a 'Theory Y' learning environment is focused on creating a trusting and supportive learning climate.

In Sri Lankan universities, the creation of a trusting 'Theory Y' environment could be viewed as a risky proposition. Thus the challenge is to strike the right balance between trust and risk when creating a 'Theory Y' climate that would be conducive towards quality learning.

In this action research study, a 'Student Honor Code' was introduced as a mechanism to balance the trust and risk, in a semester-long third-year course for 100 students. The objectives were, to create a trusting learning environment and to facilitate academic integrity. The intended outcome was to enable quality learning. The content of the Honor Code, and the manner in which it was introduced to the students will be discussed, since these two aspects are considered to be significant in ensuring success.

An end-of-semester questionnaire to solicit student opinions on the Honor Code and its impact on their individual learning experiences revealed many interesting insights, including the respondents' overwhelming agreement (82%) that the honor code had a positive impact on how they learned. Based on this perceived success, the implementation of the 'Student Honor Code' was expanded and extended to the entire incoming batch of CSE students — an exercise which will be closely monitored over the next few years.

shahani.w@gmail.com

#### **HALL B**

#### P 1 B

Changing Student Perspectives on the Educational Environment, Faculty of Medicine, University of Colombo

de Abrew A\*, Corea E, Karunathilake I, Keerithinanda D, Wijeratne S, Samarakoon U, Rodrigo C

Faculty of Medicine, University of Colombo

The educational environment is an essential component of the teaching/learning experience and an important determinant of student behavior, achievement and satisfaction. The 50 item Dundee Ready Education Environment Measure (DREEM) is a measure of the educational environment that has been validated and found reliable in a range of cultural contexts. A recent study of medical students in the Faculty of Medicine, Colombo, revealed that although scores for the educational environment range from acceptable to good during the first few years of study, these scores drop drastically during the final year. The present study longitudinally followed-up the batches to identify whether the drop was due to unique characteristics of the relevant batch of students or due to the adverse nature of the environment itself.

The DREEM questionnaire was administered to 300 randomly selected students belonging to the 3 main phases of the course. Total DREEM scores and those of the five subscales were compared to previous findings.

Response rate was 87%(n=261). Overall DREEM score of pooled data was 112.8/200, interpreted as "more positive than negative" according to the DREEM rating scale. This contrasted with a previous score of 123.5/200, which was significant(p<0.000). Analysis of mean DREEM scores for each phase of the curriculum showed high scores during the Basic Sciences Phase, lower scores during Applied Sciences Phase and lowest scores in the final Phase. This contrasted significantly(p<0.000) with previous findings where the Applied Sciences Phase obtained the highest scores.

Longitudinal follow-up of 4 batches of students revealed a steady deterioration of scores for the Educational Environment, with a shift in the previously reported pattern. This may reflect recent changes implemented in the curriculum, where content has shifted away from the first two years, to the next phase. Further analysis would enable identification of specific areas for improvement.

Email of corresponding author: ashwinie@yahoo.com

#### P 2 B

### Information Technology Supported Approach to Large Class Assessment for Active Learning

Fernando W. M. N.\*, Department of Information Technology, Faculty of Management Studies and Commerce, University of Sri Jayewardenepura, Nugegoda Good assessment improves students learning and helps the development of life-long learning skills. Assessment either be formative or summative need to promote better learning and appropriately used to improve the quality of learning. Even though the traditional end of term

examination can be used to check the passive and active levels of learning, it is more productive for the student to learn out of feedback. When it comes to assessment of large classes, there is a tendency to assess the students only through end of course examination due to the difficulty of handling the assessment and coordinating the evaluation staff.

This paper discusses an attempt of assessing an extremely large group of students in a group project assignment with the support of information technology. An assignment was given to around thousand two hundred third year students. These students were divided between four staff members and the students were asked to form groups of ten members. With the help of Learning Management System (LMS), all the students were informed about the assignment and given a template to analyse information they collected. Subject coordinator communicated common notices and required deliverables through LMS and other staff members guided groups accordingly. The tools of evaluation were group presentation and report which were marked using a common marking scheme. The evaluators entered marks directly to the data file for each individual separately. The students were given feedback at the end of the presentation and continuous assessment marks were given before the final examination. The coordination of the assignment was made easy with the help of LMS. The evaluators found it easy to maintain the standard and the quality of assignment evaluation due to the templates used. On the other hand, student feedback reveled how they have enjoyed the activity and benefited through proper instructions.

mahesh@sjp.ac.lk

#### P 3 B

Relationship between A/L Results and Study Materials Used and Examination Results of Medical Students of Rajarata University.

Janaka Pushpakumara PHG $^1$ , Marystella M $^3$ , Amarasinghe  $CP^{*\,1}$ , Amarakoon  $GGGT^2$ , Chandrakumara WAJC $^2$ 

<sup>1</sup> Department of Psychiatry, <sup>2</sup> Department of Paediatrics, Faculty of Medicine & Allied Sciences, Rajarata University of Sri Lanka, <sup>3</sup>Postgraduate Institute of Science, University of Peradeniya.

Z score of the students at the entrance and the study materials used to upgrade the knowledge might have an effect on student performance.

This study assesses the correlation between the GCE(A/L) results and 2<sup>nd</sup> and 3<sup>rd</sup> MBBS part 1 examination results. It also examines the correlation between examination results and the study materials used by the medical students of Rajarata University of Sri Lanka (RUSL).

Final year medical students (n=161) were included in the study and information about their study materials and the frequency of their use were collected using a self-administered questionnaire. GCE (A/L) z-scores, attempt,  $2^{\rm nd}$  MBBS and  $3^{\rm rd}$  MBBS part 1 examination results were obtained from RUSL.

Data were analyzed using R software and Pearson correlation was calculated.

24 % of them entered the university in the first attempt and 45.6% in the second attempt. For the  $2^{nd}$  MBBS 70 (43%) had classes. There is no correlation between A/L attempt and  $2^{nd}$  MBBS results (P = 0.657). In the  $3^{rd}$  MBBS 23 (14%) had classes and again there is no correlation between A/L attempt and  $3^{rd}$  MBBS results (P = 0.23). Their mean z score at A/L was 1.81. There was weak positive correlation between Z-score and  $2^{nd}$  &  $3^{rd}$  MBBS results (r = 0.207, P = 0.016 & r = 0.282 & P = 0.001).

Sixty-five (40%) used textbooks daily and 68% used more than 2 days/week. 44 (27%) used lecture notes daily. Only 15 (0.09%) used journals at least once a month. 42 (26%) used web based materials more than once a week. There is no correlation between A/L z-score, 2<sup>nd</sup> or 3<sup>rd</sup> MBBS results and the study materials they used in the university. There are weak positive correlations between A/L z-scores and 2<sup>nd</sup> & 3<sup>rd</sup> MBBS results. There is no correlation between study materials used and exam results. Further exploration with a larger sample is indicated.

janakatechno@yahoo.com

#### P 4 B

## Effects of A/L Z-Score and Study Habits on the Academic Performance of BSc. Agriculture Undergraduates of Ruhuna University

Sandika A L<sup>1</sup>, Atapattu N.S.B.M <sup>2\*</sup>, Weerasinghe W.M.C.B <sup>2</sup>
<sup>1</sup>Dept. of Economics, <sup>2</sup> Dept. of Animal Science, Faculty of Agriculture, University of Ruhuna, Mapalana, Kamburupitiya, Sri Lanka.

Apart from the academic merits at the university entrance, a range of other factors including study habits could affect undergraduates' academic performance. The objective of this study was to determine the effects of A/L Z score and study habits on the academic performance of BSc Agriculture undergraduates of Faculty of Agriculture, University of Ruhuna (FAUR). The sample consisted of all the semester level first class holders (FCH) (n=28), 44 randomly selected failures (one or few courses) and 42 other class holders. Information such as students' Z score, English proficiency, study habits, library and computer usage and lecture attendance were collected by employing pre-tested questionnaires. Pearson' correlation test and factor analysis were used to analyze the data.

Number of A/L attempts for university entrance and the Z score had no significant effect on undergraduate performance. Books, journals and teachers were the main information sources of FCH whereas failures relied on senior students, radio and television. Usage of library and computer unit had significant positive correlation with the GPA. Library and the hostels were the most preferred study places of FCH and failures, respectively. Lecture attendance (95 %) and short note preparation of FCH (71%) were higher than those of failures (74 % and 41%, respectively). 71 % of FCH reviewed lecture notes regularly whereas the majority of (81%) repeaters reviewed lecture notes only during the examination period. The majority (75%) of FCH preferred to study alone while the repeaters (59%) preferred to study as groups. English proficiency of the FCH was significantly better than that of repeaters.

Many repeaters (56%) and some FCH (14%) also had translated lecture notes into Sinhala.

Results show that it was not the academic merit at the university entrance but the study habits and English proficiency that determine the academic performance of BSc Agriculture undergraduates of the FAUR.

#### P 5 B

#### An Analysis of Student Learning Style Preferences for Promoting Student Engagement

Subajana J\*, Piriyanthy M

Vavuniya Campus of the University of Jaffna

Many students become demoralized if the educators fail to identify student learning style preferences in teaching and learning. Therefore, adopting the appropriate and effective methodologies and learning styles for undergraduates lead to academic achievement. For successful learning, engaging students in active learning is important. This study examines (1) to which extent student engagement takes place in learning (2) Whether the relationships between student learning style preference and student engagement are interdependent. The study examines why students do not engage effectively and meaningfully in the academic activities though teachers are doing their best. A model was constructed, considering learning style preferences as an independent variable and student engagement as a dependent variable. To facilitate this study, experimental sessions of teaching and learning practiced throughout the semester featuring a wide range of innovative, student centred activities for enhancing students' active engagement in learning were used. For this study questionnaires were given to the 68 under graduates from the second year of the Faculty of Business Studies. Convenient sampling method was used for this purpose. The questionnaire was designed based on students' different learning style preferences considering three dimensions as whole class, individual and small group activities. Data were collected and analyzed using SPSS 16.0. The findings reveal that effective and active student engagement takes place when interactive and integrated modern methodologies such as collaborative learning, using authentic materials for perusal and discussion, pair work, peer tutoring, small group tasks, technology based learning such as audio video aids, multimedia, OHP etc.. are adopted as opposed to traditional teaching. The absence of suitable and apt student oriented learning activities leads to student disengagement.

subi\_08@hotmail.com

#### P 6 B

#### Impact of Reinforcing Receptive Skills on Quality Language Learning for Higher Education

D.N. Aloysius, Faculty of Social Sciences and Humanities, Rajarata University of Sri Lanka, Mihintale

At present, most graduates seem to be very poor in their language proficiency. The undergraduates study three main languages such as Sinhala, Tamil and English as their first or second language. But, even after completing their degrees, they were found to be weak in grammar, pronunciation, vocabulary, spelling, punctuation and pragmatics of the language they had studied. The objective of this study is to identify the reasons for their failure to communicate effectively. Research methodology applied in the present study is empirical. Interviews, testing and observation were the tools used for collecting primary data. The students were asked to collect information regarding their lessons from the library and websites. Practical activities were thus increased up to 50% whereas lecture and theory hours were reduced to 50%. Later, two samples, 20 in each, were selected as the practical activity oriented group and those who did not engage in practical activities during the final semester and their language proficiency was tested. Later, it was found that the practical activity oriented group was more competent in language skills than the other. The practical activity oriented group scored 67% for productive skills (oral and written tests) whereas the non practical activity oriented group scored 48%. This indicates the importance of getting students involved in more receptive skills (listening and reading). It was also found that they had improved their grasping power to collect information from the above sources so that they were able to write their tutorials, assignments and project reports accurately. Hence, this pedagogical approach seems to have improved students' competency in the language they use. It is, therefore, suggested to involve the students more in receptive skills in order to ensure higher language proficiency.

#### P 7 R

### Analysis of Factors Influencing Organizational Conflict: Case Study- Wayamba University of Sri Lanka

Henegama H P \*, Ranawaka K

Wayamba University of Sri Lanka\*, National Institute of Business Management, Sri Lanka

Organizational conflict is a common phenomenon under the context of organizational behavior. Conflict is a process that begins when one party perceives that another party has negatively affected for something that first party cares about (Robbins, 2003). The group conflicts affect the performance of the groups of employees.

This is a case study, conducted under the objective of finding and analyzing the factors influencing the organizational conflicts in Wayamba University. The secondary data and literature were used for constructing the project model and the hypothesis suggested the factors such as the organizational structure, leadership, individual differences, professional qualifications, resource availability, policies, organizational culture and unresolved

conflicts of the organization can cause organizational conflicts.

The questionnaire survey and interview discussions were conducted to identify the factors causing organizational conflicts in the university. The sample (46 respondents) was selected using stratified sampling including all staff categories. The collected data were analyzed by SPSS and MS Excel software. The descriptive statistics were expressed with the percentages of the responses regarding each factor and the average level was 50% of responses.

Findings revealed that factors of chain of command, authority, span of control, unity of command, interpersonal differences, policies, resource availability, professional differences and unresolved conflicts have higher effects and factors of centralization, job related attitudes, group behavior, organizational culture and leadership style have less effect in creating the organizational conflicts in the university. The relatively small homogeneous sample and restrictions in collecting data were considered limitations of the research.

The study recommends the policy makers of Wayamba University to implement firm policies regarding conflict management while empowering employees, developing the organizational culture, and enhancing constructive conflicts. It is evident a restructuring process is necessary to enhance employee performance, which will improve the education background in the university.

prasangikah@yahoo.com

#### P 8 B

### Team Based Teaching and it Usefulness in Improving Undergraduates' Employability Skills

Arulrajah A A , Department of Management, Eastern University, Sri Lanka

The objective of this study is to examine the productivity of team based teaching, which is relatively a new method used in certain universities.

A class consisting of 69 students (Management 55 and Commerce 14) was selected. The teacher formed 12 teams (11 teams of six members and one team of three members only) and specified their role clearly before implementing some learning tasks with the intention of developing certain specific skills of the students during a semester.

Depending on the team size, one or two students each were responsible for leadership (Leader-I and Leader-II); writing and listening task; and communication and presentation in each team.

After implementing several learning tasks during the semester systematically, opinions of the teams were collected and analyzed separately regarding two aspects: (1) the extent to which this approach facilitated subject learning and (2) the possible skills development through this approach by asking two open ended questions on the said two aspects from all teams.

Findings of this study revealed that all teams strongly agreed that this method of teaching is good for learning and motivate them to actively participate in the classroom learning and they also identified nine types of skills such as

leadership skills, communication skills, writing skills, listening skills, presentation skills, team/group working skills, interpersonal skills, time management and problem solving.

The findings reflect to what extent the team based teaching can influence students' subject learning as well as required types of skills development. Findings of this study may be useful to improve the teaching, learning and assessment activities of teachers in the universities.

#### P 9 B

### Effect of Medical Undergraduate Programme on Students' Learning Approaches and Patterns

Janaka Pushpakumara PHG <sup>1</sup>, Marystella M <sup>3</sup>, Amarakoon GGGT\*<sup>2</sup>, Amarasinghe CP <sup>1</sup>, Chandrakumara WAJC <sup>2</sup>

<sup>1</sup> Department of Psychiatry, <sup>2</sup> Department of Paediatrics, Faculty of Medicine & Allied Sciences, Rajarata University of Sri Lanka, <sup>3</sup>Postgraduate Institute of Science, University of Peradeniya.

Student approaches for learning (SAL) and accuracy and reliability of the study materials determine the outcome of education.

The objectives were to find out SAL in the Medical Undergraduate Programme (MUP) and to determine the effect of the study materials used on the MUP at Rajarata University of Sri Lanka (RUSL).

First year (n=127) and final year (n=161) medical students studying at RUSL were engaged in the study. Information about SAL was collected using self-administered Biggs' Revised Study Process Questionnaire and study materials they used in the University (textbooks, lecture notes, journals and web) and frequency were collected using selfadministered questionnaire. Data was analyzed using R software; Pearson correlation and Chi-Sq were calculated. The study showed that mean score for deep learning approach is higher among first year students (34.843, SD-5.527) when compared with final year students (28.591, SD-6.330). However, the difference is statistically not significant (Chi-Sq = 147.732, DF = 126, P=0.09). Mean score for surface learning approach is higher among final year students (25.488, SD-6.266) when compared with first year students (23.386, SD-5.260) and the difference is statistically significant (Chi-Sq = 169.901, DF = 126, P=0.006).

Among the first year students, 96% read at least one of the above materials daily but only 75% of final year students read daily. The majority of final years (65/40%) referred textbooks daily, but most of the first years (100/79%) referred lecture notes daily. However a higher proportion (59%) of first years daily referred textbooks when compared to final years. When compared to final years a higher proportion of fist years used journals. 59% of first year students and 0.9% of final year students read journals at least once a month.

Final year students mainly use surface learning approach compared to the first year students. Further studies on this direction are important to implement a programme to improve SAL.

janakatechno@yahoo.com

#### P 10 B

## Enhancing Quality Learning of Undergraduates in the Faculty of Science by Incorporating an Information Skills Development Programme into the Curricula

Somaratna S D\*, Senior Assistant Librarian, The Library, Faculty of Science, University of Colombo

Information literacy is important to higher education, as it is a part of, and contributor to, life-long learning. While it has become evident that the majority of new entrants are exposed to varying degrees of information prior to university entrance, it was further noted that the majority of them do not exhibit the skills needed in using information for their academic purposes. Hence, in order to empower the undergraduates with information literacy skills the library of the University of Colombo introduced a credit based course to students of the Faculty of Science in March 2010.

This research was conducted to identify the effectiveness of the information literacy skills programme in enhancing quality learning of the undergraduates. The course covered basic information literacy skills under fifteen topics and the course was evaluated by students and the faculty who participated in the course.

Initially fifty undergraduates were chosen for the course, forty four students successfully completed it. Learning aspects, course delivery methods, assessment methods and the overall quality of the course were evaluated by analyzing questionnaires filled by the course participants. All students (100%) believed that this course helped them to identify new learning methods such as mind mapping, brain storming techniques, note making methods, information searching, evaluating, organizing acknowledging sources and they also believed that their awareness of the library resources and services have increased dramatically. Ninety three percent of them declared that they know how to use the library effectively and 68.8% students strongly agreed that what they learned from this programme could be effectively applied to other subject areas. All students either strongly believed (62.5%) or believed (37.5%) that this programme will help them to upgrade the quality of their academic work during the next 2-3 academic years in the university and the feedback given by the faculty suggested that the programme should be made compulsory for all undergraduates in the faculty and to develop an advanced information literacy course for special degree students. sajees@lib.cmb.ac.lk