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Book of Abstracts of International Conference on Future of Education 2018 (Edu '18)

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**MESSAGE FROM THE HOSTING PARTNER Edu' 18: UNIVERSITY SAINS
MALAYSIA**

Society is changing more rapidly than ever before, generating unprecedented opportunities and challenges in its wake. Anticipating and addressing the consequences of the Fourth Industrial Revolution, this development has and will place enormous pressure on educational institutions, students, teachers and researchers.

In this situation, the way knowledge is obtained, constructed and communicated have completely transformed and altered. When comes to education, innovation is of vital importance in transforming and reconstructing teaching and learning environments and the roles of the educational system enhance many fold. Education policy documents are addressing the future of education by considering fundamental unpredictability of the future and trying to influence that future. To address and discuss these key education challenges of the future, School of Educational Studies, Universiti Sains Malaysia as the conference's hosting partner hope that educationists, academicians, teachers, researchers, administrators, policy makers around the world would be able to participate in and contribute at the International Conference on Future of Education 2018 in Colombo, Sri Lanka on 26-27 June 2018.

Prof. Dr. Hairul Nizam Ismail,
Dean,
School of Educational Studies,
Universiti Sains Malaysia,
Malaysia.

MESSAGE FROM THE CONFERENCE CHAIR Edu' 18

Education is at a time of genuine change. More and more people are gaining access, including via new information technologies. New pedagogical methods are gaining ground and re-shaping educational institutions and the teaching profession. Yet, at the same time, inequality remains a major problem. Girls, rural dwellers, the urban poor, and minorities often still face a difficult path into and through education, with lower rates of participation and uncertain outcomes.

At the same time, the quest for global talent is increasingly global. Both educational institutions and employers are casting their nets more widely, to catch talented students and graduates from around the world. This is one index of increasing competitiveness, both within systems and internationally. Many universities are no longer just content to be prominent nationally, but are positioning themselves on various league tables and international ranking schemes. Schools, too, are in some cases marketing themselves internationally.

What do such transitions mean for the world of education? How are teachers, academics, institutions and systems responding to these changes, and with what effect? Who is able to take advantage of this changing world of education and who is being left behind? The International Conference on Future of Education 2018 offers the opportunity for researchers, policy makers and practitioners from around the world, to debate and discuss these changes, and to propose solutions.

Prof. Anthony Welch,
Statement from the Chair,
School of Education & Social Work,
University of Sydney,
Australia.

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KEYNOTE SPEECHES

**IMAGINATION AND ASPIRATION OF “EDUCATION FOR ALL” AS A PRESENT
AND FUTURE HUMAN ENDEAVOUR: REACHING THE UNREACHABLE**

Prof. Samson Madera Nashon

The University of British Columbia, Canada

ABSTRACT

The presentation will be guided by UN’s aspirations in *Education for All*, focusing on the inspiring “Sustainable Development Goal”(SDG) #4: “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.” As well, it will draw on past aspirations by select world leaders realized over time. These include former US President J. F. Kennedy’s May 18, 1963 address to graduates at Vanderbilt University about the “Educated Citizen”. Further, the presentation will be framed in relation to three core challenges raised by Kenya’s first President, Jomo Kenyatta, in his 1963 inaugural speech, which he promised to battle. These challenges were identified as Ignorance, Poverty, and Disease. It should be everyone’s goal to eradicate these. In this presentation, I argue that the only vehicle or mechanism for achieving goal #4 is a dynamic, transforming, vigilant education process that every nation or community has to endeavour to create. Overall the presentation will be enriched by a focus on refugee populations that require protection of their right to quality education. Hence, there is the need to be creative on how education can reach these populations. Building on the present, in the future we will have to transform the ways in which education can reach the unreachable with technology as the vehicle. Thus, the future depends on the type of “educated citizen” described by President Kennedy and education is the only way to eradicate future Ignorance, Poverty and Disease, as President Kenyatta explained. The education imagined here is what Mahatma Gandhi implied in his 1921 article in *Young India*: education aims to develop self-reliant and self-dependant citizens and is supportive of family, community, nation and the transformation of undesirable human conditions.

**“ ENGLISH FOR ALL” IS IT A MYTH? WHAT THE NATIONAL ASSESSMENTS
REVEAL**

Prof. Marie Perera

University of Colombo, Sri Lanka

ABSTRACT

English was introduced as the second language to the Sri Lankan schools in the 1950s. The objective of introducing English as a second language was to make it available for all. National assessments of achievement of learning outcomes are conducted in Sri Lanka annually at the completion of grade 8 and 4. This paper is based on the findings of the national assessments conducted in 2015 and 2016. The national level performance of grade 4 students indicates a bimodal curve with both high achievers as well as low achievers with the latter group slightly more than the former. On the other hand, the grade 8 students' performance indicates a positively skewed curve with more low achievers than high achievers. Similar pattern is observed in the performance at public examinations. Therefore. It appears that the objective of “English for all” has not been achieved. If this objective is to be achieved the expectation is that innovative teaching methodologies must be introduced. Yet, the question is whether the innovations used in other parts of the world especially in the Western world can be success fully used in Sri Lanka. This paper examines a few ‘innovations’ used in a small disadvantaged school successfully by dedicated teacher.

Keywords: National assessments, English for all, Innovative methodologies



ORAL PRESENTATIONS

A1

[01]

**INTEGRATING TPCK PROCESS TO DEVELOP ENGLISH LEARNING
ACHIEVEMENT OF UNDERGRADUATE STUDENTS**

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ABSTRACT

The study aimed to compare students' English learning achievement between employing the Technological Pedagogical Content Knowledge Process (TPCK Process) and a conventional teaching method as well as to compare the English learning achievement of students before and after using the TPCK Process. The samples used in this research were 80 undergraduate students selected by the random sampling method. The students were divided into two groups; 40 students in the controlled group treated by a conventional teaching method and the other 40 students in the experimental group treated by the TPCK Process. The research instruments were twelve TPCK Process lesson plans, twelve conventional method lesson plans, and fifty items of English achievement test with difficulty index between 0.23-0.78, index of discrimination between 0.28-0.83, and its internal reliability at 0.86. Mean, percentage, standard deviation and t-test were used to analyze the collected data. The results revealed that the English learning achievement of students treated by TPCK Process was higher than those treated by the conventional teaching method at the significant level of $p < .05$, and students' English learning achievement was higher than after using TPCK Process at the significant level of $p < .05$.

Keywords: TPCK Process, conventional teaching method, English learning achievement

A2

[02]

**ASSESSMENT PRACTICES OF SINHALA LANGUAGE AND LITERATURE IN
SRI LANKA: ARE THE ASSESSMENTS AUTHENTIC?**

C. Chandrakumara

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ABSTRACT

Authentic assessment is the main approach for assessing 21st century competencies. Although teaching-learning is widely researched in Sri Lanka the need for research on assessment is high. Sinhala is the mother language of the majority of the Sri Lankans and one of the two national languages. Sinhala Language and Literature is a core subject of the secondary school curriculum. Study objectives focused on identifying the assessment practices in relation to the Sinhala Language and Literature subject, the perceptions and challenges of teachers and students on assessments. The study used a quantitative dominant mixed method. The stratified random sample comprised 450 grade 10 students and 54 teachers in Colombo district. Stratifications were to consider different types of schools and gender balance. Questionnaires and interviews were data collection methods. Study revealed that teachers planned assessments considering subject objectives. They highlighted improving language skills and critical appreciation of literature as assessment objectives for Sinhala Language and Literature curriculum. Conventional written assessments were predominantly used and intended to familiarize students to face written examinations during national examinations. 95.8% of students liked assessments and considered preparatory for exams. No significant differences were found across schools and student gender. 80% preferred group assessments. Teachers indicated lack of preparation among students for assessments while the students' felt inadequacy of time for assessments as challenges. In conclusion, although conventional assessments are widely practiced, the teachers were found to be somewhat inclined towards Authentic Assessments. To widen the practice of Authentic Assessment teachers need training in designing and using authentic assessments.

Keywords: Sri Lanka, authentic assessment, language

A3

[03]

**EFFECTS OF E-LEARNING LESSON IN BASIC TRANSLATION COURSE FOR
THE ENGLISH PRE-SERVICE TEACHERS**

K. Kittichartchaowalit

Faculty of Education, Surattani Rajabhat University, Thailand

ABSTRACT

The purposes of this research were to develop the e-Learning lesson, to compare students' translation learning ability before and after using the e-Learning lesson and to study the motivation of the English pre-service students in Basic Translation Course. The participants were 48 of English sophomore students, Faculty of Education, Surattani Rajabhat University in the second semester of the academic year 2017. The instruments employed in the experiment comprised of e-Learning lesson in Basic Translation course, the test of translation learning used as a pre-test and post-test and the satisfaction questionnaire. The data were statistically analyzed by percentage, mean, standard deviation and t-test for dependent. The research findings indicated that the efficiency the e-Learning lesson in Basic Translation was at 75.12/77.86. The students' achievement after learning by using the e-Learning lesson in Basic Translation course was significantly higher than before at the .05 level. The satisfaction of the students on the e-Learning lesson in Basic Translation course was at a high level.

Keywords: e-Learning, translation, English pre-service students

A4

[04]

**DEVELOPING SELF-REGULATED LEARNING SKILLS IN UNIVERSITY
STUDENTS STUDYING IN THE OPEN & DISTANCE LEARNING
ENVIRONMENT**

D.V.M. De Silva

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ABSTRACT

Open and Distance Learning (ODL) is an empowering mode of learning which applies to all segments in the society. University students studying in the ODL environment are dispersed and physically separated from the institution. Most probably students who have self-regulated learning (SRL) skills will be more successful in the ODL environment (Das, 2010). Therefore the researcher carried out an action research to investigate the strategies and tools that can be adopted in ODL environment in Sri Lanka to develop SRL skills in university students. Twenty four (24) B.Ed students studying in the Open University of Sri Lanka is the sample of the study. Zimmerman's self regulated cycle of learning model (2002) was used for the intervention. Motivated Strategies for Learning Questionnaire was administered to measure students' SRL skills. Observations, interviews and video recordings were used to collect other data in the first cycle. Statistical Package for the Social Sciences (SPSS) was used to analyze Quantitative data and Qualitative data were analyzed by using content analysis. Findings of the first cycle revealed that goal setting and planning, time management and organization of study environment, learning in learning groups, study and learning strategies, reflections and self evaluation strategies have been useful in developing SRL skills. SMART goals work sheets, Action plan, study time chart, checklists, rubrics for assignments and reflective notes can be implemented as tools to develop SRL skills. Based on the impact of the intervention it was identified that a second cycle of the action research should be conducted to further test the applicability of those strategies.

Keywords: Self regulated learning skills, Open and Distance learning

A5

[05]

**A STUDY OF TEACHING METHODS USED BY PRE-SERVICE ENGLISH
TEACHERS**

N. Nakchaya

Faculty of Education, Surattani Rajabhat University, Thailand

ABSTRACT

Pre-service teachers from English Department, Faculty of Education, Surattani Rajabhat University were prepared about various teaching approaches and methods for their teaching practicum. Each method was possibly used under various considerations and purposes. This research aimed to investigate the teaching methods used by pre-service teachers for their teaching practice and to study about the impacts on learners' learning using those selected methods. The findings revealed that three majors of teaching methods used by pre-service teachers were Grammar Translation Method, Audio Lingual Method, and Total Physical Response. Interestingly, Total Physical Response and Audio Lingual Method were mostly used by primary school level while Grammar Translation Method was mostly found in secondary school level. Supervising and coaching by supervisors play an important role for pre-service teachers. They should be closely supervised and trained to implement various teaching methods/approaches including teaching techniques for their teaching performance in order to maintain the positive impacts on their learners' learning. In addition, to study and get information about learners' learning preferences is necessary to understand in order to promote more effective learning.

Keywords: Teaching methods, learners' learning impacts, teaching practice, pre-service, English teacher

A6

[06]

**INTEGRATING TECHNOLOGY INTO UNDERGRADUATE CLASSROOM;
STUDENT-LED VIDEO PRODUCTION AS AN EFFECTIVE INSTRUCTIONAL
STRATEGY**

T.P. Rupasinghe and S. Wijesinghe

Faculty of Computing and Technology, University of Kelaniya, Sri Lanka

ABSTRACT

In today's world, successful integration of education theory and technology has led to new advents of teaching and learning which has enhanced the aptitudes and interests of learners. Current students, termed as "Twenty first century students" or "Digital natives" have grown up in a multi-media, multi-sensory simulated world and are highly competent in adopting to the rapid changes of technology. Hence, it is of enormous importance to utilize technology enabled pedagogical approaches to invoke students' interest and engagement transforming the traditional classrooms into digital classrooms. Utilizing digital videos in the teaching and learning have become an emerging instructional strategy in the past decade, mainly being used in the content delivery ranging from primary classrooms to university level in many subject areas. However, there is only a limited number of studies that have been conducted focusing on learning through student-produced digital videos. Current study focuses on investigating student-led video production as an effective instructional strategy in an active learning environment. Study was conducted as a part of an Engineering Technology degree program and students were asked to create videos (10-15 minutes) to educate their peers on given topics in the course content. Then they were given the opportunity to teach their peers using produced videos as an instructional strategy. Students' perception on the activity was evaluated using surveys and its' impact on the learning process was evaluated through an in-class quiz and was compared with previous quizzes. Majority of the students (> 90 %) had agreed that the activity helped them to understand subject matter better and improved their confidence, communication skills, team work skills and technical skills. Further, according to statistical testing it was proved that the average mark for the quiz after the activity was higher than previous quiz proving that the activity has a direct impact on students learning. In conclusion, it can be stated that student-led video production has a vast impact as an instructional strategy which enhances students' competence, skills as well as the subject knowledge.

Keywords: Student-led videos, instructional strategy, active learning

A7

[07]

**PEDAGOGY AND ITS LIFELONG LEARNING EFFECT ON TWO
PROFESSIONAL PUPIL'S ACHIEVEMENT USING ICT AS TEACHING TOOL:
TECHNIQUE OF TECHNOLOGY APPLIED ON RURAL STUDENT, IS A LIFE
CHANGING**

S. Namdeo

School of Education, Dr. Harisingh Gour Vishwavidyalaya, Sagar, India

ABSTRACT

“Learning every think that is good from others, but bring it in and in your own way absorb it, do not become others”-Swami Vivekananda.

By this message, I draw my attention towards the mankind and its way of life. The study investigated the effect of usage of Teaching Learning Material (TLM) on Nursing and Education stream of rural students. The study selected the samples from Sagar district of Madhya Pradesh-India and from two famous institutions. Education sample is taken from Central University and Nursing sample from Bhagyodaya Nursing College. Pedagogy aims to develop sense of ideas, so that students work both independently and collaboratively Life is ready to accept the changes and using ICT as teaching tool make the classes more interesting. But we find some major barriers and issues of today's education at private and government institutions of India who are facing problems in teaching and adapting to this new technology. The study is on Northern Middle state part of India and students play the participant role which includes; listening, writing, responding, questioning, work actively in group and critical assessment. The main objective behind this study is “To compare and identify the factors underlying perception towards INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) in new technique of teaching-learning method on Under Graduation students of RURAL BACKGROUND. The proposed study used two different types of tools; Diagnostic Tool as Pre Test and Endline Tool as Post Test for studying the effectiveness of New Technology: ICT as teaching tool. The work was conducted on Nursing students and Education students was administered for 3 months.

Keywords: technology, TLM, ICT, diagnostic tool

A8

[08]

**TOWARDS BLENDED LEARNING: LESSONS LEARNED THROUGH
TECHNOLOGICAL INTERVENTIONS IN TEACHER EDUCATION IN SRI
LANKA**

P.D.H.S. Amarasinghe¹ and M.V. Vithanapathirana²

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ABSTRACT

The Faculty of Education, University of Colombo is the pioneer of teacher education in Sri Lanka. The Faculty adopted 'face-to-face instruction' for more than four decades. However, the need to align with the learner-centred pedagogical modalities such as Blended learning is being positively considered.

The objectives of this study were to introduce blended learning through technological interventions and reflect on the impact. The ICT module of the Postgraduate Diploma in Education program was blended with technological interventions. ICT instructor possessed the expertise to design and implement Blended learning initiatives. The lessons learned from the study intended to be significant for decision making on the scaling-up of blended learning across the Faculty.

The interventions were developed to facilitate sharing of material, discussions among teachers and students through google drive, email and LMS prior to the 'face-to-face session' by teachers and students. E-books and videos were uploaded to the LMS and forums were created to facilitate discussions ensuring active participation of every student. Time-bound class quizzes for each lesson included multiple choice questions, matching formats and true or false questions. More questions were uploaded to the LMS and the students submitted the assessment by the final date announced.

Students were highly motivated to use technological interventions and realized they learn more effectively and also developed skills of perusing internet, use search engines and LMS. All modules need to be gradually transformed to adopt Blended learning and strategies for capacity development of staff has to be explored to realize this initiative.

Keywords: blended learning, teacher education, technological interventions

B1

[09]

**INTERNATIONAL HUMAN RIGHTS LAW AND IMPROVING ACCESS TO
HIGHER EDUCATION: PRINCIPLES, IMPLICATIONS AND CHALLENGES.**

Jayewardene

The University of Sydney, Australia

ABSTRACT

Improving access to higher education is of growing significance as many nations move towards mass higher education. The paper examines principles of international human rights law (IHRL) concerning higher education access and participation, recognising the global shift from elite to mass higher education systems (Brennan, 2004). The provisions in major IHRL treaties bearing on higher education are examined – of which the *International Covenant on Economic, Social and Cultural Rights* contains the most extensive provisions on education. Drawing on government policy on university admission and funding in Sri Lanka and higher education statistics, the paper considers 1) the Sri Lankan experience of facilitating access to university education, and 2) some of the practical considerations and policy challenges in Sri Lanka with reference to IHRL provisions. The paper identifies that IHRL promotes higher educational access based on individual merit, and higher education that is free, and of good quality. While Sri Lanka has maintained a free university education system, facilitating adequate and equitable access to university education is an ongoing challenge.

Keywords: higher education, human rights, educational access, participation

B2

[10]

**WIDENING ACCESS, FLEXIBILITY, AND QUALITY IN MALAYSIAN HIGHER
EDUCATION THROUGH LIFELONG LEARNING**

M.A. Kassim, O.C. Puan, M.Z.M. Yunus and D. Abdullah

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ABSTRACT

In Malaysia, there is an upward trend of young people going to universities and colleges for higher education. However, there is another segment of student body that is worthy of attention, in the form of individuals who are keen on re-skilling, up-skilling, or pursuing education for their personal interests. This lifelong learning ability is crucial, as industries brace for technological disruptions in the marketplace. This paper describes a case study of a lifelong learning institution with over 25 years of experience in delivering education and professional development opportunities to Malaysian communities. It manages part-time programmes offered by a Malaysian public research university specialising in science, engineering and technology. It is the only institution accredited by the Board of Engineers (BEM) Malaysia for its range of part time engineering programmes. Lifelong learners who are enrolled under the part-time programmes can attend classes delivered by teaching faculties from the public university, across 4 campuses and 12 learning centres all over the country. To date, more than 11,200 working professionals have obtained qualification at the degree level through part-time studies. Professionals in engineering (34 percent), education (22 percent), IT (11.3 percent) and human resources (11.8 percent) are the biggest beneficiaries of part-time programmes. It is critical that these lifelong learners are given adequate academic support, in order to encourage them to complete their studies and graduate. They have proven that they are capable of completing higher education despite work, family, and other commitments.

Keywords: lifelong learning, higher education, professional development, engineering, Malaysia

B3

[11]

**TOWARDS AN INTEGRATED FRAMEWORK FOR SELECTING A BACHELOR'S
DEGREE FROM PRIVATE HIGHER EDUCATIONAL INSTITUTES IN SRI
LANKA**

K.A.V. Abeygunawardena

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ABSTRACT

Internalization is a term used to discuss the international dimension of higher education (HE), and more widely postsecondary education (Knight, 2007). Internationalization gives students the space to read for a Bachelor's Degree (BD) without leaving the comforts of their home country. As a result, several private higher educational institutes (PHEIs) in Sri Lanka have entered into the HE industry, offering various types of IDPs conducted by top ranked foreign universities. IDPs are popular among Sri Lankan students due to difficulties in entering into National Universities in the country. However, selecting a BD from IDPs is complex and multi factorial due to optionality and flexibility. As a result, students may make sub-optimal choices, thereby negatively impacting academic success and motivation (Ozga & Sukhnandan, 1997). Further, unsatisfactory progression of students will pose a challenge to the academic reputation of PHEIs. Hence, this mixed method study has been carried out to overview students' behavior in selecting a BD and build an integrated framework to optimize Sri Lankan students' choice. A total of 40 empirical studies on students' choices in selecting a BD were reviewed and factors found to be influential internationally were identified by content analysis. As these factors may not be directly relevant to Sri Lankan students, primary data were collected by administering a structured questionnaire and focus group discussions with relevant stakeholders. The data were analysed using thematic and factor analysis. The finding of this study will be helpful for parents to be better involved in deciding the HE choices of their children, for career counselors to recommend a BD to prospective student and for PHEIs to enhance their enrollment strategies.

Key words: higher education, students' choice, bachelor's degree, international degree programmes

B4

[12]

**THE PURSUIT OF GLOBAL MINDEDNESS AMONG MALAYSIAN HIGHER
LEARNING INSTITUTIONS: A COMPETITIVE ADVANTAGE APPROACH**

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ABSTRACT

Globalization has various interpretations and it has been the rationale behind internationalizing higher education. Internationalization of higher education started in the past three decades globally. The term internationalization of higher education has been widely discussed in Malaysia in the past two decades. The survival and acceptance of Higher Education Institution (HEI) are highly dependent on how much elements of the internationalization are incorporated into these institutions. Even though Malaysian HEIs have spearheaded this effort a decade ago, it seems to be a goal far reaching for some HEIs. Despite internationalization effort has been taken by Ministry of Higher Education Malaysia (MOHE), there is no significant and conclusive study on how HEIs in Malaysia are successful in meeting the global needs and requirements, what are the barriers that prohibiting HEI in achieving its internationalization goals. It is important to pay close attention to the development of Malaysian Higher Education System and the barriers towards internationalisation to be sustainable in global environment. This conceptual paper examines on the important factors in sustainability of higher education in Malaysia and proposes conceptual framework to study the barriers of internationalization of Malaysian HEIs.

Keywords: internationalization, sustainability, higher education, Malaysia, barriers

C1

[13]

GAMIFICATION: THE NEXT EVOLUTION OF EDUCATION

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ABSTRACT

From the first illustrative “textbook” designed for children to the era of “compulsory education” for every child, education has slowly evolved with its time. However, the growth of education has only been in the preset direction of traditional education. Education acts as the foundation for technology, medicine, art, culture etc. As these building blocks of the ecosystem evolve with time it is necessary for the foundation to evolve too.

The purpose of this research paper is to show the positive effects of gamification on learning and the concept of learning through experience .

A possible step towards the future of education is with gamification . Gamification encourages participants to think and take actions based on knowledge, skill and judgment. RISOUK, a board game designed with an educational purpose is specific to the subject of geography. The product designed can be employed to teach the fundamental concepts of resources that are important in Asia.

This research proves that prove that a carefully designed game-based learning environment will allow students to experience the topic and understand the subject better. The board game is tested and analysed through two frameworks, a) Mechanics - Dynamics - Aesthetics framework i.e MDA Framework & b) Design - Play - Experience i.e DPE framework in real time.

The study shows that the group of children who learned topics of geography through the board game (RISOUK) had a better understanding, and results are above average when tested. Gamification of education is the new tool for leaving a deeper impression of learned content by making teaching more fun and engaging. We present our preliminary investigations of our game based learning environment that demonstrates its full potential.

Keywords: evolution of education , gamification, game based learning, gamification of education

C2

[14]

**ENHANCING STEM STUDENTS' ENGAGEMENT AND LEARNING OUTCOMES
WITH INNOVATIVE PEDAGOGY**

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ABSTRACT

Traditional pedagogy of lectures, laboratories and tutorials is falling short of the expectations of the current students of Science, Technology, Engineering, and Mathematics (STEM). Consequently, in many countries students are moving away from STEM related courses. This paper expounds how innovative pedagogy, such as Digital Storytelling and Drama-based learning, can help to enhance student engagement and lead to better learning outcomes. Combining aspects of the creative arts with the technical content of STEM units can help to tap into the students' creativity, making the technical content more interesting and memorable. This leads to the concept of STEAM: Science, Technology, Engineering, Arts and Mathematics. This paper will show how Digital Storytelling and Drama can be combined with STEM content and make it fun, and a pleasure to learn at the school as well as university level education. The example of Educational Drama (EduRama) will be shown as an innovative pedagogical model for enhancing learners' interest in Mathematics [1]. A case study demonstrating the effectiveness of Digital Storytelling in the Classrooms will be used as the example to make the case for enhancing student engagement, leading to better learning outcomes [2].

Keywords: STEM, innovative pedagogy, digital storytelling, drama-based learning, STEAM

References:

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[2] Najat Smeda, Eva Dakich & Nalin Sharda (2013), The Effectiveness of Digital Storytelling in the Classrooms: A Case Study, IEEE 13th International Conference on Advanced Learning Technologies, Beijing, China, 15-18 July 2013.

C3

[15]

**SIGNIFICANCE OF EVALUATION OR ASSESSMENT IN PEDAGOGICAL
EVALUATION PROCESS OF WEB BASED E-LEARNING**

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ABSTRACT

Designing a rich learning environment is an important factor to enhance the success of web based education. Due to that reason the necessity of evaluating the web based E-Learning content is arising. Evaluation process of web based e-Learning is normally belongs of pedagogical evaluation and subject evaluation. To automate this pedagogical evaluation process, a calibrated checklist has devised considering the literature. Course Overview and Introduction, Accessibility, Structure of the Course, User Interface of the Course, Language, Learning Resources, Interaction and Activities, Evaluation or Assessment, Learner Support, Navigational Structure and the Overall Presentation Outlook are the main review factors considered in this checklist. Each main review factor is then divided into several sub review factors accordingly. Based on the checklist produced a questionnaire and conducted a survey with pedagogical experts to identify the most important review factors. Evaluation or Assessment review factor highly ranked by the pedagogical reviewers in the survey. A number of assignments or exercises are provided, For each exercise, step by step instructions are given, Evaluation and grading criteria is clearly mentioned, The number of assignments and their due dates are provided, Guidelines for submitting assignments are given and Procedure for submitting assignments are mentioned considered as important sub review factors under Evaluation or Assessment main review factor. This study has focused on design and develops a supporting tool to measure the significance of Evaluation or Assessment main review factor and its sub review factors.

Keywords: e-learning, evaluation, assessment, pedagogical

D1

[16]

CONTEXTUALIZED LEARNING AND TRANSITION FROM SECONDARY SCHOOL TO UNIVERSITY: THE CASE OF A DAY SECONDARY SCHOOL IN KENYA

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ABSTRACT

In this paper, the contribution of contextualized science learning to high school students' transition from secondary school to Universities in Kenya is presented. The investigation employed a case study approach where Form three (Grade 11) students from a secondary school experienced a 9-week contextualized science learning that involved a full day interaction with *Jua Kali*¹ artisans. This involved, observing the processes in Jua kali workshops and discussing relevant scientific concepts with the artisans. Later in school, the groups were tasked with discussing and sharing their best learnt topics with the entire class through presentations. At the end of their fourth year, they sat for an examination, the Kenya Certificate of Secondary Education (KCSE) examination, a final national exam taken countrywide at the end of secondary school cycle. This is the examination that determines transition to tertiary levels. A student with grade C+ or above qualifies for University. Based on minimum grade of C+, the school improved significantly from 47.48% to 68.4% ($X^2=7.110$, $P=0.008$). This study has shown that, Jua kali workshops can be used as a cheap, easily available and sustainable learning resource for disadvantaged schools. The artisans can work in synergy with science teachers to help students reach higher learning institutes

Keywords: Jua Kali, contextualize, curricula

¹*Jua Kali*, small-scale manufacturing and technology-based service sector, (UNESCO, 1997)

D2

[17]

**FINANCIAL PROBLEMS AND THEIR IMPACT ON THE FUNCTIONING OF
HIGHER SECONDARY SCHOOLS IN KHYBER PAKHTUNKHWA, PAKISTAN**

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ABSTRACT

The study aimed to explore the financial problems and their impact on the functioning of higher secondary schools. All the heads of Government Higher Secondary Schools (GHSS) in Khyber Pakhtunkhwa, Pakistan were population of the study. The researchers selected 145 heads of GHSS through multi stage cluster sampling technique for the study. It was a mixed method explanatory sequential research design; therefore, a Likert type questionnaire was used for the collection of quantitative data and a semi-structured interview guide was used for the collection of qualitative data from the purposively selected 10 heads of the schools. Data was tabulated and analyzed through Statistical Package for Social Sciences (SPSS) using percentage and Chi-square test. The study explored that the heads of higher secondary schools have the lack of finances, difficulties in sanctioning the budget/bills, the specification of funds and the authority to utilize the funds according to the needs and requirements of the institutions which adversely affects schools' academic and administrative activities. Therefore, the study recommended that the heads may be empowered to utilize the available resources according to the needs and requirements of the institutions. The refresher training should be provided to the heads of higher secondary schools in order to keep them abreast with the latest management techniques for meeting the challenges in financing of management in their schools.

Keywords: financial problems, management, impact, secondary schools., Khyber pakhtunkhwa

D3

[18]

**MATHEMATICS TEACHING IN VIETNAM AND THE CONNECTING
MATHEMATICS TO THE REAL WORLD ON MATHEMATICS TEACHING**

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ABSTRACT

This article investigates two major issues in mathematics teaching in Vietnam: (1) What is the purpose of learning mathematics among Vietnamese pupils? (2) What is mathematics teaching method in relation with reality? Based on the findings from these questions, the article proposes some recommendations for mathematics teaching regarding the method and appropriate extent to which teachers should connect mathematics to the real world in the context of rapid science and technology development as well as the adjustment to the current mathematical content at schools. Also, this article presents some examples of exploring practical content problems and designing real-life context in mathematic teaching to develop students' competency in Vietnam. The researchers also suggest that Vietnam's national mathematics curriculum need reforming in order to keep up with the pace of development in the field of information and communication in Vietnam.

Keywords: mathematics, practical situation, connect mathematics to the real world, mathematics teaching

D4

[19]

**CHALLENGES AND BARRIERS FOR IMPLEMENTING EDUCATION FOR
SUSTAINABLE DEVELOPMENT (ESD) IN SECONDARY SCHOOLS IN SRI
LANKA**

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ABSTRACT

Sustainable Development (SD) is a vision for process of development. The world is presently aiming to achieve 2030 Sustainable Development (SD) Goals. Education for Sustainable Development is a mechanism used to teach SD concepts and SD issues in the secondary schools. This study was aimed to identify challenges and barriers to implement ESD in Secondary Schools in Sri Lanka. The sample 36 Geography teachers from 36 secondary 1AB & 1C schools was selected from the Kandy district and stratified random sampling method was used. Data was collected by the survey method and the quantitative and qualitative data analysis was done descriptively. As research findings; challenges and barriers identified were; not including ESD as a core topic in the school curriculum, exam oriented mentality of students, lack of awareness of SD and ESD concepts among teachers, lack of ESD programmes in the school time table, lack of funds, lack of time and lack of resource persons to carry out ESD programmes. The study recommended that curriculum enhancement and implementation of programmes to create awareness about SD and ESD with the concepts originated from the range of themes selected from the syllabi from Grade 6 to 13, a specialized SD and ESD teacher training, converting teachers to be change agents with a broad vision towards 2030 Sustainable Development 17 Goals and identifying strengths and opportunities to implement ESD in the school programmes with the help of the school management.

Keywords: sustainable development, education for sustainable development, secondary school, curriculum, sustainable development goals, geography teachers



**POSTER
PRESENTATION**

P1

[20]

A CASE STUDY OF HOMESCHOOLING EXPERIENCE AND SELF-CONCEPT

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ABSTRACT

Since 2014, the experimental education enforcement act in Taiwan had been passed, it conferred the statutory status for the non-school-based experimental education. Although domestic studies on homeschooling were few, there still had studies that profiled the experimental education administered at home for individual student. Therefore, this study will explore the experience of homeschooling in depth. The main purpose is to understand the subjective perception of homeschooling student, the influence on self identity, and the connection between self identity and career vision. Participant was an adult who had been schooled at home for five years and used a semi-structured interview to collect the information. Results included: (1) The decisions mostly made by Parents' authority, such as administering homeschooling, following curriculum guidelines; (2) the schedule became much more flexible and the educator transformed into parent; (3) the positive influence is time management ability and self-learning ability; (4) the negative influence is that the social circle, cultural contact is too inflexible, and the homeschooling student may received the values of certain religions and social circles; (5) homeschooling experiences influenced the student's self identity. The participant denied the past experience of limited values, and expect himself to be an open minded person; and (6) the student's current career vision is to explore the real world, and achieve self-growth.

Keywords: homeschooling, self identity, career vision



VIRTUAL PRESENTATIONS

[21]

**IMPACT OF E-LEARNING ON STUDENT PERFORMANCE AT HIGHER
COLLEGES OF TECHNOLOGY (HCT)**

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ABSTRACT

The use of e-learning in higher education is increasingly becoming standard practice day by day. However, there has been limited research documenting the direct correlation between e-learning and student performance. The primary topic of the impact of e-learning on student performance on e-learning is defined as any form of learning that uses technology as a medium of delivering teachings. Although it is expected to observe a difference between the traditional e-learning versus non-traditional e-learning method, the preliminary results from this paper indicate that there is no statistical significance between both methods. The preliminary data in this pilot study suggests further research study is needed to be conducted to correlate the relation between e-learning methods and student's performance.

Keywords: education, e-learning, performance, quantitative

[22]

MOOCS: DESIGN OF A TEACHING METHODOLOGY FROM A HUMANIST UNDERSTANDING

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ABSTRACT

One of the principal challenges faced by the current system of education is that of satisfying the necessity of developing professionals, who are able to be fully incorporated and actively participate in society; taking into consideration the fact that knowledge is the main component for social, cultural and economic development. Undoubtedly, the evolution of technology has revolutionised the boundaries of education, making space for new portable, flexible and more dynamic methods of social learning and development. Various educational institutions, in their eagerness to become more prominent and international, and to attend to a greater number of students, offer continuous education via the medium of Massive Open Online Courses. (MOOCs) These employ mechanical learning methods such as memorisation, converting the learning process into something artificial and dehumanized, which raises a series of pedagogical and didactic questions among others. The following work has, as its objective the realisation of a descriptive study based on diverse bibliographic sources regarding the development of Massive Open Online Courses, the aim of which is to form a theory for the design of a methodology, which humanises learning in these types of courses. It links the principal pedagogic and psycho-pedagogic theories and information and communication technologies with emphasis on a socio-cultural perspective of cognition, and considering processes of developmental learning, both active and dynamic, with an eminently social character to permit the whole development of participants.

Keywords: massive open online course, MOOCs, social learning, humanize learning, teaching methodology

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