

APPLIED RESEARCH INTERNATIONAL CONFERENCE, U.K



Feb
2020

Conference Proceedings



user

**APPLIED RESEARCH
INTERNATIONAL CONFERENCE,
U.K**

**Venue: St. Catherine's College,
University of Cambridge, U.K**

Date: February 27-28, 2020

ISBN 978-1-83853-225-3





Applied Research International Conference on Teaching & Learning (ARICTL) Feb 27-28, 2020, Cambridge, United Kingdom

Applied Research International Conference on Education & Professional Development (ARICEPD) Feb 27-28, 2020, Cambridge, United Kingdom

Conference Proceedings

Conference Committee Members

The conference organizers would like to express their gratitude for the contribution made by following committee members for the conference in various academic roles:

Prof. Lynn Martin
Prof. Naim M. Ajlouni
Prof. Osman Adiguzel
Prof. Ali Mohammad Akour
Prof. Christi Spulbar
Dr. Xuesen Zhang
Dr. Ronald Kovach
Dr. Olav Eikland
Prof. Nassr Saleh M. Ahmad
Prof. N.M. Nasrullayev
Dr. Ilona Baryiska
Dr. Mariya H. Nadeem
Dr. Adam Tityaltug
Dr. Edward Bace
Dr. Bruno Roque Cignacco

Copyright © 2020 ARICON Private Limited, U.K

All rights reserved. No part of this publication may be reproduced or transmitted in any form, or by any means, or stored in any retrieval system of any nature without the prior permission of the publishers.

Permitted fair dealing under the Copyright, Designs and Patents Act 1988, or in accordance with the terms of a license issued by the Copyright Licensing Agency in respect of photocopying and/or reprographic reproduction is excepted.

Any application for permission for other use of copyright material including permission to reproduce extracts in other published works must be made to the publishers and in the event of such permission being granted full acknowledgement of author, publisher and source must be given.

Disclaimer

Whilst every effort has been made to ensure that the information contained in this publication is correct, neither the editors and contributors nor ARICON U.K accept any responsibility for any errors or omissions, quality, accuracy and currency of the information, nor any consequences that may result. ARICON takes no responsibility for the accuracy of URLs of external websites given in this publication nor for the accuracy or relevance of their content. The opinions, advices and information contained in this publication do not necessarily reflect the views or policies of the ARICON.

Applied Research International Conferences (ARICON) is a registered company in the Company House England & Wales, U.K. Company Registration Number 11991021.

ISBN: 978-1-83853-225-3



ISBN 978-1-83853-225-3



Conference Chair

Dr Ross Kemble
Researcher Development Programme Manager
Seasoned Educationist, Lecturer Leadership & Management
Anglia Ruskin University, Cambridge UK

Session Chair

Dr.Maria A. Saberi
Assistant Professor-Ahlia University, Kingdom of Bahrain (BH).
Chairperson of the Management & Marketing Department, College of Business &
Finance. Associate Certified Coach (ACC) by International Coach Federation (ICF).
Regional Director of the International Society for Emotional Intelligence (ISEI NY, USA).

Conference Moderator:

Dr. Maria H. Nadeem
Associate Professor/ Researcher & Trainer
London Institute of Skills Development, U.K

Technology Innovation Entrepreneurial Education Orientations of Bahrain Universities

Prof. Fairouz M Aldhmour*, Ph.D. Scholar Haya Mohammed Alkandari and Prof. Rustom Mamlook
Innovation and Technology Management Department
Arabian Gulf University, Bahrain
*fairouzm@agu.edu.bh

Abstract

Technological development in the field of informatics is among the most prominent manifestations of the progress of countries in our era known as the era of the information revolution. Informatics is a strategic force for one country, which may determine its victory or defeat in any cold or hot confrontation with another state. With increasing unemployment, especially among graduates of higher education institutions that are pumping to the labor market every year, increasing numbers of graduates. Decreased capacity of public and private institutions to absorb sufficient numbers of jobs, which means that job opportunities for these graduates are diminishing. A transformation of the work environment is needed, highlighting the importance of individual initiatives and entrepreneurship and technology, becoming a source of economic growth in light of my world it is increasingly moving towards a knowledge economy.

This paper was aimed to explore the technology innovation entrepreneurial education orientations of Bahrain Universities. To achieve the aim, the analytical approach was used. The population of this study was the top management at the Bahrain Universities, a convenience sample of 13 policymakers were chosen to be the sample of the study.

According to the data which were collected and analyzed, the results indicated that the top management of Bahrain universities has a positive orientation for technology innovation entrepreneurial education orientations, in addition, the technology innovation entrepreneurial education orientations of Bahrain Universities influenced by many factors of like Autonomy, appropriate environment, competitiveness, risk-taking, and knowledge sharing, financial resources, information technology infrastructure, organizational structure. there is a positive relationship between these factors and technology innovation entrepreneurial education orientations in the context.

Key Words: *Entrepreneurship Education, Entrepreneurial University; Educational Innovation, Higher Educations, Bahrain Universities.*

1. Introduction

Education is an important element to success and to meet the global challenges, therefore education must be systematic and accessible; thus policy makers have to adapt new methods for the millennium (Serdyukov, 2017), according to that cooperation between different sectors is important to meet development and regional innovation, (Huang, 2018).

Universities are capable to allocate the resources to create different opportunities (Li et al., 2017). Innovation is essential in education field, thus; universities are expected to adapt innovation concept in their culture to build connections among several aspects (Welsh et al., 2016). Therefore, universities should combine regional objectives, knowledge hubs, mechanisms to allocate resources, and the concept of regional contributions through innovation and knowledge transfer (Mangematin et al., 2014; Liu, 2018).

When innovation is being presented in the learning context, Student's productivity will increase, (Meyer et al., 2014), thus, educational institutions must change the traditional approaches with innovative ones to get benefits (Maselena et al., 2017). Applying entrepreneurial practices and assessing the entrepreneurial orientation are important to

change the current situation of education to achieve the regional objectives (Harasim, 2019).

2. Literature Review

2.1 Innovation Role in Education

Innovation usually associated with radical change or technologies, and involve the concept of *newness* to improve the performance of any organization (Bowen et al., 2010), and considered the main tool of entrepreneurs (Koellinger, 2008), and many literatures assured on the importance to spread innovation concept to different fields (Glassman & Opengart, 2016; Lee & Benza, 2015), as well as education field (Fuller & Thursby, 2009), believing that innovation is the main element for repairing and developing the economic (Daniela et al., 2018; Serdyukov, 2017; Basiron et al., 2017; YU, 2011).

The players in the educational field have the choice to unblock innovation (Ferrari et al., 2009), to reach social development by replacing the rigid teaching practices with innovative ones, to promote the learners' capabilities (Lee, 2011), because innovation occur in a community collaborations, and connections with other (Pisanu & Menapace, 2014).

Many strategies support innovation in the university context, that require working in teams, openness, flexibility, and taking risk (Gibson, 2010), by implementing new technologies, techniques, and methods (Pisanu & Menapace, 2014). There is no need to invent or create new strategies or approaches, there are many existed once that just needs to be applied (Hamrita, 2019; Pisanu & Menapace, 2014; Yu, 2011). According to ERIC the education resources information center, innovation in education means applying new method, concept, or tool (Lee, 2011), in a supportive environment (Kettunen et al., 2013). Thus, the relationship between university and context is reciprocal, in another word innovative institutions are able to combine external innovation in their organization, and enhance motivation in the learning environment

(Waslander, 2011). Sustainability occur through innovation by providing new opportunities to achieve goals (Sabani et al., 2017; Anshari et al., 2017), and translate knowledge into a meaningful-outcomes such as products and services (Visvizi et al., 2018; Brasser et al., 2017). Therefore, achieving sustainability depends on innovation and new innovative approaches especially in education (Schroder & Kruger, 2019; Ajmain et al., 2019; Wu et al., 2018). Researchers believes that innovation approaches contribute to create students able to adapt, produce, and utilize knowledge in order to create value (David, 2013; McCarroll & Kevin, 2013; Kairisto & Mertanen, 2011; Warschauer & Matuchniak, 2010; Putkonen et al., 2010).

Integrating innovation in the educational systems could happen by changing the old pedagogical methods with new ones to foster the educational outcomes and economic growth (Akhmetshin et al., 2019; Shyshkina, 2018; Yunis et al., 2018; Cherrez et al., 2018; Lopez, 2017). Thus, innovation in education field should focus on teaching, learning, and practice theory, context, society, and culture (Afshar, 2016), and a strong theoretical foundation is needed and to apply innovation, based on systemic research and pedagogy (Heick, 2016). Adapting entrepreneurial approaches has to be scalable and systemic, therefore, administrators, researchers, and policymakers have to apply new practices and strategies to develop students (Serdyukov, 2017).

2.2. Innovation and Entrepreneurship Education

Entrepreneurship education is important to achieve economic growth and job creation through start-ups (Kim et al., 2017), many literatures proved that entrepreneurship can be taught through education (Walter & Block, 2016), which led many educational institutions to invest in entrepreneurship education to develop entrepreneurial skills (Chung et al., 2018) and many universities have adapted entrepreneurship education to encourage student and clarify their social role as an entrepreneurs (Lee & Kim, 2016).

Entrepreneurship education promotes economic growth, and reduce unemployment, (Bohlmann et al., 2017), Thus, supporting new strategies to apply entrepreneurship

education programs are essential (Obschonka et al., 2018). The Korean government supports entrepreneurship education to provide systematic and professional education, and training programs for each start-up stage (Park et al., 2018). In UK the educational institutions that adapt entrepreneurship their main strategy is encourage start-ups to generate new jobs to avoid unemployment (Rauch & Hulsink, 2015; Matlay, 2011; Packham et al., 2010). Thus, Students could be encouraged to entrepreneurship programs to get benefit from the human network, infrastructure, the start-up preparation, and getting a degree (Zhang et al., 2014).

Entrepreneurship programs focus in supporting entrepreneurial attitudes of students and increase intentions to start a business and create new enterprises and startups (Murugesan & Jayavelu, 2015; Autio et al, 2014), to generate careers (Jones et al., 2015).

To develop the entrepreneurial spirit, China integrated entrepreneurship in education, and apply researches in that field (Xingsun 2007), and USA academic and policy makers believe on entrepreneurship for innovation and economic success (Oosterbeek, 2009), the European Union developed the entrepreneurial culture and adopted the entrepreneurship mindset, skills, and approaches to foster innovation (Selkkula, 2011), assuring that entrepreneurship education leads to success and discover opportunities (Esfandiar et al., 2019), which requires flexibility, engagement, and partnership to fill the gap between economic sector and education (Akhmetshin et al, 2019; [Nowiński](#) et al., 2017).

Entrepreneurship education considers as methodological approach, new pedagogic theory, instructional tool, or learning process (Yuzhuo, 2017), to enhance efficiency and productivity (Hamrita, 2019; Frances & William, 2018; Miftachul et al., 2018; Jones et al., 2017).

2.3 The Entrepreneurial University

University has a significant role to develop the economy through the society by transforming from traditional university into an entrepreneurial university (Markuerkiaga

et al. 2016), because all universities around the world produce knowledge and can facilitates and enhance innovative practices in regions (Markuerkiaga et al. 2016; Giunta et al. 2016; Caiazza et al. 2016), many empirical evidence assured that entrepreneurial intention leads to innovation (Tsai et al., 2016). Entrepreneurship education literatures focus on intention-based models and understanding the context and factors that enhance the entrepreneurial intention (Trivedi, 2017), thus, university has the ability to foster and encourage student's entrepreneurial intention significantly (Trivedi, 2016) and adapt the concept of the entrepreneurship and transform into entrepreneurial university and facilitate the entrepreneurship practices (Zollo et al., 2017). According to that students would get the knowledge and act as an entrepreneur through the university's support and environment (Trivedi 2016; Shirokova et al. 2016), because many literatures proved the positive relationship between the entrepreneurial intention of the students and the entrepreneurship education and context (Moraes et al., 2018). As an example Unicamp's context fosters the students' start-up and considered as the second-best university in Brazil with their entrepreneur's outputs (Quacquarelli Symonds, 2016; Gajón et al., 2014), and the Anglia Ruskin University in UK also consideres as an entrepreneurial university for its effort in seeding the entrepreneurial culture and behavior in the members and students, and offering value for partners and students, additionally the University of Manchester got the world award for the its local contribution in 2014 (NCEE, 2014).

many studies proved that entrepreneurship education affect positively job growth and local economics, and recommended universities to restructure the context and learning process to generate entrepreneurs (Hair et al., 2017), and develop students by offering encouraging and motivational learning environment to increase entrepreneurial outputs (Sarstedt et al., 2018; Bignotti & Roux, 2016).

The entrepreneurial university links education and economy together by building the knowledge through the entrepreneurial environment from university's new projects, research, and startups which promote the business sector economically and socially (Arantza et al., 2018). Many Universities considers as a labor market and collaborates

with external stakeholders, and transformed into a collaborative organization by adapting entrepreneurial approaches (Torre et al., 2016; Sam & Sijde, 2014).

The Entrepreneurial universities aim to collaborate with different sectors and combine researches from different fields (Giuseppina et al., 2017), to develop the economic growth and create new local startups to fight unemployment (Nogueira et al., 2018; Vilutiene et al., 2018), in addition the Entrepreneurial universities involve in business activities, networks, and partnerships with private firms and governments (Rajalo & Vadi, 2017).

Transforming into entrepreneurial university, innovation needs to be integrated in education (Secundo et al., 2017), and reconfiguring the organization strategy and programs to generate regional innovation (Guerrero et al., 2011; Etzkowitz, 2004; Ropke, 1998), and providing a technical experts, an instructor to set strategies, an integrator to merge different issues together, and an entrepreneur to work on the ideas and turns them into valuable outputs (Elia, et al., 2017; Byers et al., 2008; Fontela, 2005), because the entrepreneurial university is an organization with somehow entrepreneurial faculty, and students who creates value from different knowledge and publishable patent (Bouncken, 2018; Lackéus, 2015; Etzkowitz & Viale, 2010). The entrepreneurial university interact with different sectors and depends on partnership to make a sustainable life cycle to solve the regional issues (Chen & Lin, 2017; Wolf et al., 2017; Garousi et al., 2016). Many researchers in the educational field assured in the importance of educational innovation methods to improve the education system (Riel et al., 2015), and cooperate with the key players to avoid failure (Tiago et al., 2014). Innovation leads to create value from something new or already exist, through entrepreneurs whom are willing to take decision and take risks (Mousavi et al., 2018).

The literatures from that field assured that organizations with a quick responding, competitive, and flexible are innovative (Grigoroudis et al., 2017), and Universities with a successful history are always associated with innovation (Martin & Iucu, 2014), according to that universities can be the main part of generating innovation and value

(Meissner & Stamati, 2017). Therefore, shaping the entrepreneurship orientations has a huge interest between the academic researchers (Kimatu, 2016).

Educational innovation is associated with the entrepreneurial orientation (Simons et al., 2015), that include factors such as *networking, risk taking, autonomy, competitiveness, pro-activeness, and innovation* considering innovation as a result (Kraus et al., 2017), through the models, number of patents, and studies that have been conducted (Miles et al., 2016; Saridakis et al., 2016), Thus, innovation can be fostered through the educational model with an entrepreneurial factors (Cruz, 2019) and applying a complex multi-level educational models (Ferreira et al., 2017). Figure 1 shows the factors that influence the entrepreneurial orientation;

Figure 1: Conceptual framework for the educational innovation process (Mousavi et al., 2018).

Figure 2 shows the educational innovation process:

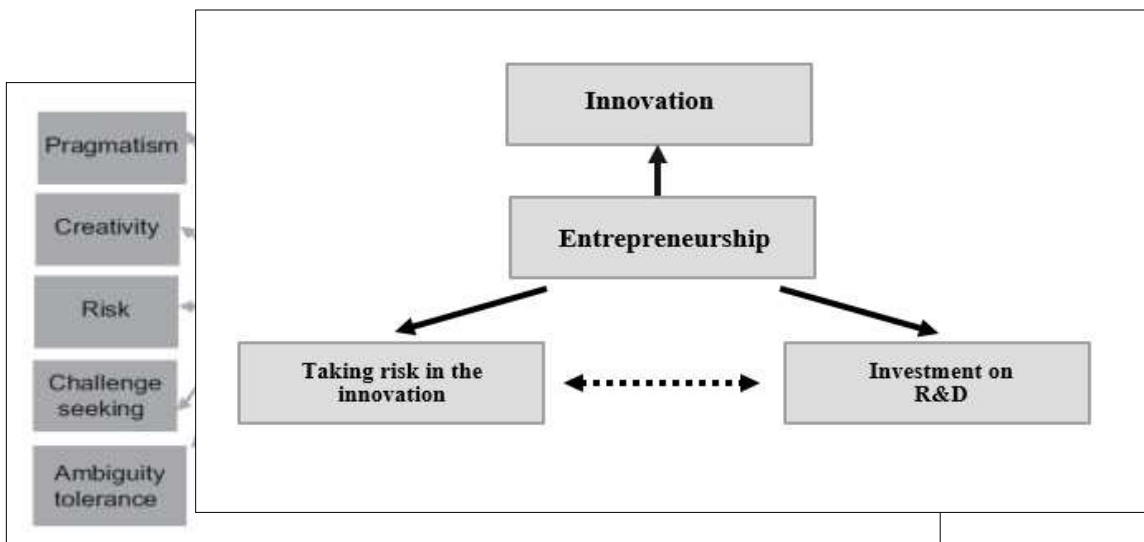
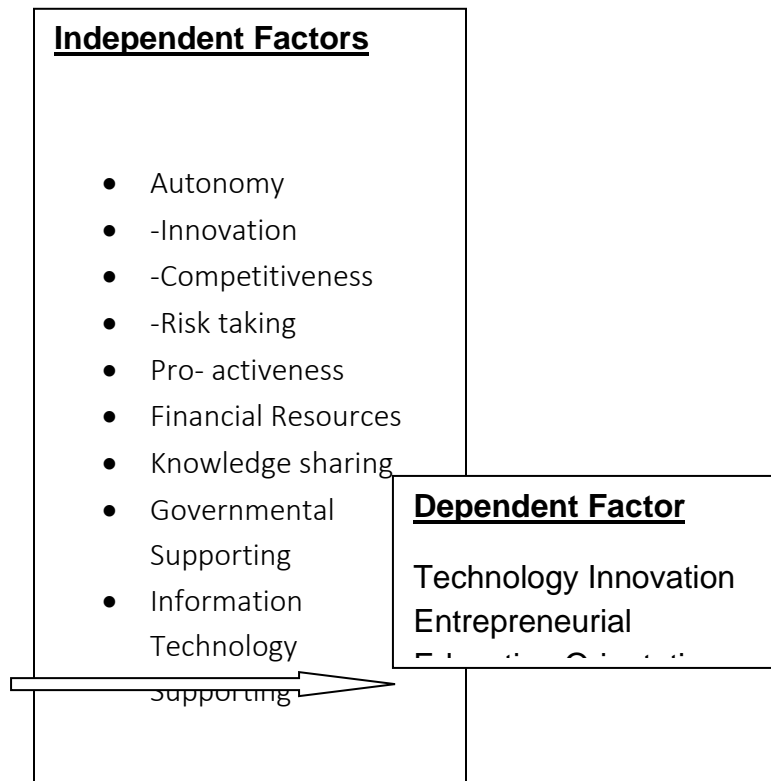


Figure2: influencing factors of the entrepreneurship for innovation (Zawislak et al., 2008).

Based on the above literature review the researchers suggested the following conceptual Framework Innovation Entrepreneurial Education Orientations of Bahrain Universities as shown in figure 3



3. Methodology

The methodology used in the research is document analysis and qualitative research by conducting 13 interviews with top management of Bahrain private and governmental universities through open interviews with the top management to explore the impact of the entrepreneurial orientation on technology innovation. The research sample is a convenience sample of the top management of Bahrain's universities.

4. Research Objectives

This paper aims to explore the technology innovation entrepreneurial education orientations of Bahrain Universities.

To achieve the main aim, the researchers proposed the following objectives:

- 1- To know the top management point of view of technology innovation entrepreneurial education implementation.
- 2- To explore factors that influence the technology innovation entrepreneurial education orientations of Bahrain Universities.
- 3- To measure the impact of entrepreneurship implementation on technology innovation in Bahrain's universities.

5. Analysis of Results

This paper was aimed to explore the technology innovation entrepreneurial education orientations of Bahrain Universities. Based on the documentary and interviews data analysis; the economy of Bahrain depends mainly on oil and gas, Thus, Bahrain needs to seek for economic diversification through entrepreneurship concept and new technology. So, recently the top management of Bahrain universities has a positive orientation for technology innovation entrepreneurial education orientations, they considered it the main element to grow, survive and sustain, this result agreed with (Miniaoui & Schilirò, 2017) study. The respondents said that:

"We need to believe more in innovation, technology role, and entrepreneurial education and persuade the policymakers, staff, students".

Adding, the respondents confirmed that the higher education institutions must spend more on investment in developing education, particularly at this initial stage. As a result, the students will be more aware of the importance of starting their own business, this result agreed with (Kim et al., 2017) study. The respondent said that:

"Universities should encourage higher education students to start their own business to generate jobs opportunities".

Moreover, the researchers conclude that universities play a crucial role to clarify the role of the students' social contribution as entrepreneurs, entrepreneurship skills can be gain and taught through education, and the Bahrain kingdom needs more investment to establishing incubators and supporting new policies to set up entrepreneurship education programs. The respondent said that:

"Bahrain universities need radical changes in their syllabus, programs, curriculums for more involvement and gaining of entrepreneurship skills"

The results of this study confirm that the technology innovation entrepreneurial education orientations of Bahrain Universities influenced by many factors of like Autonomy, appropriate environment, competitiveness, risk-taking, and knowledge sharing, financial resources, information technology infrastructure, organizational structure. There is a positive relationship between these factors and technology innovation entrepreneurial education orientations in the context. but unfortunately, most of the respondents, particularly in governmental universities, complain from the lack of Autonomy and the other stated that the policymakers are still fear of risk-taking and they don't take pro-activeness procedures.

The respondents recommended focusing on technological entrepreneurship, this boosts the Bahrainian economy -if it is supported by the governments, universities, and private sector, - particularly, that the revenues of technology and information, are considered high returns compared to many commodities. The rise in technology and IT revenues, as opposed to lower software costs and operational costs, is promising, as this can be a good lever for the national economy. This result agreed with (Kim et al., 2017) study. The respondent stated that:

"Entrepreneurship education is so important for economic improvement and creating jobs opportunities for a huge number of graduated throughout start-ups"

References:

Rauch, A. and Hulsink, W. (2015), "Putting Entrepreneurship Education where the intention to act lies: An investigation into the impact of entrepreneurship education on entrepreneurial Behavior", *Academy of Management Learning & Education*, Vol. 14 No. 2, pp. 187-204.

Nabi, G., Linan, F., Fayolle, A., Krueger, N. & Walmsley, A. 2017. The impact of entrepreneurship education in higher education: A systematic review and research agenda. *Academy of Management Learning & Education*, Vol. 16, No. 2, pp.277-299.

Sawang, S., Parker, R. & Hine, D. 2016. How Small Business Advisory Program Delivery Methods (Collective Learning, Tailored, and Practice-Based Approaches) Affect Learning and Innovation. *Journal of Small Business Management*, Vol. 54, No. 1, pp.244-261.

Markuerkiaga, L., Caiazza, R., Igartua, J. I. and Errasti, N. (2016), Factors fostering students' spin-off firm formation: an empirical comparative study of universities from North and South Europe, *Journal of Management Development*, Vol. 35 No. 6, ISSN 0262-1711.

Giunta, A., Pericoli, F. and Pierucci, E. (2016), University–Industry collaboration in the biopharmaceuticals: the Italian case, *Journal of Technology Transfer*, Vol. 41, pp. 818–840.

Caiazza, R. (2016), A cross-national analysis of policies effecting innovation diffusion, the *Journal of Technology Transfer*, Vol. 41 No. 6, doi 10.1007/s10961-015-9439-2.

Pisoni, G. (2018). Strategies for Pan-European Implementation of Blended Learning for Innovation and Entrepreneurship (I&E) Education. *Education Sciences*, 9(2), p.124.

Bohlmann, C., Rauch, A., and Zacher, H. (2017). A lifespan perspective on entrepreneurship: perceived opportunities and skills explain the negative association

between age and entrepreneurial activity. *Front. Psychol.* 8:2015. doi: 10.3389/fpsyg.2017.02015.

Obschonka, M., Moeller, J., and Göthner, M. (2018). Entrepreneurial passion and personality: the case of academic entrepreneurship. *Front. Psychol.* 9:2697. doi: 10.3389/fpsyg.2018.02697.

Fellnhofer, K., and Puumalainen, K. (2017). Can role models boost entrepreneurial attitudes? *Int. J. Entrep. Innov. Manag.* 21:274. doi: 10.1504/IJEIM.2017.08 3476.

Biraglia, A., and Kadile, V. (2017). The role of entrepreneurial passion and creativity in developing entrepreneurial intentions: Insights from American homebrewers. *J. Small Bus. Manag.* 55, 170–188. doi: 10.1111/jsbm. 12242.

[Jabeen, F.](#), [Faisal, M.](#) and [I. Katsioloudes, M.](#) (2017), Entrepreneurial mindset and the role of universities as strategic drivers of entrepreneurship, [Journal of Small Business and Enterprise Development](#), Vol. 24 No. 1, pp. 136-157. <https://doi.org/10.1108/JSBED-07-2016-0117>.

Tsai, K. H., Chang, H. C., & Peng, C. Y. (2016). Refining the linkage between perceived capability and entrepreneurial intention: Roles of perceived opportunity, fear of failure, and gender. *International Entrepreneurship and Management Journal*, 12(4), 1127–1145.

Trivedi, R. (2017). Entrepreneurial-intention constraint model: A comparative analysis among post-graduate management students in India, Singapore and Malaysia. *International Entrepreneurship and Management Journal*, 13(4), pp.1239-1261.

Zollo, L., Laudano, M. C., Ciappei, C., & Zampi, V. (2017). Factors affecting universities' ability to foster students' entrepreneurial behavior: An empirical investigation. *Journal of Management Development*, 36(2), 268–285.

Trivedi, R. (2016). Does university play significant role in shaping entrepreneurial intention? A cross-country comparative analysis. *Journal of Small Business and Enterprise Development*, 23(3), 790–811.

INTEGRATING CRITICAL THINKING AND COGNITIVE SKILLS TO ENRICH THE UNDERGRADUATE STUDENTS' ACADEMIC APPREHENSION

Dr. Samah Nassar¹
October University for Modern Sciences and Arts, Faculty of Arts and Design
Cairo, Egypt
Samah@nassar.at

Abstract

This research targets the development of critical thinking skills amongst undergraduate students that equip them for university as well as career successes. Also, it examines the importance of cognitive skills and how it facilitates the acquisition of skills including decision making, analysis and problem-solving. The research implements and closely examines Novak's and Ausubel's assimilation theories related to critical thinking and cognitive skills development. It focuses on the cognitive function which is recognized as the area of performing numerous mental activities. The key objective of the report is to understand and evaluate certain factors related to the system of critical thinking and cognitive skills and evaluate their impact. The paper also offers insights into the variety of learning opportunities to which critical thinking can be applied to deliver the optimal learning outcomes and the process through which students learn effectively.

Keywords: cognitive skills, critical thinking, undergraduate pedagogy

Introduction

The following review is based on certain factors that are associated with the system of critical thinking and cognitive skills and the impact of these respective qualities on the development and advancement of knowledge amongst undergraduate

¹ Dr. Samah Nassar, PhD.
October University for Modern Sciences and Arts University. Assistant Professor.

students. As compared to certain factors that are related to the system of critical thinking, it can be stated that the functional part of critical thinking is considered to be the strong examination of facts for the purpose of forming judgments. Several subjects associated with the system of critical thinking is considered to be a complex part that leads to existence of several definitions which basically includes skeptical, rational, unbiased analysis or assessment of accurate evidence.

Cognitive function on the other hand is a term which is completely based upon the ability of humans in the area of thought processing which must not deplete the healthy individuals on a higher scale. On the other hand, certain factors that are associated with the system of cognitive skill is defined as individual ability under the area of performing numerous mental activities which are generally associated with the system of problem solving and learning (Florea & Hurjui, 2015). Apart from all these respective factors, the key objective of the report is to understand and evaluate certain factors related to the system of critical thinking and cognitive skills and bring a brief study about their impact and importance under the development area of undergraduate students.

Critical Thinking and Cognitive Skills Amongst Undergraduate Students

According to theories designed by Loving and Wilson (2000), it is considered to be a challenging endeavor to confirm that there is a strong and innovative mode of critical thinking skills that are particularly enhanced among the students. Novak states that several aspects that are associated with the system of learning are generally categorized under five major components which include evaluation, knowledge, learner, teacher and framework to present (Bretz, 2001). Under this respective part, Novak gives a clear statement that the student must be systematically guided by teacher in the area of establishing studies that are on an actual basis instead of building memorizing behavior among them. In this respective area an innovative mode of concept map is designed for the students for the part of improving their cognitive skills which are related to the system of critical thinking where this can play a beneficial part for them under various fields.

The designed concept map has the capability in the area of improving the performance of the students for the part of subjects which may require strong and innovative mode of skills based on critical thinking required to be adopted (Greene and Yu 2016). Hence, under this respective part assimilation theory of Ausubels is added with concept map of Novak for the purpose of promoting strong mode of skills based on critical thinking among students because certain characteristics that are associated with the system of critical thinking which includes interpretation, inference, self-regulation and explanation are involved under concept development (Vacek, 2009). Five major steps that are associated with the system of the learning process generally include concept formation, subsumption, integrative reconciliation, progressive

differentiation and consolidation. These are considered to be some of the core major factors that are involved under the system of assimilation theory. These are considered to be some of the major required steps which are combined in order to form complicated mode of critical thinking function more easily through the process of building concept map.

Several formation factors associated with the system of concept is generally divided in to two major heads which involves primary and secondary concept (Atabaki, Keshtiaray and Yarmohammadian, 2015). Ausubel clearly identifies that young children have the capability of labeling and recognizing something which is regular through the process of symbols, languages and concept formation which first occurs among them. A mode of intellectual activity is shaped by the young children through these observations which completely define the primary concept. Under the secondary concept, it can be stated that having recognized with much regularity, cognitive structures among them get developed along with which many new and innovative concepts which are considered to be not visible gets generated among them on all aspects. Some of the examples under this respective part can be anger, love, sadness and many others

According to the theories made by Novak, it is understandable that, learning process among the adults in the area of developing and constructing new and innovative learning process is similar to a particular process under which child learns to construct appropriate meaning to words (Howard, Tang and Austin, 2015). Several parts that are associated with the system of concept formulation is identical to interpretation related to critical thinking. According to the ideas generated by Ausubel, the integration of knowledge which is newly acquired with previously acquired knowledge is the process of sub Sumption, which mean a phase related to learning process and learning which is considered to be meaningful, The merging of new and old knowledge under this respective part forms the system of assimilation theory.

As compared to the system of progressive differentiation, Ausubel make a statement that a natural mode of sequence under which human beings organize cognitively and accumulate knowledge is completely hierarchal from specific to general. It generally happens with undergraduate students who generally adopt the behavior of memorizing rather than conducting studies on an actual basis. Mind associated with the human beings generally works through the process of taking the complete with assimilated parts than vice versa procedure. Ausubel states that this can be attained through the process of arranging information in hierarchal series which helps in the area of selecting the most required information form the numerous available ones.

Integrated reconciliation is considered to be a function which occurs when a person has the core capability in the area of understanding the given concept that is considered to be different but also comparable to additional concept (Florea and Hurjui, 2015). The system of misconception may generally happen when the mode

integrated reconciliation is not performed. The idea that are newly acquired and generated are related and integrated with learned subjects that are previously generated. With acquiring these students will have the clear and accurate knowledge in the part of interconnecting old and new learning through the process of making complete use of previous acquired knowledge in the area of supporting the newly acquired knowledge.

Ausubel has suggested that the application of concepts is key to the consolidation of knowledge and proper learning, performed through proper modes of clarification and correction where it is also important to understand the current lesson before moving on to the other one as the student's learning can get interrupted if the student's emphasis on their current lesson is compromised (Taber et al., 2010). Consolidation under all terms is considered to be a part of critical thinking function which will create an adaptive platform for students in the area of self-regulating their lessons.

The systematic combination that is associated with the assimilation theory of Ausubel and concept map of Novak is used in the area of promoting and mastering several skills associated with critical thinking function (Ghanizadeh, 2017). As per Novak, an ideal concept under this respective part is stated as a professed regularity in objects or events or archives of events or objected chosen by label. With the help of a concept map it will be easier and more convenient for students in the area of interpreting, decoding and categorizing the problems. The introduction of the respective concept map is made through the process of addressing and identifying the problems that are associated with the maps, later presenting the same form general to specific concepts based on descending hierarchal method with certain cross links that which portrays a better mode of connecting the knowledge.

Barriers to Critical Thinking Amongst Undergraduate Students

Several factors that are associated with the integration to skills that are related to the system of critical thinking are also affected by certain barriers and obstacles. The barriers arise within undergraduate students due to the issue of lack of proper mode of training, information, preconception along with several time constraints.

According to the statements made by Broadbear, it is understandable that lack of proper training associated with the methodology of critical thinking among the teachers may bring a strong mode of negative impact on skills associated with the critical thinking in students (Buckley et al., 2015). The core issue can be that the teacher may not have clear idea about the factor of implementing skills associated with critical thinking in students though they are well trained and have clear knowledge under this respective part related to the skills associated with critical thinking process.

On the other hand several statements generated by Paul and Scriven identified that the other part of barrier related to the skill of generating critical thinking process among students can be due to lack of availability of resources that are required to generate the function of critical thinking as there are only some instructional materials that provide an accurate information regarding the respective process. Though there are certain books which provide discussion based on critical thinking on a chapter basis but there is no additional information added to the books under this respective part.

Often, on the other hand several preconception that are based on bias about instructional materials also blocks and inhibit ability of students and teachers to think on a critical basis as certain characteristics that are associated with the skills of critical thinking is regarded as analytical skills which is considered to be open minded, fair and inclined in the area of asking questions concerning the particular topics.

The other part of issue is associated with the lectures where they generally cover wide range of information in a limited point of time. This creates issue where they miss the required part to be discussed in a more accurate manner. This particular aspect can strongly bring a negative impact in the skills associated with the critical thinking process among the students where this can also affect their certain aspects that are related to cognitive skills that are required to be enhanced and adopted by them.

Role of Critical Thinking Cognitive Skills Amongst Undergraduate Students

As compared to the theories that are demonstrated by Facione, it is considered to be an understandable part that, among the students in order to maintain strong and adaptive mode knowledge creation, several factors that are associated with disposition dimension and cognitive skills are considered to be a major part that are required to be implemented in order to remain more competitive and successful in their performance (Wilson, 2016). For the purpose of adopting the critical thinking function cognitive skills are generally classified under six major and core skills which involves several factors that are associated with the system of analysis, interpretation, explanation, inference and self-regulatory factors.

As per several perceptions made by experts in the part of interpretation process, it can be stated that the function of interpretation is related to the process of comprehending and expressing the meaning or consequence which is related to wide range of experiences, data, events, situations, judgments, criteria or procedure. Below the part of interpretation are the sub skills that are associated with the system of categorization, clarifying meaning and decoding significance.

Under the part of categorization factors, it is completely related to the system of sorting and the process of sub clarifying the information's for the purpose of understanding and describing the situations or the events. It is completely based upon the system of describing several factors that are related to facial expressions, graphs or

signs and languages and intentions. These are considered to be the part about which the sub skill associated with the process of decoding gives more significance about.

Lastly as compared to several factors that are related to the process of clarifying generally gives more emphasis under the system of finding or paraphrasing certain examples which helps under the area of explaining something to another individual where the meaning under this respective part always remains same as it is intended to be (Martaida, Bukit & Ginting, 2017). Several factors that are associated with the system of analysis is applied in the part of identifying the actual and intended inferential relationship among different statements, questions description and concepts or any other forms that are associated with the methods of representation which is intended in the part of expressing judgment, express belief, reasons, experience or opinions.

The key major sub skills that are associated with the function of analyzing are completely related to the function of detecting arguments, examining ideas and evaluating the arguments. On the other hand, under this respective part the functional prospective related to the system of interference is associated with the system and function of identifying and securing elements which are required in the part of drawing reasonable conclusions (Howard, Tang & Austin, 2015). This is considered to be one of the most effective skill that is required to be implemented among the undergraduate students in order to remain and adopt innovative mode of skill development and faster mode of problem-solving techniques within their internal prospective. Apart from all these factors the last two major core skills are considered to be the most adaptive platform under the area of improving and developing strong and adaptive mode of innovative skills associated with the system of critical thinking cognitive function among the under graduate students.

Lastly, several factors that is associated with the system of self-regulation generally include the process of monitoring the individuals own cognitive activities in a self-conscious manner (Aizikovitsh-Udi & Cheng, 2015). Under this respective part certain elements that are associated with the respective function generally includes the process of conducting own self judgments arising questions on an individual basis along with taking core initiatives in the part of resolving the discrepancies caused. It is completely based upon the internal prospective of an individual where the sub skill is completely related to the system of self-correction and self-examination (Martaida, Bukit & Ginting, 2017). Self-examination means understanding one's own internal behavior. On the other hand, self-correction means taking core responsibilities under the area of resolving and finding solution to the caused and identified discrepancies.

THEORIES RELATED TO CRITICAL THINKING AND DEVELOPMENT OF COGNITIVE SKILLS

Learning Behavioral Theory

Behaviorism under this respective part generally plays a major role when the particular individual comes under the category of passive learning. This depends upon the capability of teachers who fill the mind of students with accurate and required mode of knowledge in order to make them more efficient and in the part of gaining better and adaptive mode of results in their current and future performance (Adams, 2015). It is completely associated with the core principle which is related to the system of Stimulus-response where such behaviors generally occur due to environmental or external stimuli. Under the respective part accurate and innovative mode of knowledge will be reinforced among the students where they get motivated both on an internal and external basis.

It is considered to be a stated factor that, at the introduction stage learners are generally considered to be an empty vessel where the system of behavior is reinforced among them both on the negative and positive basis (Kwan & Wong, 2015). The theory which is associated with the system of Law of Exercise demonstrated that thinking and behavior related to the learner is built through adaptive learning platform generated from the side of their teachers. Thinking opportunities are considered to be more limited as implied thinking occurs through passive mode of processing as information is obtained only to experience.

Constructivism

Under the part of constructivism learners are considered to be more active where they are more influential and confident under the area of experimenting new and innovative things in order to learn something which is part from their actual learning's and knowledge (Howard, Tang & Austin, 2015). They have their own capability of generating understandings and knowledge under which the process is to compare and contrast the new mode of ideas and information with already existing ones. Disequilibrium occurrence can happen in this particular situation where there is a chance of having conflict between the newly acquired ideas and knowledge and the existing ones when the comparison is made between them.

In this particular part this can be avoided through the process of giving and adopting challenging problems among the students which may help them in the area of enabling the system that is associated with the factor of cognitive processing.

Conclusion

It can be concluded that, as compared to certain factors that are related to the system of critical thinking, it can be stated that the functional part of critical thinking is considered to be the strong examination of facts for the purpose of forming judgments. Several subjects associated with the system of critical thinking is considered to be a complex part along with this under this respective part there leads to existence of several definitions which basically includes skeptical, rational, unbiased analysis or

assessment of accurate evidence. Cognitive function on the other hand is a term which is completely based upon the ability of humans in the area of thought processing which must not deplete the healthy individuals on a higher scale (Martaida, Bukit & Ginting, 2017). On the other hand, certain factors that are associated with the system of cognitive skill is defined as individual ability under the area of performing numerous mental activities which are generally associated with the system of problem solving and learning.

The systematic combination that is associated with the assimilation theory of Ausubel and concept map of Novak is used in the area of promoting and mastering several skills associated with critical thinking function. It can be stated that several preconception that are based on bias about instructional materials also blocks and inhibit ability of students and teachers to think on a critical basis as certain characteristics that are associated with the skills of critical thinking is regarded as analytical skills which is considered to be open minded, fair and inclined in the area of asking questions concerning the particular topics.

It is considered to be an understandable part that, among the students in order to maintain strong and adaptive mode knowledge creation several factors that are associated with disposition dimension and cognitive skills are considered to be a major part that are required to be implemented in order to remain more competitive and successful in their performance. For the purpose of adopting the critical thinking function cognitive skills are generally classified under six major and core skills which involves several factors that are associated with the system of analysis, interpretation, explanation, inference and self-regulatory factors. The theories give clear understanding about the internal and external prospective that is required to be adopted and implemented among the undergraduate students to remain more competitive and goal oriented in the future to gain better results based on their performance.

References

- Adams, N. E. (2015). Bloom's taxonomy of cognitive learning objectives. *Journal of the Medical Library Association: JMLA*, **103**(3), 152.
- Aizikovitsh-Udi, E., and Cheng, D. (2015). Developing critical thinking skills from dispositions to abilities: mathematics education from early childhood to high school. *Creative Education*, **6**(04), 455.
- Atabaki, A.M.S., Keshtiaray, N., & Yarmohammadian, M.H. (2015). Scrutiny of Critical Thinking Concept. *International Education Studies*, **8**(3), 93-102.
- Bretz, S. L. (2001). Novak's theory of education: Human constructivism and meaningful learning. *Journal of Chemical Education*, **78**(8), p. 1107.

- Buckley, J. et al. (2015). Defining and teaching evaluative thinking: Insights from research on critical thinking. *American Journal of Evaluation*, **36**(3), 375-388.
- Florea, N. M., & Hurjui, E. (2015). Critical thinking in elementary school children. *Procedia-Social and behavioral sciences*, **180**, 565-572.
- Forawi, S.A. (2016). Standard-based science education and critical thinking. *Thinking Skills and Creativity*, **20**, 52-62.
- Ghanizadeh, A. (2017). The interplay between reflective thinking, critical thinking, self-monitoring, and academic achievement in higher education. *Higher Education*, **74**(1), 101-114.
- Greene, J.A., & Yu, S.B. (2016). Educating critical thinkers: The role of epistemic cognition. *Policy Insights from the Behavioral and Brain Sciences*, **3**(1), 45-53.
- Howard, L.W., Tang, T.L.P., & Austin, M. J. (2015). Teaching critical thinking skills: Ability, motivation, intervention, and the Pygmalion effect. *Journal of Business Ethics*, **128**(1), 133-147.
- Kwan, Y. W., & Wong, A. F. (2015). Effects of the constructivist learning environment on students' critical thinking ability: Cognitive and motivational variables as mediators. *International Journal of Educational Research*, **70**, 68-79.
- Lee, H. et al. (2016). Cooperation begins: Encouraging critical thinking skills through cooperative reciprocity using a mobile learning game. *Computers & Education*, **97**, 97-115.
- Loving G. L. and Wilson J. S. (2000). Infusing critical thinking into the nursing curriculum through faculty development. *Nurse Educator*, **25**(2), pp. 70-75.
- Mahanal, S. et al. (2016). Empowering students' critical thinking skills through Remap NHT in biology classroom. In *Asia-Pacific Forum on Science Learning and Teaching*, **17**(2), 1-13.
- Martaida, T., Bukit, N., & Ginting, E. M. (2017). The effect of discovery learning model on student's critical thinking and cognitive ability in junior high school. *IOSR Journal of Research & Method in Education (IOSR-JRME)*, **7**(6), 1-8.
- Maynes, J. (2015). Critical thinking and cognitive bias. *Informal Logic*, **35**(2), 183-203.
- Taber, K. et al. (2010). Facilitating Effective Student Learning through Teacher Research and Innovation.. 10.13140/2.1.4684.9925.
- Vacek JE (2009) 'Using a conceptual approach with concept mapping to promote critical thinking', *Journal of Nursing Education*, **48**(1), pp. 45-48. doi: 10.3928/01484834-20090101-11.

Wang, J. S et al. (2015). How clear and organized classroom instruction and deep approaches to learning affect growth in critical thinking and need for cognition. *Studies in Higher Education*, **40**(10), 1786-1807.

Wechsler, S. M. et al. (2018). Creative and critical thinking: Independent or overlapping components? *Thinking Skills and Creativity*, **27**, 114-122.

Wilson, K. (2016). Critical reading, critical thinking: Delicate scaffolding in English for Academic Purposes (EAP). *Thinking Skills and Creativity*, **22**, 256-265.

Thai MOOC as a Platform for Learning Ageing Care: learner achievement and Satisfaction

Chutiwat Suwatthipong
Office of Educational Technology, Sukhothai Thammathirat Open University
9/9 Chaengwattana Road, Bangpood, Pakkret, Nonthaburi 11120 Thailand
Chutiwat.suw@stou.ac.th, Chutiwat.train@gmail.com

Abstract

The objectives of this study were to examine the learning achievement, behavior and satisfaction of learners who enrolled in the Holistic Approach on Ageing Care courses. The study was divided into three steps. The first step was to create content structure and content modules. Next step was to analyse and design content for media production. The last step was to examine learning achievement, behavior and satisfaction of learners. The samples were 108 learners who studied in this course for 10 weeks. Data were analyzed by using frequency, percentage, mean and standard deviation. The findings were as follows. 1) Content structure consisted of 9 Modules - Quality Life, Health Promotion, Food and Nutrition Care, Caring for Elderly People with Common Problems, Caring for the Elderly at Home, Financial Management for the Elderly, Law and Privileges of the Elderly, Management for Good and Safety Environments, and Innovation for Elderly Care. 2) Learners had a high level of academic achievement (Mean = 90.29 percentage, SD = 0.06). 3) Most learners watched all videos and study video clips, pdf files all of modules and did learning activities completely. 4

Learners satisfied over all of this course at a high score satisfaction and they also liked video clips with new content because it was very interesting and easy to understand. The video clips were also interesting and easy to understand. They enjoyed learning experience and could adapt this experience into their daily life. They felt that it is convenient to apply these learning abilities in real life.

Keyword: Thai MOOC platform, Ageing care course, learner achievement, Satisfaction

Introduction

The National Strategy of Thailand 2561 - 2580 B.E. (2018 - 2037) encourages educational organizations to develop a lifelong learning system. It focuses on competency-based educational and training systems and flexibility in the development of mechanisms such as open online education, a learning system on digital literacy skills, a credit transfer system, a credit bank system, and measures to encourage people to develop skills. In addition, community learning must be promoted to enable people to access knowledge anywhere and anytime. Community learning centers will be improved to be creative and living learning areas.

MOOCs or Massive Open Online Course allows everyone to study freely and supports a variety of accesses. MOOCs provide online courses and employ technology to allow people from all over the world to study online. Online media are in the form of both lessons and open source learning resources for learning activities and evaluation. Spyropoulou Pierrakeas and Kameas (2014) selected the 6 best practice MOOCs platforms that are widely known, these include:

1) edX is a non-profit platform developed by Harvard and MIT. 2) FutureLearn has 26 participating universities and 3 non-university organizations, including British Museum, British Council, and British Library. 3) Coursera was founded by 2 experts from Stanford and has 33 network universities, offering diverse course content. 4) Udemy is a paid learning platform, providing everyone the opportunity to present MOOCs or their courses on the MOOCs. This system has the work of world-class experts, such as famous writers, with over 3 million people enrolled. 5) Udacity is a company for profit, founded by experts from Stanford focusing on partnerships with IT companies, such as Microsoft,

Google, Facebook, and Twitter. 6) Iversity MOOCs has more than 100,000 students and focuses on students with a higher education level. In addition, MOOCs use various types of educational materials, e.g., videos, quizzes, audio files, documents, presentations, Hypertext, projects, and wikis. All 6 platforms have videos as the main course media. For example, edX and Udacity use videos that are between 5 - 10 minutes long, alternating with tests. Other documents, such as articles, PDFs, Hyperlinks can be used in general platforms. In Thailand, EdX has been chosen as a platform for the development of MOOCs because Edx can create courses that can be divided between students to complete within a week. The system can notify the enrollment date. When students complete their studies, they will receive a free certificate. The learning system can be cooperative learning, Moreover, the EdX Platform is the most reliable Open Source MOOC LMS.

Currently, Thailand has completely entered an aging society. The proportion of the elderly population (aged 60 years and over) has increased to 20 percent in 2018, accounting for approximately 1 in 5 of the total population. It is necessary to prepare oneself to be an elderly person, take care of themselves, as well as, take care of the elderly. However, most people have not yet prepared themselves for health, finance, places to live, benefits, welfare, etc. Also, they did not prepare themselves to take care of family members which can cause problems in terms of family relationships, psychological and emotional aspects, mental health, physical health, and financial, etc. In addition, there are top 5 prevalence diseases among the elderly which are high blood pressure, diabetes, obesity, and osteoarthritis.

Therefore, the development of courses or MOOCs for the general public about holistic care for the elderly is very important to help promote learners with knowledge of preparing to take care of the elderly and being elderly who is able to take care of one's own health and those around them. It will promote learners for lifelong learning. MOOCs enable learners to learn freely. Learners can study, review, and repeat the lessons. The objectives of this study were to 1) examine the learning achievement of learners in the Holistic Approach on Ageing Care courses, 2) examine online learning behavior of learners, and 3) examine the satisfaction of the learners towards the Holistic Approach on Ageing Care courses.

MOOCs: Massive Open Online Course

Stine (2013) and Tosh (2014) provided the definition of MOOCs that it was online learning offering various courses based anyone and anywhere concept and the basic principles of the educational goal of lifelong learning that provides opportunities for free access. It is a sharing of knowledge without any costs or there may be costs for courses with an online certificate. The technology and modern teaching methods are combined, allowing people all over the world to access education online. In Thailand, Thailand Cyber University Project stated that Thai MOOC system was an open education system that allows students and the general public to learn online. Upon completion of each course and passing the assessment criteria, students can receive an online certificate immediately from the system without any registration fees or admission exams. There is no limit of the number of enrolled students.

Required standards for MOOC

Suwannatthachote and Sophonhiranrak (2017) proposed the required standards for MOOCs that were international accepted. They consist of 10 standards, divided into 4 phases. Phase 1 is the course development agreement (standard 1: course outline, standard 2: readiness of the personnel). Phase 2 is course design and development (standard 3: instructional design, standard 4: content, standard 5: learning media, standard 6: communication, and standard 7: copyright and Creative Commons). Phase 3 is opening online courses in the system (standard 8: learner support). Phase 4 is course evaluation (standard 9: learning management outcomes, standard 10: course improvement).

Methodology

The population in this study was the general public who enrolled in the Holistic Approach on Ageing Care courses. The class started on 8 June 2019 and ended on 16 August 2019, with a total duration of 10 weeks. With 316 enrolled learners, there were 108 learners completing the course, accounting for 34.18 percent of the total number of enrolled learners. Learners had to take the test before studying, during studying, and after studying. Students who were able complete the course with a total score of not less than 80 percent will be considered qualified and receive an online certificate. Data

were analyzed by using frequency, percentage, mean, standard deviation. Data collection was divided into 3 steps. Step 1 is to create content structure and content modules. Step 2 is to analyze and design content for media production. Step 3 is to collect data on learning achievement, learning behavior, and satisfaction of learners.

Findings

The findings of the study of the development of the Holistic Approach on Ageing Care courses for MOOCs were divided into 4 parts which were Part 1: Content structure and content modules, Part 2: Learning achievement of learners, Part 3: Behavior of learners, and Part 4: Satisfaction of learners toward the course.

Part 1: Content structure and content modules

Based on group discussions with experts in Nursing, Human Ecology, Law, and Science and Technology, the results of the analysis of the content structure of the Holistic Approach on Ageing Care courses consisted of 9 Modules including 1) Quality Life, 2) Health Promotion, 3) Food and Nutrition Care, 4) Caring for Elderly People with Common Problems, 5) Caring for the Elderly at Home, 6) Financial Management for the Elderly, 7) Law and Privileges of the Elderly, 8) Management for Good and Safety Environments, and 9) Innovation for Elderly Care. The media format is content texts, articles in PDF, hyperlink, images and video media.

Part 2: Learning achievement of learners

The achievement scores of 108 learners who completed the course were from the post-test scores in each module and the final exam after completing all 9 modules. Data was by analyzed by using frequency, percentage, mean, and standard deviation. The details are as follows.

Table 1 The achievement scores of 108 learners who completed the course

score	frequency	percentage
90.01 - 100.00	62	57.41
80.01 - 90.00	40	37.04

70.01 - 80.00	6	5.56
Total	108	100.00
Mean = 90.29, SD = 0.06		

Table 1 shows that most learners (62 people) who completed the courses had scores between 90.01 - 100.00, accounting for 57.41 percent, followed by having scores between 80.01 - 90.01 (40 people), accounting for 37.04 percent. The average scores were 90.29 and standard deviation was 0.06.

Part 3: Behavior of learners

After learners completed the courses, the author asked 50 learners to do the survey to study their learning behavior to successfully complete the course. The survey results are shown in Table 2 and Table 3.

Table 2 General information of learners (n = 50)

General information	frequency	percentage
1.sex		
1) male	8	16.00
2) female	42	84.00
2.age		
1) < 30 years	6	12.00
2) 30-39 years	8	16.00
3) 40-49 years	24	48.00
4) 50-59 years	11	22.00
5) > 60 years	1	2.00
3. highest education		
1) Bachelor Degree	27	54.00
2) Master Degree	19	38.00
3) PhD Degree	2	4.00

General information	frequency	percentage
4) other	2	4.00
4. career (choose more than 1 career)		
1) Students	4	8.00
2) Graduate Students	24	48.00
3) Teachers / Educational Personnels	10	20.00
4) Government officials/Government employees /State enterprises employees	21	42.00
5) Employees	4	8.00
6) Private employer	2	4.00
7) Unemployed	1	2.00

Table 2 shows that most learners were 42 females (84.00 percent), and aged between 40-49 years (48.00 percent). Most learners had Bachelor degree, as the highest education, were 27 (54.00 percents). While 19 learners had Master degree accounting for 38.00 percents and only 2 learners had PhD degree. Regarding, their career, it was found that most of our learners (n = 24) were graduate students representing 48.00 percents. This followed by 21 government officials/ governments employees/ state enterprise employees (42.00 percents).

Table 3 Behavior of learners (n = 50)

General information	frequency	percentage
1. How long does it take to finish the course (approximately)		
1) within 1 - 3 days	19	38.00
2) within 4 -10 days	16	32.00
3) within 11 - 30 days	13	26.00
4) more than 30 days	2	4.00
2. Behavior of watching video media in Modules		
1) watch 100 % of video	25	50.00
2) watch 70 - 99 % of video	21	42.00
3) watch 40 - 69 % of video	4	8.00

General information	frequency	percentage
4) watch 10 - 39 % of video	0	0.00
5) watch < 10 % of video	0	0.00
3. Behavior of study all content PDF documents in lessons		
1) study all 100 %	23	46.00
2) study 70 - 99 %	23	46.00
3) study 40 - 69 %	2	4.00
4) study 10 - 39 %	2	4.00
5) study <10 %	0	0.00
4. do pretest in each lesson		
1) do complete 100 %	46	92.00
2) do some lessons 70 - 99 %	3	6.00
3) do some lessons 40 - 69 %	0	0.00
4) do some lessons 10 - 39 %	1	2.00
5) do less than 10 % or didn't do it at all	0	0.00
5. do posttest in each lesson		
1) do complete 100 %	48	96.00
2) do some lessons 70 - 99 %	1	2.00
3) do some lessons 40 - 69 %	1	2.00
4) do some lessons 10 - 39 %	0	0.00
5) do less than 10 % or didn't do it at all	0	0.00

The results in Table 3 have shown that 19 learners finished this course within 1 - 3 days (38.00 percent), followed by 16 learners completing the course within 4 - 10 days (32.00 percent) and 13 learners within 11 - 30 days (26.00 percent), respectively. Most 25 learners watched all video clips (50.00 percent), followed by 21 learners watching 70 - 99 percent of all video clips (42.00 percent) and 4 learners watching video 40 - 69 percent of all video clips (8.00 percent), respectively. An equal number of 23 learners studied all content from lessons and PDF documents in modules and studied 70-99 percent of the content (46.00 percent). Most learners (46 out of 50) did pretest (92.00 percent) and 48 learners did posttest (96.00 percent)

Part 4: Satisfaction of learners toward the course.

The results of satisfaction of learners toward the course consists of video media, content, Learning and Management System (EdX) and other aspects, are summarized in Table 4.

Table 4 Satisfaction of learners toward the course (n = 50)

List	M	SD	Level of suitability
1.Video media			
1) beautiful and interesting	4.44	0.64	High
2) The characters in the video media are clear and easily read	4.46	0.65	High
3) Illustrations in video media are easy to understand	4.58	0.50	Very High
4) The sound of the music in the video media is clear and appropriate	4.50	0.58	Very High
5)The instructor's voice is clear	4.60	0.53	Very High
6)The video quality is clear	4.58	0.57	Very High
7) The length of each video media is appropriate	4.48	0.61	High
8) Useful video media Gain more knowledge and apply	4.60	0.57	Very High
9) Closed captions are useful for watching media	4.58	0.54	Very High
10) Closed caption is accurate	4.64	0.48	Very High
Total video media average	4.55	0.57	Very High
2.Content			
1) Content suitable for purpose	4.58	0.50	Very High
2)The content is accurate	4.52	0.50	Very High
3)Appropriateness of content order	4.54	0.58	Very High

List	M	SD	Level of suitability
4) Content modernity	4.56	0.50	Very High
5) Classification Lesson of content	4.56	0.50	Very High
6) Appropriateness of content	4.46	0.61	High
7) Suitability of the language used	4.60	0.49	Very High
8) Illustrations communicate directly with the content.	4.58	0.50	Very High
9) This lesson is appropriate for publicizing for further learning	4.66	0.52	Very High
Total content average	4.56	0.52	Very High

3. Learning and Management System (EdX)

1) Learners can access the media they need quickly.	4.46	0.54	High
2) Students using the system Easily and conveniently	4.54	0.58	Very High
3) The format, size and placement of various media on the web is the same standard. Be consistent	4.52	0.58	Very High
4) Different menus are in the same position on every screen	4.52	0.54	Very High
5) Symbols, icons, or images On the interpretation system makes it easy to understand	4.50	0.54	Very High
6) The web screen design has support for both PC, Tablet and Smartphone	4.60	0.53	Very High
7) The system has a forum for students	4.54	0.58	Very High
8) The system has a way to coordinate with the teaching	4.48	0.61	High

List	M	SD	Level of suitability
team using social media such as Line Group, email			
Total Learning and Management System (EdX) average	4.52	0.56	Very High
4. Other aspects			
1) Information Introduction to course The evaluation criteria is clear, easy to understand	4.44	0.58	High
2) Appropriateness of the quantity of questions in the test before and after learning in each lesson	4.50	0.54	Very High
3) Appropriateness of the quantity of questions in the pre and post test (20 questions each) of the entire subject	4.56	0.54	Very High
4) The speakers have the knowledge and appropriately transfer knowledge in every lesson.	4.74	0.44	Very High
5) Satisfaction with the course Holistic care for the elderly (STOU021) as a whole	4.66	0.52	Very High
Total other aspects average	4.58	0.52	Very High

Overall, the results (Table 4) have demonstrated that learners were satisfied in all aspects, including video media, content, Learning Management System, and other aspects at the highest level. Averagely, other aspects had the highest scores (Mean = 4.58, SD = 0.52), followed by the content (Mean = 4.56, SD = 0.52) and video media (Mean = 4.55, SD = 0.57), respectively. In the aspect of video media, it was found that learners were satisfied with the illustration in the video media which was easy to understand. The music in the video media was clear and appropriate. The instructor's voice was also clear. The

video quality was clear. The video media was found to be useful. Learners gained more knowledge and can apply it to their daily life. Closed caption was useful for watching media and had accuracy at the highest level. In the aspect of the content, it was revealed that learners were satisfied with the content, in terms of the suitability of the objectives, the accuracy, the suitability of the content organizing, up-to-date content, the suitability of language, illustrations that can communicate the content, and this course was suitable to be distributed for further learning at the highest level. As for Learning and Management System (EdX), it was found that learners could use the system easily and conveniently. The format, size, and media position on the web were the same standards and consistent. Menus were in the same position on every screen. Symbols, icons, and images were easy to understand. The web screen design supported PC, Tablet and Smartphone. The system had a discussion forum, allowing learners to chat, discuss, and ask information at the highest level. As for other aspects, it was found that learners were satisfied with the number of pre-test and post-test in each module and the number of items in pre-test and post-test (20 questions each). Instructors were knowledgeable and can transfer knowledge appropriately in every module. The overall learner's satisfaction toward the course (STOU021) was at the highest level.

In addition, students have expressed their opinions and recommendations on various issues as follows

The obstacles that affect learning. 1. Time. Some learners thought that it consumed a lot of time to study. When they studied, they preferred not be interrupted. Learners had to manage and arrange time to study. 2. Learner characteristics. Some learners were afraid to study. Some lacked of discipline and determination in learning. 3. Learner's readiness. Learners had difficulty to access to the system and took a long time to access at the first time. Some contents in the modules were difficult.

Things that need to be improved. 1. Time. Class should be open without specifying periods. 2. Content and media. The amount of the content on theory should be reduced. The content should be short and concise. The amount of video media should be increased. The content on modern innovations should be increased and there should be more samples of the elderly that were supported by the elderly club. There should be

more questions to cover the content. 3. The system. The system should be improved for easier access.

What I like about this study. 1. Content and media. The video had new content and the presentation was interesting, easy to understand, not too difficult, fun and attractive to follow. Learners gained more experience from watching the video. The instruction for study was very useful. It helped learners to study by themselves. Instructors can transfer knowledge well. 2. Learner characteristics. Learners can study by themselves continuously, conveniently, anytime and anywhere. 3. Other aspects. Learners gained more knowledge and can apply to use in real life. There should be Line Group to share news and promote courses.

Additional suggestions and comments. 1. Content and media. Pre-test and post-test should be included in every module. Additional content on other topics should be added, for example, patient caring system for specific diseases, such as stroke, coronary artery disease, cancer, ward management, and nursing of various diseases. There should be additional supplementary documents for learners to review the lessons. CNEU (a certificate from the Nursing Council) should be provided. 2. Time. Study time should be increased. Class should be open widely. 3. Public relations. The course should be publicized for nurses who took care for the elderly in the hospitals. There should be Facebook page to publicize the course and communicate with learners.

Conclusion

Holistic Approach on Ageing Care courses (STOU021) on the Thai MOOCs Platform is another online course that gives people the opportunity to upgrade their knowledge. It allows everyone to study freely, anywhere, anytime, with high flexibility which encourages people to have lifelong learning (Sine, 2013 and Tosh Yamamoto, 2014). Each course had the required standards, including 1) course outline, 2) readiness of the personnel, 3) instructional design, 4) content, 5) learning media, 6) communication, 7) copyright and Creative Commons, 8) learner support, 9) learning management outcomes, and 10) course improvement (Suwannachot and Sophonhiranrak, 2017). There were only 34.18 percent of learners who finished the course in Thai MOOCs. This was because they had high flexibility. Some

students had limitation of time and lacked of management for learning. They also lacked of discipline and determination in learning. Some learners thought that there was too much content. Thus, the content should be short and concise. However, learners like this learning method. The content presentation was interesting. It encouraged learners to learn anywhere and anytime as convenience. They gained knowledge that can be used in daily life.

References

- Office of the Higher Education Commission, Thailand Cyber University Project. (2016). *History of the Thai Mooc Project*. [Online]. Retrieved January 1, 2020 from <http://mooc.thaicyberu.go.th/about-us>
- Office of the National Economic and Social Development Council. *The National Strategy of Thailand 2018 – 2037*. [Online]. Retrieved January 1, 2020 from https://www.nesdb.go.th/download/document/SAC/NS_SumPlanOct2018.pdf
- Spyropoulou, N., Pierrakeas, C. & Kameas, A. (2014). *Creating mooc guidelines based on best practices*. Retrieved December 11, 2019 from https://www.researchgate.net/profile/Christos_Pierrakeas/publication/281555098_Creating_MOOC_Guidelines_based_on_best_practices/links/5735d47508ae9ace840ae0a1/Creating-MOOC-Guidelines-based-on-best-practices.pdf
- Stine, K. (2013). *MOOCs and Executive Education: A Research Report prepared for UNICON*. [Online]. Retrieved December 3, 2014 from <http://uniconexed.org/2013/research/UNICON-Stine-Research-06-2013-final.pdf>
- Suwannatthachote., P., Sophonhiranrak, S. (2017). *Internationally recognized MOOC standards and practice*. Bangkok: Office of the Higher Education Commission, Thailand Cyber University Project.
- Tosh, Y. (2014). *Future Design in Education*. Tshlab, Kansai Univ. All rights reserved. Kasetsart University ETC Seminar Nov. 21, 2014.

The Leadership Gym: A proposed undergraduate leadership program for Generation Z

Dr. Maria Akbar Hussain Saberi
Ahlia University, Bahrain

Recently, the world labor market has received a generation of youth unlike any other in human history. Born after the commercialization of the Internet, Generation Z (Gen-Z), now known for being a digital native, is both location aware and highly connective. In addition, Gen-Z has a dominant kinetic learning style coupled with fast decision making and bite size information gathering capabilities. These characteristics have led to the emergence of a worldwide learning by doing, digitally based, learner centered higher education system equipped with "apps" based social media platforms. This new learning pedagogy is not restricted to the technical fields of higher education. Courses related to human skills development have also shifted to cater the learning styles of Gen-Z. Since such a learning pedagogy is new to higher education, there are not many applications of human skills development programs catered to Gen-Z's dynamic learning style. Amongst these being leadership programs. Therefore, this theoretical paper proposes a contemporary undergraduate leadership program called the "Leadership Gym". This proposed program will give learners a gym like experience where training methods are made compatible to the new generations' learning paradigm. In addition, seven intended learning outcomes (ILOs) are designed into the proposed leadership program. These being: Self-directed learning, self-initiative, creativity, communication skills, emotional intelligence, team building, and analytical skills. At the leadership gym learners are considered an integral part of the learning environment where they get to choose the time, space, and mode of their own learning experience. Furthermore, this paper goes on to elaborate on the gym's management structure and process as well as the learners' performance management methodology. In addition, detailed descriptions of the physical, cognitive, social, cultural and emotional aspects of the leadership gym's design is stipulated. The design components and learning outcomes of the leadership gym are based on literature reviews in order to enrich the proposed program.

Bite-sized learning: Enhancing deep learning in adult learners

Eun-Young Yeo, Yan Yin Ho
Singapore University of Social Sciences, Singapore

Micro-learning is a bite-sized approach to delivering learning material through short-term activities or small learning units that take no more than two to five minutes to complete (Bruck, Motiwalla, & Foerster, 2012; Torgerson, 2016). This approach is widely used in corporate and commercial training as it is less time-consuming and fits well into working adults' busy schedule (Armstrong & Sadler-Smith, 2008; Fox, 2016). This method of learning may also suit adult learners who study part-time and are also faced with busy schedules, multiple commitments, roles and responsibilities. Finding long stretches of time to study is a challenge for adult learners and they tend to set aside time at night after work or on the weekends for this. The current study collected data from 61 participants for the experimental group, all adult learners taking a Cognitive Psychology course as part of their part-time university degree programme. It was found that given the opportunity to access bite-sized learning material during pockets of free time in the day, 80% readily accessed them on their mobile devices. The assumption was that consequently, they would come to class in the evenings better prepared to participate in group discussions and class activities, and enhance their learning. Andragogy postulates that adult learners are intrinsically rather than extrinsically motivated. With a fully developed sense of self, which means being responsible for their decisions and knowing what they want to learn, adult learners are assumed to be self-directed in their learning. Pintrich and De Groot's (1990) Motivated Strategies for Learning Questionnaire (MSLQ) was administered and although the control group was found to be more intrinsically motivated to learn ($F(1, 78) = 5.71, p = .019$) than the experimental group (completed micro-learning activities), results of this study show that the experimental group generated more in-depth classroom discussion compared to the control group. Class group discussions were recorded and students' depth of learning achieved was assessed according to Bloom's taxonomy of learning. We, thus, propose that it is not sufficient to rely on adult learners' self-directedness and that they can benefit from the provision of appropriate study tools, such as bite-sized learning materials, to facilitate deep learning and achieve better learning outcomes. Bite-sized learning is the innovative approach that offers the flexibility that adult learners seek to enhance their practice of self-directedness in their learning.

The Development of Electronic Learner Support System in Distance Education for Sukhothai Thammathirat Open University's Undergraduate Students

Thanathnuth Chatpakkarattana
Sukhothai Thammathirat Open University,Thailand

The purposes of this research were to develop an electronic learner support system (e-LSS) in distance education for undergraduate students at Sukhothai Thammathirat Open University (STOU). The research and development procedure were divided into four phases. In the first phase, the current situation of the LSS in distance education was evaluated. The second phase involved analyzing the needs and opinions from instructors, undergraduate students, technicians, and academic specialists' opinions about an electronic learner support system in distance education. The third phase was to create an e-LSS in distance education. In the fourth phase, the effects of the system in distance education were tested. The sample group in this study consisted of 30 undergraduate students at STOU. The students studied the e-LSS in distance education via the Internet for five weeks. Data were analyzed by using frequency, percentage, arithmetic mean, standard deviation, and t-test Dependent

The results of this research showed that

- 1) The Organization have responsibility to support electronic learners in distance education consisted of (1) Office of Registration, Records and Evaluation, (2) Office of Educational Services, (3) Information Service Center and STOU One Stop Service Services Center, and (4) Regional Distance Education Coordinating which each office has a unique role or focus on different services and have interconnected work.
- 2) Instructors, undergraduate students, technicians, and academic specialists have opinions about an e-LSS in distance education should be easily accessed in the form of a web application or application with a connection to social media. The media that will be used to support learners are focused on the media in the form of infographic and motion graphics.
- 3) The e-LSS in distance education for STOU's undergraduate students consisted of Input, Process, Output and Feedback. Input consisted of (1) problems of learner support system in distance education; (2) the current situation of LSS in distance education; (3) expected learning outcomes of graduates of STOU; and (4) Thailand Qualifications Framework or TQF. Process, the second component consisted of (1) analysis, (2) design, (3) development, (4) implementation, and (5) evaluation. Output, the third component consisted of (1) data and information, (2) web application, and (3) service. The last component was feedback on (1) knowledge of users, (2) stability of web applications, and (3) convenience and speed of service.
- 4) The undergraduate students at STOU who completed the e-LSS in distance education had statistically higher problem-solving ability at .05 significant level.

Development and Validation of the Music Education Teaching Practice E-Supervision System Using Google Classroom Application.

Associate Prof. Mohd Hassan Bin Abdullah, Mohd Azam Bin Sulong, Mahayuddin Bin Abdul Rahim
Sultan Idris Education University, Malaysia

Teaching practice programs have been recognized as one of the most important components of a teacher training program that will produce quality beginning teachers. One of the most important elements of teaching practice is supervision. Currently, only two or three times, supervision is conducted by the supervisor for each teaching practice session at Universiti Pendidikan Sultan Idris, Malaysia. The question is, is that enough to guide the trainee well? Supervisors and teachers have been facing many problems and constraints in the process of supervising teaching practice. These include factors such as institutional distance, time constraints, budget constraints and supervisory skills. This study aims to develop a complete system of E-Supervision training teaching music education using the Google Classroom application that will be a support system for face-to-face supervision currently in use. Studies in the form of experimental case study use a mix of qualitative and quantitative study design. The research data was obtained through document analysis, focus group discussions, interviews, observations and even questionnaires. The E-Supervisory Training system was undergoing expert validation before being implemented in real setting during a training session involving music education trainee teachers and supervising lecturers. The results were analyzed and standardized to see the usefulness and impact of teaching practice. It is found that with the aid of e-supervision application system, both supervisors and students benefit from the system in term of effectiveness of supervision. The findings of this study can be used by various institutions of higher learning involved in teacher training especially music teachers. It can also be used by policy makers and stakeholders who are involved in teacher training. Keyword: E-Supervision, Teaching Practice, Music Education, Teacher Training, Google Classroom.

Prof. Hiroyuki Obari
Aoyama Gakuin University, Japan
Term Prof. University of Oxford, U.K

In 1950, he published a scientific paper on the question of whether a machine could 'think'. The paper introduced the 'Turing test' (Wooldridge, 2018, p.6). Ninety years have passed since the invention of the computer. Nowadays AI has intervened in every aspect of our lives in the 21st century. AI today is everywhere and it will soon become ever more prominent because AI software can reliably and efficiently make better decisions than people in a huge range of settings. In the future, AI will be invisibly embedded everywhere in which decisions are made (Wooldridge, 2018, p44). Recently, artificial intelligence (AI) speakers can be experienced efficiently and smoothly using hand-held devices, which can enhance the construction of broader learning environments and viewpoints (Kepuska & Bohouta, 2018). AI/mobile technologies have succeeded in transforming learning methodologies. One such methodology adopted successfully in recent years is blended learning (BL) (Obari & Lambacher, 2014). BL combines traditional face-to-face classroom methods with computer-mediated activities, resulting in a more integrated approach to language learning. AI, mobile devices, and social media are the key components of the next generation of this novel wave of educational instruction. A constructivist approach to flipped learning can motivate students by activating their brains to create new knowledge and reflect more consistently and deeply on their language learning experiences. The main purpose of this study is to introduce two case studies carried out to ascertain the effectiveness of a BL/FL-training program that incorporated the AI speakers Google Home Mini and Amazon Alexa to improve the English proficiency of native Japanese, including 21st-century learning skills for developing international cultural awareness.

The present study focused on assessing the use of the AI speakers Google Home Mini and Amazon Alexa as part of a flipped-learning environment to improve the English skills of two groups of native Japanese undergraduates. The participants were 47 native speakers of Japanese, all third-year Economics majors at a private university in Tokyo. Pretest and posttest TOEIC scores, as well as post-training survey results, were used in evaluating the overall effectiveness of the program. Gains in TOEIC score indicated the flipped-learning program that incorporated AI speakers improved the students' overall English skills, especially listening comprehension. The results suggest the integration of AI, along with social media and 21st-century skills, may be an effective way to improve the English language proficiency of adult ELT learners.

A triadic model of self-regulated learning, motivation, and academic goals: A structural equation modeling to assess gender difference

Ph.D. Candidate: Eman Faisal
University of Cambridge, UK

This study aimed to explore the relationships between self-regulated learning, motivation, and academic goals in a sample of Saudi first-years and to investigate any difference in these relationships between males and females. The study developed a triadic model including these variables. This mixed-methods research included two sequential phases, a qualitative investigation, then, a quantitative study. Semi-structured interviews were conducted on university teachers, first-years, and the students' family members. The themes emerging from the analyses of the qualitative data informed the development of the questionnaire, which was administrated on a random, survey, sample of 2174 first-year undergraduates. The conceptual models were verified by testing the measurement model (using confirmatory factor analysis), and then, the structural model (using structural equation modelling). The models fit the data well (χ^2 [df] = 489.138 [2572]; $p < .001$; CFI = .927; TLI = .920; RMSEA [90% confidence interval] = .047 [.042-.052]; SRMR = .052). It was found that self-regulated learning was associated with motivation in the male and female groups ($\beta = .402^{***}$; $.169^{**}$) respectively. Self-regulated learning was associated with academic goals in the male and female groups ($\beta = .652^{***}$; $.801^{**}$) respectively. However, the relationship between motivation and academic goals in the male group was ($\beta = .203^{***}$) but non-significant in the female group. Interestingly, this association became significant ($\beta = .136^{**}$) if self-regulated learning is a mediator. This later maybe have an impact on how Saudi first-years females set their academic plans and aims. All the relationships probably are influenced by the nature of the Saudi Islamic culture and its collectivist society.

Longitudinal data in psychology and education: A diary task method

Ph.D. Candidate: Eman Faisal
University of Cambridge, UK

This study aimed to show the benefits of using a diary task in collecting longitudinal data in the fields of psychology and education, and in particular, in collecting data about

self-regulated learning (SRL), self-efficacy (SE), and seeking social assistance (SSA). Twenty-five first-year undergraduates in one of Saudi universities were participated in this study. The diary included three open- and closed- ended questions about SRL, SE, and SSA, which were sent to the participants every week – for 11 weeks (i.e. 11 points of data were collected). The results showed that the diary task helped in collecting useful longitudinal data, help the students to express their learning methods and feeling during different times in the term, and help some of them to assess their learning (some learners used the diary task as a self-evaluation tool). However, in addition to the diary task, it is recommended to use other methods when studying SRL, SE, and SSA, which would help collecting qualitative and quantitative data that help in exploring and understanding these three elements.

Sustainable Health Financing: Bedrock for Wealth Creation & Dependable Workforce in the Metropolitan Regions of Sub-Saharan Africa

DR. AUGUSTINA OFORIWAA
ACCRA METRO HEALTH DIRECTOR, GHANA HEALT SERVICE, Ghana

The study investigated Health Financing as a panacea to unemployment malady in Ghana and the entire ECOWAS sub-region from 1999-2018. On the threshold of the general theory of finance, the model of the study specified unemployment as the dependent variable and Health Financing as the independent variable. Accordingly, unemployment rate was employed as the proxy for the former while Commercial Banks credit to agriculture, micro finance banks credit to agriculture, and Governments allocation to agriculture were employed as proxies for the latter; however, both inflation and gross domestic product were employed as control variables. In relation to these proxies, annual time-series data were sourced from Seven (7) Central Banks of the ECOWAS Sub-region namely Ghana, Nigeria, Senegal, Gambia, Cameroon, Sierra Leone and Mali. Statistical Bulletins of various editions and reports of the National Bureau of Statistics were also reviewed. Estimating these using Auto Regressive Distributed Lag (ARDL) approach, the study found that, both Commercial Banks credit to Agriculture and Microfinance Banks credit to Agriculture were inversely related to unemployment, that is, the more agricultural credits were extended by the duo of Commercial banks and Microfinance banks, the less the unemployment malady in the ECOWAS Sub-region. It, also, found that, Governments allocation to Agriculture was positively related to unemployment, that is, Governments allocation to agriculture still worsened unemployment malady in the sub-region. It, further, found that, both inflation and gross domestic product exerted positive effects on unemployment in the sub-region, that is, the duo, also, worsened the unemployment malady in the entire ECOWAS region. The study, therefore, concluded that, Agricultural Financing is a panacea to unemployment

malady, especially through the initiatives of the financial institutions. As a result of these, it was, among other things, recommended that, Governments should, with sincerity of purpose, embark on programmes and policies that would diversify away the economy from crude oil to functional investments in agriculture. When this is supported by industrialization strategies, it will go a long way in creating job opportunities for the teeming population of ECOWAS sub-region. The study also established that Agricultural Development Banks and African Development Bank Group must develop homegrown credit schemes to promote strategic industrialization in the sub-region which has a direct bearing employment creation.

Keywords: Unemployment, Agriculture, Health Financing, Credits, Commercial Banks, Microfinance Banks, African Development Bank Group, Homegrown credit scheme, strategic industrialization, ECOWAS.

Advancing the Working Rights of Persons with Disabilities: A Case-Study of Governments' Interventions, Disabilities' Common Fund & Affirmative Action Policies.

Dr. Dominic Yeboah
Director of Education & Public Advocacy
National Commission for Civic Education, Ghana

The Convention on the Rights of Persons with Disabilities (PWDs) enjoins member states of the United Nations to promote, protect, and ensure the full enjoyment of human rights by people with disabilities and ensure that they enjoy full equality under the law. The Convention has served as the major catalyst in the global movement from viewing PWDs as objects of charity and social protection towards viewing them as full and equal members of society, with human rights. It is also the only UN human rights instrument with an explicit sustainable development dimension. The Convention was the first human rights treaty of the twenty-first century. The United Nations Conference on Trade & Development 2017 report on "Disadvantaged Groupings" sees empowerment of PWDs as a great social Intervention with the propensity of democratizing real wealth. It is the surest bet to curb the menace of unemployment and endemic poverty among PWDs. To sustain this approach calls for Targeted Policy Direction, mass-based Advocacy, Deliberate Interventionism and Sustainable Funding Source for PWDs. This approach must focus on promoting Self-employment or entrepreneurship among PWDs, promoting Intrapreneurship for PWDs, capacity building on rights and privileges of PWDs etc. Similarly, Governments and State Led Agencies in charge of driving the course of PWDs can introduce the quota system in public sector employment and political appointments for PWDs. In the same way, Reliefs Funds and Common Funds for Persons with Disabilities can be introduced to cater for needs of PWDs. This must be backed by the required whatever necessary legislations. All Geopolitical and Socio-economic groupings like UNO, AU, ECOWAS COMESA, SADC, EU etc. must provide the necessary

political will towards operationalizing the various treaties on the rights and privileges of Persons with Disabilities. According to the World Health Organization 2015 report on the danger faced by Persons with Disabilities, greater percentage of the world population stands the risk of suffering from one form of disability or the other. Estimate One billion people, or 15% of the world's population, experience some form of disability, and disability prevalence is higher for developing countries. This figure is expected to increase further and rightly so should be the bold steps towards safeguarding and advancing the working rights of PWDs. The 17 SDGs equally must have each goal addressing the key needs of PWDs. Once the Chief Employer in every economy is the Government of the day, the responsibilities lie squarely at the doorstep of the Government. This research work is geared towards establishing the gaps in advancing the working rights of PWDs and the possible measures to ameliorate the situation. Keywords: Persons with Disabilities, international human rights, Advocacy, Deliberate Interventionism, Mentorship, Sustainable Funding, Geopolitical groupings, World Health Organization, Sustainable Development Goals.

Use of Drone Technology, the most sustainable and efficient way to improve health delivery in the Peri-Urban and Rural Communities of West Africa.

Dr. Kwaku Boahen
Director of Specialized Projects & Services.
Ghana Health Services

Drones make it possible to deliver blood, vaccines, birth control, snake bite serum and other medical supplies to rural areas and have the ability to reach victims who require immediate medical attention within minutes, which in some cases could mean the difference between life and death. Drone use for commercial purposes has gotten much press of late due to Amazon announcing it intends to use drones to deliver packages to customers. This is a very intriguing and transformational idea with many intended and unintended consequences. The future use of drones in healthcare also is very thought provoking. How can the industry best use this technology to improve safety and care delivery? Well for starters, drones already have been trialed to deliver food aid and medical supplies to areas hit by disaster, such as Haiti, by a startup called Matternet. The rapid delivery of vaccines, medications and supplies right to the source could quash outbreaks of life-threatening communicable diseases. Communication equipment, mobile technology, portable shelter comprise the vast list of what could be delivered in a rapid fashion to areas where critical infrastructure damage would prevent ground or typical air transport.

Drones help provide more efficient healthcare to patients from a distance or while mobile. In the future, small indoor drones could deliver medicine to the bedside of a patient from the pharmacy, thus eliminating some human steps. This would lead to more

rapid and less error prone administration of medications. Nurses and pharmacists can work more efficiently as supplies can be summoned to the bedside instead of the time-consuming task of gathering necessary items. Drones could deliver medications and supplies to patients being cared for in the home instead of a hospital-based setting. The future will see more outpatient care and even home-based care that used to be delivered in the hospital. For many conditions, drone technology may make it easier and safer to provide this home-based care. When a provider rounds on a home patient, blood can be drawn and immediately sent by drone to the lab to be tested. Medications, antibiotics and treatments ordered by the provider may be delivered to the home by drone.

This technology may allow more people in nursing homes to receive care at home for a longer period of time, which would increase the independence of the growing boomer population as they age. A drone could keep tabs on a patient living at home with dementia or deliver a meal to someone who cannot prepare his or her own meals. I can envision drone automated external defibrillators (AED) that would fly to the patient in a public space to provide rapid defibrillation for ventricular fibrillation. No longer would a person have obtained AEDs from a specific location that may be challenging to find in a rapid fashion. Simply summon the AED with the push of a button or smart phone app.

Healthcare organizations already are deploying mobile technology to solve some of the problems in the industry today. Mobile devices, wearable tech, remote monitoring, telemedicine and information sharing platforms all are transforming healthcare. Likely in the foreseeable future, drones, robots and artificial intelligence will assume many tasks in healthcare that are performed by humans, to reduce variability, cost and error

Methods: Data from the Directorates of 17 Sanitation Ministries in Africa for the years 2012-2017 were used. Chi-square test and Logistic Regression Model were used to evaluate the relationship between usage of technologies and waste management.

Results: 94.6% of Cosmopolitan Government Structures still ready to resort to waste to Energy Technologies only 5.4% has instituted appropriate advanced technologies on waste to energy. This is mostly called the Waste to Energy Projects (WTE Projects). The upscale of these waste to energy technologies has the propensity of creating sustainable wealth, reducing more filth-induced sicknesses and mostly importantly create worth. Estimatively, close to 23% of Health budgets of most Governments in the Sub-Saharan Africa goes into filth induced sickness. This implies that adopting the needful technologies in waste management will end not only creating wealth but undeniably create healthy Sub-Saharan Africa. Most Cities have become a confused web of disorganized human activities where the life somehow moves within squalid, filthy and shabby urban envelop caused by overcrowding, insanitary environment, the heterogeneous mixture of non-conforming functions.

Conclusion: Waste to Energy must be embraced by many Sub-Saharan African Countries not only as creating a clean energy but riding our Cosmopolitan areas of needless filth. This has impact on urban sustainability.

Keywords: Drone technology and Sorted municipal wastes; Clean Energy; Climatic Changes; Logistic Regression, Urban sustainability.

Creative Education, a Tool for Changing the Narrative of the Chew and Pour System of Education, Prerequisite for Modern Day Business Management

Dr. ERIC ADJEI BOATENG
National Curricula Instructor

Ghana Education Service

The traditional educational system has ended up producing mostly products of pen pushers (Prof. Nsowah Nuamah, 2005). The modern educational system must not only be directed towards the development of the arms of future specialists by professional knowledge and abilities, but also on formation of free creative thinkers, requirement to continuous self-education needful for the required innovation in the business world. This research work is devoted to one of actual problems in education to a problem of search of innovative approaches in formation of creative thinking of students. The literary review containing disclosure of the concepts "creativity" by different educational scientists among which are Sir Kenneth Robinson, an English citizen (November 2014), Clara Hemphill, a Pulitzer Prize-winning journalist and Randi Weingarten etc all give credence to the subject matter under review.

In a generalized view, creativity discussed as ability to put forward original, non-standard ideas, to apply various strategy in the solution of problems, readiness to develop the arisen ideas. "Creativity" is understood by many researchers as deviation from the status quo way of approach. The "chew and pour" system of education has produced what is termed as graduates of mass destruction in the industrial world.

Special attention must be paid on the independent activities of students, definite purposes and problems of this kind of activity. As the leading tasks are allocated: formation of independent thinking, ability to self-development, self-improvement, self-realization; development of a creative initiative, skills of research; motivation of purposeful work on enrichment of the general and professional knowledge. Whilst the traditional educational system places much emphasis on IQ the modern-day requisites for meeting the needs of Business Management are Emotional Quotient (AQ) and Adversity Quotient (AQ). The later quotients influence the motivational sphere of the students towards thinking outside the box.

It follows from this that process of formation and development of creative thinking of students demands serious training from outside of both the teacher, and students as it is connected with selection of sources, generalization and systematization of the available knowledge and experience, definition of receptions and methods of realization of projects tasks. (Ibragimova Gulsanam Nematovna, 2015)

Whilst the business world operates on the tenets of conscious capitalism (Dr. Amber Gove is Director of Research within RTI's International Education Division) the educational system must ensure to retool the thinking capacities of students. The problem of development of creative identity of trainees is modern and significant. Education must be seen as a holistic venture to produce outside the box thinkers who will not only be seen as conformists but will aspire to challenge the status quo.

In the conclusion, it is noted that, according to vast majority of the interrogated teachers, the problem of development of creative identity of students is non-negotiable because the captains of industry require nothing short of this. This research work is geared towards driving this clarion call.

Key words: *creative thinking, critical thinking, creative abilities, business world, management of creativity, imagination, communication, emotional quotient, adversity quotient, non-negotiable, conscious capitalism.*

Adopting Smart Appropriate Home-grown Waste Management approaches, the most sustainable and efficient way to transform waste to wealth in the Sub-Saharan Africa: Case Study of decentralized Government structures.

Ing. Alfred Boakye
Director of Projects
Volta River Authority, Ghana

The clarion call for Home-grown Waste to Energy Technology is gaining momentum in Sub-Saharan Africa as it is gradually becoming the surest bet for clean energy and wealth creation. According to the Zoomlion Alliance Africa (2017 Index Report) close to 900,000MT of both Solid and Liquid wastes are generated per each Cosmopolitan region half yearly. These wastes are left to the dictates of nature which add up to the ongoing climatic changes in the form of rise in sea levels as 70% of these waste materials find their route into sea bodies. Waste (also known as rubbish, refuse, garbage) is unwanted or useless materials. Solid wastes are from municipal, industrial, and agricultural activities. However, any refuse or waste can be an economic resource to others depending on the application of the rightful technologies with Waste to Energy Technology (WTE) as the most tried and tested in the Asian Regions. Waste is just value that we are too stupid not to use (Albert Einstein). Solid waste (SW) is an environmental and public health problem. There is a sustainable management method for Solid Waste. Uncontrolled landfill gases have negative health impacts on the local populace. Sorting Solid Waste increases its ability to be repurposed. Solid Waste is a cost-effective renewable energy source. Examples of Solid Waste includes Wood residuals from lumber mills (off-cuts, sawdust), Expired trees, Agricultural waste and Sorted municipal wastes (plastic, paper). Project assumptions of setting up a successful Waste to Energy

Technology is estimated at an Installed capacity cost of: \$4,500,000 Includes equipment, shipping, customs and installation, Annual Operations and Administrative cost of \$250,000. The Project useful lifetime is 20 years, Electricity generation: 7,560 MWh, Price of 1kWh to national grid = USD 0.15 and the Cost of acquiring 1kWh worth of waste = USD 0.01. These facts make Waste to Energy Technologies not only reliable but cost effective and efficient.

Methods:

Data from the Directorates of 17 Sanitation Ministries in Africa for the years 2012-2017 were used. Chi-square test and Logistic Regression Model were used to evaluate the relationship between usage of technologies and waste management.

Results:

94.6% of Cosmopolitan Government Structures still ready to resort to waste to Energy Technologies only 5.4% has instituted appropriate advanced technologies on waste to energy. This is mostly called the Waste to Energy Projects (WTE Projects). The upscale of these waste to energy technologies has the propensity of creating sustainable wealth, reducing more filth-induced sicknesses and mostly importantly create worth.

Estimate, close to 23% of Health budgets of most Governments in the Sub-Saharan Africa goes into filth induced sickness. This implies that adopting the needful technologies in waste management will end not only creating wealth but undeniably create a healthy Sub-Saharan Africa. Most Cities have become a confused web of disorganized human activities where the life somehow moves within squalid, filthy and shabby urban envelop caused by overcrowding, insanitary environment, the heterogeneous mixture of non-conforming functions.

Conclusion: Waste to Energy must be embraced by many Sub-Saharan African Countries not only as creating a clean energy but riding our Cosmopolitan areas of needless filth. This has impact on urban sustainability.

Keywords: Agricultural waste and Sorted municipal wastes; Clean Energy; Climatic Changes; Logistic Regression, Urban sustainability

Agribusiness Entrepreneurship; A tool for eradicating Youth Unemployment and Extreme Poverty in the Rural Communities of Sub-Saharan Africa

Mr. Seidu Adama (Mphil)
Projects Research Director
Ministry of Food & Agriculture, Ghana

According to the International Labour Organization (ILO), young people in rural communities are three times more likely to be unemployed. It posits that about 70% of the global labour force within the rural communities have no access to formal sector employment. Self-Employment/Entrepreneurship which is an alternative to traditional formal employment pathways is least recognized in most rural settings. Indigenous Entrepreneurship which is a home-grown job creation and self-employment avenue is considered the most sustainable and surest guarantee for improving the bizarre youth unemployment and endemic rural poverty situation. This entails using appropriate local skills and technology to solving the very basic social challenges. Countries like Rwanda, Ghana, Mauritius and Botswana are living testimonies to this. The United Nations Conference on Trade & Development 2018 (UNCTAD) report on rural unemployment sees indigenous entrepreneurship as a panacea to the canker of rural unemployment and endemic poverty. To sustain this approach calls for Targeted Policy Direction & Advocacy, Trade Growth & Business Development, Mentorship and Sustainable Funding Source for Indigenous Entrepreneurship. This approach must focus on Youth Entrepreneurship, Women Entrepreneurship and promoting Intrapreneurship for Persons Living with Disabilities. These are the main actors affected by the ropes

unemployment and rural poverty & joblessness. Whilst Governments sign onto International Trade Pacts like African Free Trade Continental Agreement (AFCTA), conscious efforts must be made to build and scale up the capacities of Indigenous Entrepreneurs in key sectors like Agribusiness, Climate Change Management, Education, Health, Security and Transportation. Concessions in terms of quota purchase can be allocated to inspire budding youth and women entrepreneurs in the above key sectors. The greater focus should go into agribusiness since any nations that produces what it eats has the capacity to diversify into any other sector. This research work is geared towards enhancing rural employment and poverty reduction through indigenous entrepreneurship. The focus is on Youth, Women and Disability-led Entrepreneurship. The Research intends to evaluate how indigenous entrepreneurship can economically improve decentralized political regimes through revenue mobilization, royalty/tax enhancement, and job & wealth creation. Keywords: Agribusiness Entrepreneurship, Trade Growth & Business Development, Mentorship, Sustainable Funding

Limitation of Career Development of Women in the Insurance Industry of Ghana

Ms. Priscilla Adwoa Agyemang
Teaching Assistant & MPhil Candidate
University of Ghana, Legon

The Insurance Industry of Ghana has a negative penetration rate around 1.3% averagely. Conscious Capitalism has made the forces of the market the true determinants of labour value other than instruments of political protectionism and interventionism (Richard Templar, *The Rules of Wealth*, 2007). This has the tendency of placing artificial limitation on the career development of determined women in all spheres of endeavor with much focus on the Insurance Industry of Ghana. The ratio of Women to Men in the Insurance Industry is 1:5 and this is very much on the negative side. The Corporate Governance of the International Insurers Association posited in 2006 that Women in Corporate Leadership in Europe and Asia hover around 43% with that of Africa round 23%. The West African Insurers Association has 41% Women in Corporate position. The success or otherwise of every organization being it small, medium or large depends on the quality of its gender parity ratio and most importantly board membership with greater women participation (Jack Welch, 2013). The gender parity and deliberate policy to empower women not within the management structure but greater seats at the Board level goes a long way to radically promote affirmative action and Insurance penetration in the Country.

The Federation of Indian SME Association (FISME, ICSME 2019) has indicated that the strength and forward march of the Commonwealth is contingent on giving more qualified women seat at the Boardroom. FISME goes on to emphasize that Companies

in India with greater women representation at top management and Board level tend to experience high growth rate in profitability/bottomline. GBS-Africa at the 2nd Edition of the Intra Commonwealth SME Trade Forum held in Nairobi, Kenya dated May 28th-29th, 2019 confirmed that Companies in Africa with women at strategic positions tend to have positive growth rate.

Women Executives according to the estimate of Tony Ellumelu Foundation (2018) constitutes about 27% of all positions in Organizations – Private and Public Sectors. This is not encouraging at all. To correct this imbalance, the Tony Ellumelu Foundation (TEF) is pushing for "Africapitalism" that will see more women as Entrepreneurs. Once women begin to own their own companies, then the point of getting more Women Executives and Board Members is being actualized.

The December 2017 and January 2017 Editions of Forbes Magazine posited that getting more women at work requires conscious capitalism and policy direction especially at the Public Sector. This has also been strongly supported by the United Nations Conference on Trade and Development (UNCTAD) 2019. It has the Document caption "Policy Guide on Women and Youth Entrepreneurship". The Executive Summary stipulates that once more women accede to the era of Entrepreneurialism then getting to remove the artificial blockade that impede women progression won't be difficult to achieve. The Commonwealth Secretariat-UK through its Strategy Policy on Youth & Women Entrepreneurship launched in Dar es Salaam, Tanzania dated May 14th-16th, 2019 affirmed that Cultural, Skills-gap, Structural deficit, political dominance and technological bankruptcy are the real red flags that seek to place the resultant limitations on women career progression. Women Entrepreneurship and Entrepreneurialism according to Robert T. Kiyosaki (Cashflow Quadrant 1999) postulated that women with the majority population of nearly 52% globally is a thumbscrew to radically democratize wealth, add value, alleviate poverty, engender more creativity and innovation and most importantly radically reduce unemployment.

Keywords: Risk Management, Conscious Capitalism, Afro-capitalism, Entrepreneurialism, Skills-gap, Structural deficit, political dominance and technological bankruptcy



**London Institute of
Skills Development**

ISBN 978-1-83853-224-6

