



## **International Conference 2015**

# **Quality in Higher Education: Global Perspectives and Best Practices**



**SEAMEO RETRAC, July 30-31, 2015**

## Table of Contents

<b>Welcome Remarks .....</b>	<b>2</b>
<b>Introduction of SEAMEO and SEAMEO RETRAC.....</b>	<b>4</b>
<b>Introduction of British Council Vietnam.....</b>	<b>7</b>
<b>Conference Program.....</b>	<b>9</b>
<b>Abstracts, Biographies and Full Papers.....</b>	<b>13</b>

**Welcome Remarks by Dr. Ho Thanh My Phuong, Director,  
SEAMEO Regional Training Center (SEAMEO RETRAC)**

Dear Mr. Ian Robinson, Deputy Director, British Council Vietnam;

Prof. Dr. Joy Carter, Vice-Chancellor, the University of Winchester, the United Kingdom;

Representatives from the Consulates General of Australia, Canada, Indonesia, Thailand, the United States of America;

Distinguished speakers and participants from Australia, Cambodia, Canada, Indonesia, Nepal, the Netherlands, the Philippines, the United Kingdom, the USA, and Vietnam

Distinguished Guests,

Ladies and Gentlemen,

Good morning,

It is my great pleasure, on behalf of SEAMEO RETRAC, to welcome all of you to this International Conference on “Quality in Higher Education: Global Perspectives and Best Practices”. I am really delighted with the attendance of more than 100 educational leaders, administrators, professors, educational experts, researchers and practitioners from both Vietnamese and international universities, colleges and other educational organizations. You are here to share your knowledge, expertise, experiences, research findings and best practices on emerging issues identified for this conference. They are (1) leadership and management – creating future leaders, (2) teaching and learning innovation, (3) higher education institutions and enterprise partnership, (4) ICT and technological innovation; and, (5) quality assurance and accreditation. In view of the major challenges in the era of globalization in the 21st century and the lessons learned during the educational reforms taking place in many countries, these topics are indeed important ones.

The world today keeps changing and coming up with new things on daily basis. Therefore, the demand for a work force that can work, live, and adapt to the fast changing environment has become more urgent than ever. For this and many other reasons, it is without a doubt that education, particularly higher education, is believed to play a crucial role in preparing human resources for the sake of sustainable growth of a nation. Higher education provides a strong foundation to uplift the prospects of our people to participate and take full advantage of the opportunities in Southeast Asia and beyond.

It is becoming increasingly important for global educational experts to get together to identify what should be done to enhance and strengthen the higher education quality, especially in the globalized context for sustainable

development. It has become more imperative than ever for higher education to prepare students to meet the dynamic challenges of the globalized world. Along this line, the proper leadership and management for quality in higher education, aiming at sustainable development, has to be emphasized. The 21<sup>st</sup> century has brought opportunities and new trends for educational leadership and management, teaching and learning practices as well as research in higher education. Yet, at the same time, it has posed a great number of challenges in terms of education quality in order to serve the purpose of sustainable development. I sincerely hope that this conference will provide an opportunity for the sharing of expertise, information and best practices in viewing how leadership and management in higher education can contribute to the need for sustainable development. I hope the conference will promote friendship and cooperation among the conference participants from different countries and institutions. I also trust that this conference will, in one way or another, provide us with ideas, recommendations, or solutions to address issues and challenges we face every day in our own working contexts and situations.

Ladies and Gentlemen,

On behalf of SEAMEO RETRAC, I would like to thank all of the participants for joining this annual conference. We are very honored to receive the delegation of 22 high Officials from Ministry of Education, Youth and Sport, Cambodia and 7 Leaders of Cavite State University, Philippines to join us at this conference. My sincere appreciation goes to our key note speaker and presenters for your hard work in preparing your presentations and arranging your time to be with us at this important event.

My special thanks to the leaders at the Ministry of Education and Training in Vietnam for their continued support provided for SEAMEO RETRAC and our work here in Southeast Asia. Also, I wish to thank in the British Council Vietnam for being the co-organizer of the conference. I would like to send my deepest appreciation to the diplomatic corps and international organizations for their constant support and attendance. Last but not least, I'd like to thank all those who have contributed to the planning and organization of this event.

I wish all of you a pleasant and productive conference!

Thank you

Dr. Ho Thanh My Phuong

Director

SEAMEO RETRAC



**Introduction of SEAMEO and SEAMEO RETRAC**  
**Southeast Asian Ministers of Education Organization**  
**(SEAMEO)**  
**SEAMEO Regional Training Center in Vietnam**  
**(SEAMEO RETRAC)**

**BACKGROUND**

On 30 November 1965, the Ministers of Education of Southeast Asian countries established the Southeast Asian Ministers of Education Organization (SEAMEO) for the development of the region through regional co-operation in education, science and culture.

**SEAMEO consists of:**

Eleven Member Countries: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Timor Leste and Vietnam

Eight Associate Member Countries: Australia, Canada, France, Germany, New Zealand, the Netherlands, Spain and United Kingdom.

Four Affiliate Members: the International Council for Open and Distance Education (ICDE) and University of Tsukuba (Japan); and the British Council, China Education Association for International Exchange (CEAIE).

One Partner Country: Japan

Vietnam, readmitted as a SEAMEO Member State on February 10, 1992 by the SEAMEO Council, hosts the SEAMEO Regional Training Centre (SEAMEO RETRAC) in Ho Chi Minh City, as one of the 15 SEAMEO Centers in the Region.

**VISION**

Through the pursuit of excellence and the development of expertise, SEAMEO RETRAC aims to become a leading regional centre in the field of educational management, serving all SEAMEO Member Countries.

**MISSION**

To assist SEAMEO Member Countries to identify and address issues of educational management and other educational fields, particularly in teaching and learning, through research, training, consultancy, information dissemination, community service, networking and partnership.

## ORGANIZATIONAL PROFILE

The SEAMEO RETRAC Governing Board is the main policy making body of the Centre. The Governing Board comprises one representative from each of the 11 SEAMEO Member Countries. The Centre is headed by a Vietnamese Director who is nominated by the Ministry of Education and Training of Vietnam, approved by the Governing Board, and officially appointed by the SEAMEO Council President.

The Centre is staffed by qualified professional, administrative and service personnel working in the following divisions and departments:

- Division of Education;
- Division of Foreign Studies;
- Department of International Development;
- Department of Research and Project Development;
- Department of Personnel and Legal Affairs;
- Department of Planning and Finance;
- Department of Administration;
- Annex 2;
- Library and Information Center; and,
- Department of Quality Assurance and Branding.

In addition, experts from donors, governments, international organizations and exchange programs from affiliated countries complement the permanent staff under partnership agreements.

## OPERATIONS

SEAMEO RETRAC assists SEAMEO Member Countries, especially Cambodia, Lao PDR and Vietnam, to identify and tackle problems of leadership and management in education at all levels. SEAMEO RETRAC directs its efforts on educational issues by undertaking innovative, relevant programs through research, training, consultancy, staff exchange and fostering of regional and international partnership, and engaging in other related activities within and outside the region. In addition, SEAMEO RETRAC offers language training, teacher training and other training programs in education.

### ***Functions***

In cooperation with local, foreign and international organizations, SEAMEO RETRAC conducts:

- ❖ Training courses, workshops and conferences;
- ❖ Research, consultancy, project development and information dissemination; and,
- ❖ Study tours, personnel and student recruitment & exchange for educational, scientific and cultural purposes.

***Training approaches***

- ❖ Critical thinking and creative problem solving;
- ❖ Interactive, informal and based on experience sharing and practical learning;
- ❖ Innovative learner-centered; and,
- ❖ Flexible and cost effective.



## **British Council Vietnam**

The British Council is the UK's international organisation for educational opportunities and cultural relations. We create international opportunities for the people of the UK and other countries and build trust between them on a worldwide basis.

### **ABOUT INTERNATIONALISING HIGHER EDUCATION**

Our work in higher education and research looks to enhance global education and promote global citizenship. We do this by connecting people working in the UK higher education sector with counterparts in Vietnam and internationally and by supporting dialogue and exchanges between higher education institutes. The British Council works with government, universities, research institutions, individuals and ministries in Vietnam, the UK and globally to share examples of good practice in order to help develop expertise in:

- policy
- leadership
- employability and career development
- academic research

### **OUR AIMS**

Internationalising Higher Education supports the process of national reform of Education in Vietnam and provides an international dimension to learning in Universities and Colleges. As part of this programme we:

- work with ministries and UK partners to develop strategies, policies and practice to develop the human resources needed for Vietnam's move towards a knowledge-based economy
- encourage local and international discussion on higher education issues and challenges
- support government policies looking to increase employment and economic growth through education reflecting the needs of employers
- support and take part in developing professional networks promoting information sharing and dialogue.

## WHAT WE CAN OFFER

We can work with you to:

- share lessons and experience on educational reform and internationalisation with global educational leaders
- help you access the right UK partners to collaborate with
- promote your Vietnam and UK collaborative programmes
- provide information on collaboration opportunities and government funding.

## OUR ACTIVITIES

Our work in Internationalising Higher Education includes:

- **Global policy and education dialogues:** We help educators from the UK and around the world identify core themes and issues for debate and discussion. The goal is to create better policies and practices that influence educational leaders and policy makers. Our work includes conferences in Vietnam and globally.
- **Knowledge Economy Partnerships:** We believe partnerships among people from different countries and cultures are mutually beneficial for all participants. We therefore facilitate and encourage international partnerships bringing leading UK educational institutions to Vietnam and take Vietnamese educators to the UK.
- **Services for International Education Marketing:** British Council Vietnam provides a set of professional services to help educational institutions achieve the best results from their international marketing activities. For detailed information on each service, please visit our country page on the British Council Services for International Education Marketing website.

Our expertise, experience and worldwide networks help partners achieve their goals in internationalising higher education.

## MORE INFORMATION

Find more details about our global conferences or services in internationalising higher education by contacting Phi Phan, Higher Education Manager (Partnerships) via [Phi.Phan@britishcouncil.org.vn](mailto:Phi.Phan@britishcouncil.org.vn)

## CONFERENCE PROGRAM

Thursday – July 30, 2015	
08:00 – 08:30	Registration
08:30 – 09:45	<p>OPENING CEREMONY</p> <ul style="list-style-type: none"> <li>❖ <b>Welcome Remarks</b> <i>Dr. Ho Thanh My Phuong,</i> <i>Director, SEAMEO RETRAC</i></li> <li>❖ <b>Remarks</b> Mr. Ian Robinson, Deputy Director, British Council Vietnam</li> <li>❖ <b>Opening Remarks</b> Representative, Ministry of Education and Training, Vietnam</li> <li>❖ <b>Keynote Speech</b> <b><i>The UK Assurance System and Its Internationalization</i></b> Prof. Dr. Joy Carter, Vice Chancellor, the University of Winchester, the United Kingdom</li> </ul>
09:45 – 10:00	Tea Break
10:00 – 12:00	<p><b>Plenary Session I: Leadership and Management – Creating Future Leaders</b></p> <p><b>Moderator:</b> Prof. Dr. Dennis F. Berg, California State University, Fullerton, the U.S.A</p> <ol style="list-style-type: none"> <li>1. <b><i>Leaders and Followers: Building from the National to the International</i></b> Dr. Christopher Hill, University of Nottingham Malaysia Campus, Malaysia</li> <li>2. <b><i>Future Deans in Indonesia: Lions or Lambs?</i></b> Dr. Jenny Ngo, Sekolah Tinggi Teknik Surabaya, Indonesia</li> </ol> <p><b>Q&amp;A</b></p>
12:00 – 13:30	Lunch

<p>13:30 – 15:00</p>	<p><b>Plenary Session II: Quality Enhancement in Higher Education: Teaching and Learning Innovation</b></p> <p><b>Session A</b></p> <p><b>Moderator:</b> Dr. Christopher Hill, University of Nottingham Malaysia Campus, Malaysia</p> <ol style="list-style-type: none"> <li><b>1. <i>Using Student Response Systems for Peer Instruction and Active Learning in the Classroom</i></b> Dr. Mike MacCallum, Emeritus Professor of Astronomy, Long Beach City College, the U.S.A</li> <li><b>2. <i>Developing 21st Century Skills of Vietnamese Students Through the "Green Summer" Movement</i></b> Dr. Le Van Hao, Nha Trang University, Vietnam</li> </ol> <p><b>Q&amp;A</b></p>
<p>15:00 – 15:30</p>	<p>Tea break</p>
<p>15:30 – 17:00</p>	<p><b>Plenary Session II: Quality Enhancement in Higher Education: Teaching and Learning Innovation (Cont'd)</b></p> <p><b>Session B</b></p> <p><b>Moderator:</b> Dr. Michael Burgess, Academies Australasia Polytechnic, Australia</p> <ol style="list-style-type: none"> <li><b>1. <i>Cultural Considerations in the Assessment of Class Participation in International Online Courses</i></b> Dr. James Paulson, Royal Roads University, Canada</li> <li><b>2. <i>Using Rubrics in Higher Education: Some Suggestions for Heightening Validity and Effectiveness</i></b> Mr. Peter McDowell, Charles Darwin University, Australia</li> </ol> <p><b>Q&amp;A</b></p>

Friday - July 31, 2015	
09:00 – 10:15	<p><b>Plenary Session III: Quality Assurance and Accreditation</b></p> <p><b>Moderator:</b> Dr. Le Van Hao, Nha Trang University, Vietnam</p> <ol style="list-style-type: none"> <li>1. <b><i>Quality Assurance and Accreditation in Cambodia</i></b> Dr. Rath Chhang, Accreditation Committee, Cambodia</li> <li>2. <b><i>Higher Education Innovations in Vietnam to Meet the Demands of the ASEAN Economic Community (AEC)</i></b> Ms. Ho Thi Phung Duyen, College of Foreign Economic Relations, Vietnam</li> </ol> <p><b>Q&amp;A</b></p>
10:15 – 10:30	Tea break
10:30 – 12:00	<p><b>Plenary Session IV: ICT and Technological Innovation</b></p> <p><b>Moderator:</b> Dr. Mike MacCallum, Emeritus Professor of Astronomy, Long Beach City College, the U.S.A</p> <ol style="list-style-type: none"> <li>1. <b><i>A Framework for an ICT-based Development Program for Science Teachers in State Universities and Colleges in Region VI: Design and Implementation</i></b> Dr. Amel L. Magallanes, Capiz State University, the Philippines</li> <li>2. <b><i>Attitudes of Educational Managers and Teachers toward Information and Communication Technology Utilization in the Classroom</i></b> Dr. Editha L. Magallanes and Dr. Ana Liza M. Pamplona, Capiz State University, the Philippines</li> </ol> <p><b>Q&amp;A</b></p>
12:00 – 13:30	Lunch

<p>13:30 – 15:00</p>	<p><b>Plenary Session V: Higher Education Institutions and Enterprise Partnership</b></p> <p><b>Moderator:</b> Dr. Nith Bunlay, Department of Higher Education, Ministry of Education, Youth and Sports of Cambodia</p> <p><b>1. University Business Collaboration to Enhance Graduate Employability</b> Mr. Siep Littooi, Saxion University of Applied Sciences, the Netherlands</p> <p><b>2. Education and Business - Partners in Transition</b> Dr. Michael Burgess, Academies Australasia Polytechnic, Australia and Ms. Nhat Dang, the Canadean Group, UK and Vietnam</p> <p><b>3. Innovation is University- Business Relations</b> Prof. Dr. Joy Carter, Vice Chancellor, Winchester University, the United Kingdom</p> <p><b>Q&amp;A</b></p>
<p>15:00 – 15:15</p>	<p>Tea break</p>
<p>15:15 – 16:15</p>	<p><b>Parallel Session:</b></p> <ul style="list-style-type: none"> <li>▪ <b>Networking Session</b></li> <li>▪ <b>Seminar: Women in Leadership in Higher Education</b> Prof. Dr. Joy Carter, Vice Chancellor, Winchester University, the United Kingdom</li> </ul>
<p>16:15 – 16:45</p>	<p><b>Conference Closing Remarks</b> Dr. Ho Thanh My Phuong, Director, SEAMEO RETRAC</p>

**Abstracts, Biographies and Full Papers**

***Professor Joy Carter DL BSc, Ph.D., CGeol, FGS  
Vice-Chancellor, the University of Winchester, the UK***

Professor Carter has been Vice-Chancellor of the University of Winchester, since 2006. She is an academic with research based in Geochemistry and Health and was a former President of the international society in her field.

Professor Carter is the current Chair of Guild HE, one of two representative groups in the Higher Education sector. She is a previous Chair of the Cathedrals Group of Universities and for many years served on the Universities UK Board.

As an ambassador for skills and vocational learning, Professor Carter Chairs the University Vocational Awards Council (UVAC), and serves as the Vice-Chancellor member of the Sixteen + Ministerial Advisory Group. Professor Carter also chairs the Supporting Professionalism in Admissions Steering Group (SPA) and is a Board member of the Universities and Colleges Admissions Service (UCAS) and the Quality Assurance Agency (QAA).

She is very engaged with the Church and faith based values-led education at all levels and is the Chair of the Church of England's Steering Group for their Partnership of Teaching and Educational Development.

In 2013, Professor Carter was invited to become a representative of the Lord Lieutenant and is now a Deputy Lieutenant for the county of Hampshire.

Professor Carter is passionate about all aspects of equality and has a particular interest in widening participation.

## **THE UK ASSURANCE SYSTEM AND ITS INTERNATIONALISATION**

*Keynote Speaker:*  
*Professor Joy Carter DL BSc, Ph.D.*

### **ABSTRACT**

Current system for Quality Assurance and Enhancement in the UK and its Internationalisation. In addition a number of questions will be posed on the key conference themes.

***Christopher Hill, Ph.D.***

***Director, Research Training and Academic Development  
University of Nottingham Malaysia Campus, Malaysia***

Dr. Hill received his Ph.D. in Political Science from the University of Nottingham UK and has worked at the University of Nottingham Malaysia Campus since 2008. Dr. Hill is a convenor for the Knowledge without Borders Network, based at the University of Nottingham Malaysia Campus, and has international experience working in Higher Education in Australia, China, Germany, Ghana, Iraq, Malaysia, Spain, Tanzania, Thailand, UK, USA and Vietnam.

Dr. Hill's research interests include transnational education and its impact in SE Asia, the development of international education and the student experience in the global arena. Dr. Hill is a Fellow of the Higher Education Academy, has published and presented in the field of international education; organised and delivered conferences, workshops, training and lectures around the world and has led on funded projects to develop research capacity and internationalise HE systems around the world. In 2012, Dr. Hill was awarded a U21 Teaching and Learning Network Fellowship to research internationalisation and global citizenry.

Dr. Hill has worked on international education projects in the UK, Tanzania, Ghana, China, and Malaysia. He has worked with universities to develop Ph.D. supervisors and research capacity in the Kurdistan region of Iraq and Thailand and is currently working with the British Council in Taiwan to support internationalization of teaching and learning at key institutions. Dr. Hill supports this work with conference and journal publications, research grants, teaching and research. Dr. Hill works closely with universities throughout SE Asia and is a regular keynote speaker on the subject of international education, cultural teaching, transnational education and institutional development.

## **LEADERS AND FOLLOWERS: BUILDING FROM THE NATIONAL TO THE INTERNATIONAL**

*Author:  
Christopher Hill, Ph.D.*

### **ABSTRACT**

We are faced with many key challenges in international higher education. Institutions are under pressure to recruit internationally; provide interactive and innovative teaching, produce world class research; collaborate with elite international institutions; support and promote employability; all while working with diminishing funding agendas.

As global patterns of education shift, questions of access and mobility become central and the necessity to better understand the value of education, its reach, impact and legacy upon development become paramount. Within Asia, we face issues of rankings and international competition while often neglecting regional context and value. Our education provision must be responsive, not reactionary and look to fill the needs of society and culture as well as global demand. Our choice of partners should be based on value addition and cooperation. Raising the local and national profile will help support integration and student mobility, enhance our profile to international partners and build our profile and credibility. Are we producing globally competent graduates? Are we developing leaders? Do we hire and support the development of leaders?

This paper will discuss the need to implement systematic training throughout our institutions to secure the value of our graduates and to ensure the validity of our provision and quality, from a teaching and learning, research and administrative support perspective. Innovation in the classroom must be responsible and sustainable. Our students are often much more technologically advanced than we are and it is not our job to chase this but to support it and ensure active and embedded learning takes place. Aspirations are crucial but knowledge of self is vital and our credibility lies in understanding the connection between the two.

***Jenny Ngo, Ph.D.***  
***Sekolah Tinggi Teknik Surabaya, Indonesia***

Dr. Jenny Ngo is a senior lecturer and a scholar at Sekolah Tinggi Teknik Surabaya (Surabaya College of Engineering) in Surabaya, Indonesia. She is a responsible, motivated and enthusiastic lecturer with excellent communication skills demonstrated by 10 years of teaching experience. Among other colleagues, she is recognised as a hard-worker and decisive leader and good team player.

Dr. Ngo received her Master of Science and Technology in Education from the University of Twente, the Netherlands. Since 2013, she has earned her Ph.D. in Education specialised in Leadership and Management in Higher Education from the University of Twente, the Netherlands. After graduation, she became one of the teaching staff at the faculty of Behavioural Sciences, University of Twente. After her one year career as a lecturer and a supervisor there, she decided to go back to her home country Indonesia where she was offered tenure at Sekolah Tinggi Teknik Surabaya. In addition to teaching, Dr. Ngo is one of the reviewers of the International Journal of Tertiary Education and Management. She recently presented her paper on the International Conference in Tokyo Japan. She currently collaborates on a book chapter with her Australian colleagues.

## FUTURE DEANS IN INDONESIA: LIONS OR LAMBS?

*Author:*

*Jenny Ngo, Ph.D.*

### ABSTRACT

Leadership is a mysterious phenomenon, often perceived as a critical factor in an organisation's success. This also holds true for leadership and management at midlevel of organisation although that field is under-researched. This study focuses on midlevel leadership in a particular kind of organisation, namely universities. It investigates the managerial leadership styles of deans at Indonesian universities. Using the competing values framework, a large-scale survey was conducted to gather information on the deans' behaviours and roles. Based on the responses of a sample of 218 deans in Indonesia, the study identifies four distinguished leadership styles, namely the Competitive Consultant, the Focused-Team Captain, the Consensual Goal-setter and the Informed Trust-builder. The study shows that deans in Indonesia exhibit both lion-like and lamb-like leadership characteristics. While clarifying tasks, setting objectives, and emphasising productivity, Indonesian deans involve in such activities as teamwork to motivate their staff.

**Key words:** *deans; managerial leadership styles; Indonesian higher education*

### INTRODUCTION

Leadership and management in general, and in higher education in particular, have attracted enormous interest from both academics and practitioners. While studies have focussed on various topics and different managerial levels, the number of studies that explicitly investigate middle management is limited. Leadership studies usually concentrate on those at the top, such as CEOs or presidents.

In the sphere of higher education studies, the deanship is an under-investigated topic. This is somewhat surprising given the key role deans play in higher education institutions: "universities are only as strong as their colleges, and colleges reflect the strength of their dean" (Wolverton et al. 2001, p. 97). This study intends to contribute to filling this gap by exploring the managerial leadership styles of deans at Indonesian universities. An additional reason to investigate the deanship is derived from the current changes in Indonesian higher education. The winds of change, caused by, among other things, globalisation and the spread of a neo-liberal spirit in re-organising the public sector (e.g. the introduction of new public management approaches), combined with new political leadership, have affected Indonesian higher education and its institutions. Universities have been granted more institutional autonomy. It appears likely that Indonesian

universities are moving towards stronger corporate governance structures. Therefore, the deanship is also undergoing change. One could argue that in contemporary higher education, with universities increasingly seen as enterprises or corporations, the deanship is becoming more entrepreneurial and executive-based (e.g. see De Boer & Goedegebuure, 2009). However, the changing deanship is not the topic of the study. The key question is that how deans at Indonesian universities run their faculties.

## **INDONESIAN CONTEXT**

### **Higher Education Policy Reform**

The Asian financial crisis in the middle of 1997 and the fall of the Suharto government in 1998 generated a new context for universities to define their role in society. The government's centralised approach to steer the public sector was becoming obsolete (Nizam, 2006). In 1999, the government published an overall strategy for the enhancement of local autonomy in many sectors, including (higher) education (Directorate General of Higher Education (DGHE), 1999). In line with these new policies, public higher education institutions have been restructured. They were granted more institutional autonomy, funding mechanisms were changed, and market-driven approaches were introduced (DGHE, 2003). The public institutions are expected to become more entrepreneurial and innovative. They are supposed to create new fund-raising systems, to improve their services in order to successfully compete in education markets, to be more accountable to the public at large, and are encouraged to establish corporate-style governance structures (DGHE, 2003; Nizam, 2006).

Private universities which are run as business institutions and subject to government regulation and policy (Welch, 2007) have also had to improve their management in order to better compete in higher education markets (DGHE, 2003). The reforms encouraged them to strengthen their strategic planning capacity (e.g. increasing the number of undergraduate and graduate programmes) and their human resources (e.g. recruiting qualified academics and skilled administrative staff) (Nizam, 2006; Welch, 2007). They have had to work more intensively to find external funding sources and diversify their existing income streams.

### **Roles of Middle Managers in Higher Education**

The higher education policy reforms have forced both the public and private universities to restructure their internal university governance (DGHE, 2003; Nizam, 2006). One of the changes is influencing the functioning of academic leaders and managers. However, not much is known about how Indonesian deans run their faculties. Our objective is to investigate the managerial leadership styles of deans in Indonesian universities.

As the head of a faculty, deans are expected to provide administrative as well as academic leadership, including financial, personnel, services and facilities management. These roles of deans in Indonesian universities are

similar to the roles of deans elsewhere, i.e. a role of manager (an administrator), (strategic) leader and scholar (De Boer & Goedegebuure, 2009; DiFronzo, 2002; Hilosky & Watwood, 1997; Thomas & Fragueiro, 2011). As a manager, a dean is expected to focus on the detail of daily operations (e.g. budgets, administrative records). As a (strategic) leader, a dean is supposed to act as a visionary by setting long-term goals and plans for the faculty. As a scholar, a dean should be engaged in both research and teaching. These multiple roles have been reported in several studies from various countries (see Meek, et al., 2010). Yet, since higher education systems, universities, and their constituencies are expressions of a nation's historic memory and culture, it should be no surprise that structures, practices and procedures within universities might differ. Therefore, it is assumed that the Indonesian traditional culture which emphasises mutual assistance (*gotong royong*), consensus for decision-making (*musyawarah*), assertiveness and collective well-being will make the Indonesian deanship different from the leadership elsewhere in certain respects (Bowen, 1986; Irawanto, 2009).

### COMPETING VALUES FRAMEWORK

Over the years, many leadership and management theories have been developed, advocated, and researched, stressing and arguing various explanations for personal characteristics (as in great man and trait theories) to situational factors (as in contingency and situational approaches). This study used Quinn's Competing Values Framework (CVF) to investigate managerial leadership styles of Indonesian deans.

Based on an analysis of a comprehensive list of indicators for organisational effectiveness, Quinn and his research colleagues describe two major dimensions underlying effective organisations (Quinn & Rohrbaugh, 1983; Quinn & Cameron, 1983; Quinn, 1988). They notice that some organisations were effective if they were stable, whereas other organisations were successful if they had efficient internal processes or were strongly outward looking (market-oriented). In other words, there were different ways to be or become effective. The two dimensions were used to represent two axes that constitute the rudiments of the Competing Values Framework (CVF).

Figure 1 describes the eight leadership roles of CVF. The vertical axis ranges from flexibility to control and the horizontal axis concerns the organisational focus, from an internal to an external focus. These two axes form four quadrants, representing four different kinds of organisations, including different cultures, leadership roles and so on. The four quadrants are: the clan (collaborate, leaders as mentors and facilitators), the adhocracy (create, leaders as innovators and brokers), the market (compete, leaders as producers and directors), and the hierarchy (control, leaders as coordinators and monitors). The four quadrants represent opposite or competing assumptions; they are competing on the diagonal, and this diagonal is a continuum of the two opposite points. Empirically, it is

possible to engage in behaviours at two opposite points in the framework, indicating that there is no best way to manage. One leadership role, for instance, is not treated as more desirable than another role.

The CVF convincingly integrates a number of theoretical traditions such as human relations theories, open system theories, rational goal theories and internal process theories. It distinguishes a substantial number of leadership and managerial behaviours, clustered into eight different leadership roles, which makes perceptual biases clear, does not advocate one role over another, makes multiple values explicit, and provides a dynamic focus as well as consistent categories. These advantages fit the purposes of the study very well. Moreover, since its development in the early 1980s, CVF has successfully been used and tested in many research endeavours (for an overview of one example, see the “Appendices” in Cameron et al. 2006).

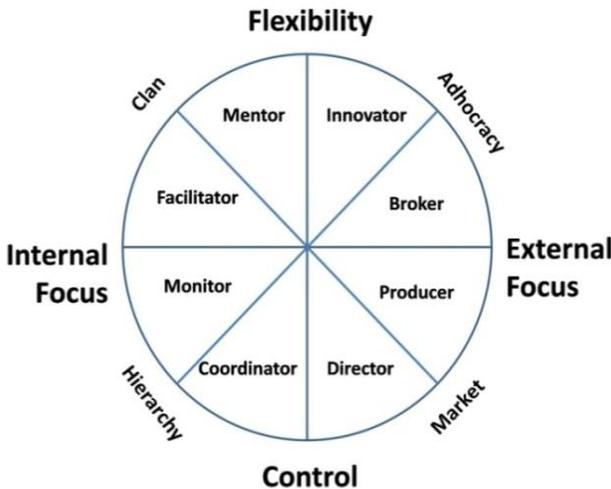


Figure 1. The eight leadership roles of CVF (adapted from Quinn, 1988, p. 86; Cameron et al., 2006)

To investigate the managerial leadership styles of deans, the study applied the “3-1 concepts of assessment” based on the CVF: behaviours—roles—styles. Quinn’s (1988) Competing Values Leadership Instrument lists 32 behaviours. Examples of such behaviours are ‘setting clear objectives for the faculty’, ‘facilitating consensus building’ or ‘showing empathy and concern’. Eight managerial leadership roles are determined by these 32 behaviours. Roles include director, facilitator or mentor. Leadership styles are then explored based on configurations of the eight managerial leadership roles within the CVF. In this study, a style is a configuration of

the eight managerial leadership roles based on the CVF that in turn are based on a set of particular behaviours (see Figure 2).

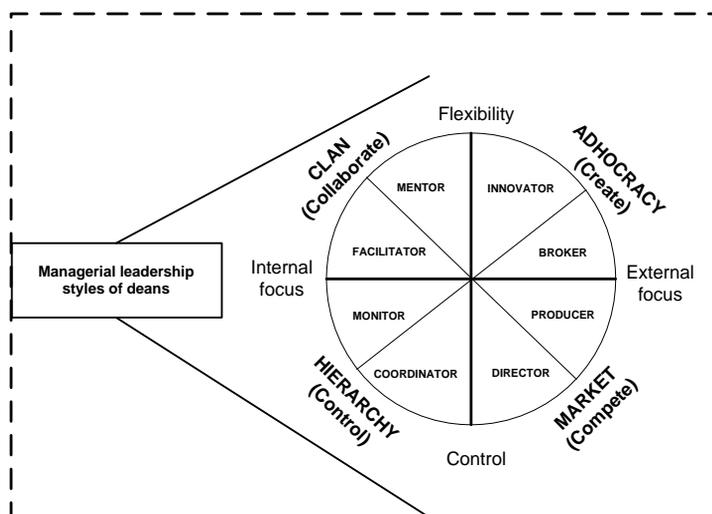


Figure 2. Framework of managerial leadership styles based on the CVF (Ngo, 2013 p. 122)

## METHODOLOGY

### Data collection, Population, and Sample

A survey was conducted to collect the data. Before conducting the survey, a questionnaire was sent to 10 deans as a pilot project to ensure that the questions were clear and understood by the deans (Babbie, 2010). All key variables in the questionnaire were measured through self-reporting. Some potential disadvantages of this approach have been considered. Firstly, there may be a discrepancy between what deans say they do and what they actually do. Secondly, deans may choose not to report their behaviour accurately because of issues of socially sensitive behaviours (see Fishbein & Ajzen, 2010, p. 37). However, when the questions phrased in the questionnaire ask about daily activities of deans, it is believed that they do not result in socially desirable answers. In such a case, it is unlikely that self-reporting behaviours will differ from actual behaviours (Ajzen, 1988, p. 103).

Determining the targeted population for the survey was a challenge because there were no data on the total number of deans in Indonesian universities. Data on higher education for the year 2006-2007 indicate that at the time there were 419 universities in Indonesia. The number of faculties at each of the 419 universities varies. If it is assumed that the

average university has eight faculties, there are more than 3,330 deans. It would be preferable to have all deans participating in this research, but, for pragmatic reasons, this was considered not feasible (due to limitations of data accessibility, time and cost).

Of these 419 Indonesian universities, 120 are accredited (DGHE, 2008). These accredited universities include private and public, small and large, and suburban and urban universities. They were the starting point for our sampling. Assuming that these universities have, on average, eight faculties, there would be a total population of 960 deans. A stratified random sample was used to guarantee represented good geographical spread. Next, half of the 120 universities were selected via a random sampling.

The survey was sent by post to 443 deans (the sample population) in these 60 universities. A total of 218 deans returned a completed questionnaire (almost 49%). The sample was then compared with the response based on the discipline of the faculty (i.e. technical vs. non-technical). The results indicated that there were no differences [Chi-square (1,  $N = 218$ ) = 1.15,  $p > 0.05$ ]. Furthermore, in terms of geographical spread, the questionnaire returned was compared with the questionnaire disseminated from each region. The results again indicated that there were no differences [Chi-square (7,  $N = 218$ ) = 4.31,  $p > 0.05$ ]. Therefore, it can be concluded that the response sample among deans from accredited Indonesian universities is representative as regards these two variables.

Of the 218 responding deans, 82% were men. On average, they were 52 years old and had served in their current positions for nearly two years. About 58% worked in public universities and 42% in private universities. Nearly two-thirds came from non-technical faculties (64%); the remaining 36% came from technical faculties. Faculty size varied. The vast majority of the deans served a medium-sized faculty, which, in the Indonesian context, means between 1,000 and 5,000 students and between 100 and 500 faculty staff members.

### **Measures and Data Analysis**

To measure the items Likert scales were used, ranging from 1 to 7. To assess leadership styles, the deans were asked to indicate how often they engaged in 32 general managerial items derived from the leadership instruments (Quinn, 1988). Eight leadership roles, each based on the four items, were identified. For each role, the items were internally consistent (with Cronbach alpha's ranging from 0.68 to 0.81).

The quantitative data analysis was carried out to explore the kind of managerial leadership styles of deans in Indonesian universities. In this part of the analysis, descriptive statistics were used. Then, a cluster analysis was carried out to classify and identify Indonesian deans who had similar patterns of leadership style based on the eight roles from the CVF. This analysis was used to identify specific deanship styles. To prepare for a two-

step cluster analysis, the eight leadership roles were divided into a dummy variable, indicating whether a leadership role was more ('value 1') or less ('value 0') important in the dean's leadership style. If all eight roles were equally important, each of them would represent 12.5% of the dean's leadership style. A leadership role measuring equal to or more than 12.5% means that this role is relatively important in a dean's leadership style; the opposite is true for percentages below 12.5%.

## **FINDINGS**

### **The Managerial Behaviours of Deans**

This section describes and discusses the managerial behaviours of deans. In the questionnaire, the deans were asked to indicate, on a seven-point Likert scale, how often they perform a certain behaviour. The outcome of this survey indicated that the deans perform all the listed behaviours frequently. However, some behaviours are more prevalent than others. The four most frequent behaviours of the deans are protecting continuity in the day-to-day operations of the faculty (6.3); seeing that the faculty delivers on stated goals (6.3); facilitating consensus-building in the faculty's decision-making (6.3); and building teamwork among academic staff (6.3). The four least frequent behaviours of the deans are persuasively selling new ideas to central management (5.2); exerting upward influence in the university (5.2); influencing decisions at higher levels in the university (5.2); and experimenting with new concepts and procedures (5.0). The number in the brackets shows the mean value. These findings are significant in that they show the deans of this study are not opposed to engaging in certain managerial behaviours and are open to some level of engagement in all the behaviours.

Table 1 presents the percentages of deans in the study that reported 'always' on the 32 behaviours of the CVF. A total of 37% of the deans reported that they are multi-behavioural, i.e. they always perform in line with more than 75% of the 32 behaviours. Another 37% reported that they always perform less than 50% of the behaviours. The deans who belong to the multi-behavioural group are, in their own eyes, able to cope with the competing values that underlie these behaviours.

Table 1 *Percentages of Deans in the Study that Report 'Always' on the 32 Behaviours Based on the CVF (N = 218, in %)*

Percentage of the 32 behaviours always* performed	Percentage of deans
≤ 25% (less than 9 different behaviours)	13
26 – 50% (between 9 and 16 different behaviours)	24
51 – 75% (between 17 and 24 different behaviours)	26
> 75% (more than 24 different behaviours)	37

\* 'always' refers to scores 6 (almost always) and 7 (always)

Although the deans reported that they execute all 32 behaviours, some differences in frequency can be observed. Firstly, the vast majority of the deans (i.e. more than 75%) reported that they always facilitate consensus building in faculty decision making; encourage participative decision making in the faculty; protect the continuity in faculty's day-to-day operations; see to it that the faculty delivers on stated goals; and build team work among academic staff members. Secondly, the majority of the deans (i.e. more than 50%) reported that they sometimes or rather often solve faculty problems in a creative and unconventional way; carefully compare records, files, and reports; persuasively sell new ideas to the central university management; influence decisions at higher levels in the university and experiment with new concepts and procedures. Very few deans reported that they never behave any of the 32 behaviours. For example, only 7% of the deans say that they never exert upward influence in the university. Similarly, 7% of the deans indicated that they never influence decisions made at the higher levels in the university.

### **The Managerial Leadership Roles of Deans**

This section presents and discusses the managerial leadership roles of deans at Indonesian universities. The CVF has two axes: the vertical axis represents flexibility and control and the horizontal axis represents internal to external focus (see Figure 1 & 2). These two axes form four quadrants in which each quadrant defines two leadership roles. The CVF is the repertoire of managerial leadership roles manifested in the behaviours of managers (Belasen, 1998). The CVF asserts that these eight different managerial leadership roles can be defined based on 32 managerial behaviours. As explained earlier, each role consists of four-item managerial behaviours scaled from never (1) to always (7). The mean score of each role was computed by applying a simple statistical mean expression. The results are depicted in Table 2.

Table 2 *Managerial Leadership Roles of Deans at Indonesian Universities (N=218, in %)*

Managerial leadership role	Never	Sometimes	Always	Mean	SD	Cronbach's Alpha (4)*
Facilitator	-	30	70	6.2	0.61	0.68
Producer	1	38	61	6.0	0.74	0.81
Director	1	39	60	6.0	0.73	0.78
Coordinator	-	47	53	5.9	0.75	0.72
Mentor	1	49	50	5.9	0.80	0.76
Monitor	1	57	42	5.7	0.81	0.79
Innovator	1	69	30	5.5	0.74	0.74
Broker	5	68	27	5.3	0.94	0.80

Groups are defined on the basis of average score on four items, where for 'never'  $x < 4$ ; 'sometimes'  $4 \leq x \leq 5.99$ ; 'always'  $6 \leq x \leq 7$ ; \*the number in brackets indicates numbers of items.

Table 2 shows that the alpha coefficient, for the four items in each role, ranges from 0.68 to 0.81, suggesting that the items have relatively high internal consistency. All 32 managerial behaviours are performed by the deans (see Table 1), this is expected, as Table 2 indicates, that all eight managerial leadership roles are found to some degree in Indonesian middle management. In other words, the deans self-reported that they frequently perform the eight leadership roles based on the CVF when they lead and manage their faculties.

Although all the eight managerial leadership roles are performed frequently by the deans, some roles are performed more often than others. The deans reported that they very often play the roles of facilitator, producer, and director. A total of 70% of the 218 deans saw themselves definitely functioning as a facilitator. This finding is consistent with the previous findings, which showed that the deans very often perform facilitating behaviours. Around 60% of the deans see themselves as a producer and director. These results suggest that in their day-to-day actions, the deans very frequently facilitate consensus building in the faculty's decision making; encourage participative decision making in the faculty; build teamwork among the academic staff members; and encourage participative decision making in the faculty. At the same time, deans often focus on results and performance of academic staff; insist on intense hard work and high productivity; set clear objectives for the faculty; and clarify faculty policy priorities and future direction.

Furthermore, the deans of the study reported that they *sometimes* play an innovator (69%) and a broker role (68%) in managing their faculty. These findings are in line with the previous finding, indicating that the deans occasionally perform the innovating and brokering behaviours. This implies that, in their daily actions, the deans seldom approach and consult people at the higher levels of the university; persuasively sell new ideas to central university management; exert upward influence in the university; or influence decisions at higher levels in the university.

### The Managerial Leadership Styles of Deans

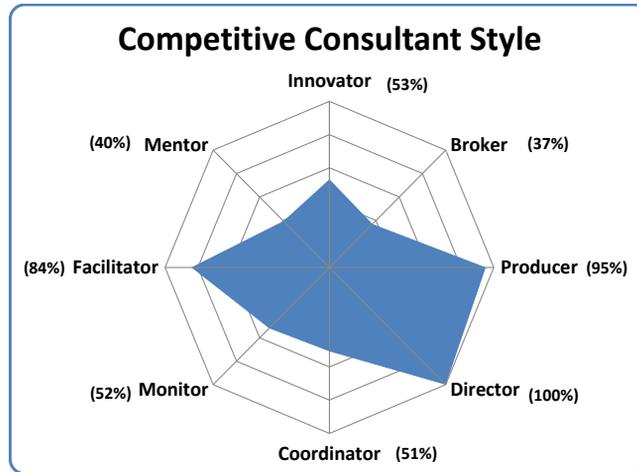
In managing their faculties, the deans perform some roles more frequently than others (see Table 2). In other words, some roles are perceived by the deans as more important than others. It means that those roles perceived as having more value. Therefore, the relative importance of roles was determined. If all eight roles were perceived as equally important, each would represent 12.5% in this analysis. Therefore, a role equal to or larger than 12.5% can be considered to be perceived as more important. A two-step cluster analysis is then used to identify particular managerial leadership styles. The number of clusters was set to four, reflecting the four aspects of the CVF. The results showed a meaningful distinction between the four clusters. These four clusters allow us to identify, both theoretically and statistically, four specific managerial leadership styles of deans at Indonesian universities as shown in Table 3.

Table 3 *Percentages of Deans performing a Managerial Leadership Style (total N = 218, in %)*

Managerial leadership style	Percentage of deans	N
Competitive Consultant	37	81
Focused Team Captain	20	44
Consensual Goal-Setter	24	53
Informed Trust-BUILDER	18	40
Total	100*	218

*Note:* \*sum of percentages is not 100% due to the rounding of decimals

The four managerial leadership styles are distinct configurations of role importance, indicating that each style is distinct. These four distinctive styles are the Competitive Consultant, the Consensual Goal-Setter, the Focused Team Captain, and the Informed Trust-BUILDER. A description of each style is depicted in Figures 3 through 6.

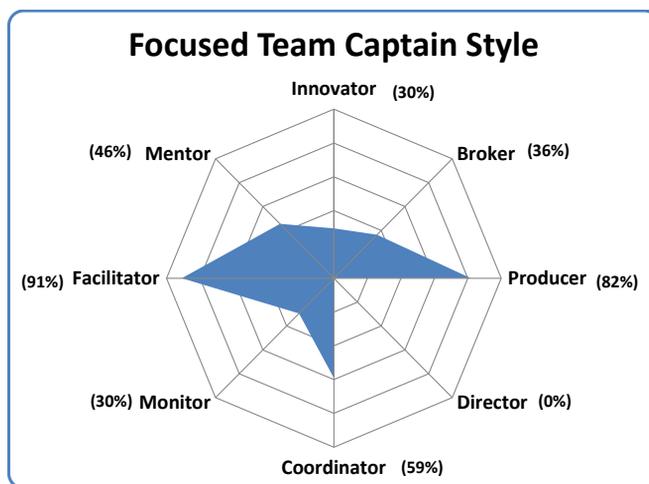
*The Competitive Consultant Style*

Note: The numbers in brackets represent the percentages of deans with this style who perceived each role as more important.

Figure 3. The Competitive Consultant Style

A total of 37% of deans in this study have the Competitive Consultant style. This style is 'comprehensive' in the sense that none of the roles are absent. This style emphasises the director, producer, and facilitator roles. Within their day-to-day actions, the deans with this style very frequently focus on setting faculty goals and objectives, defining areas of responsibility of faculty members, and clarifying faculty policies and future direction. These deans are interested in fostering a productive work environment and focus on intense hard work and productivity. They very often facilitate consensus building in the faculty's decision making, build teamwork among the academic staff members, encourage participative decision making in the faculty, and encourage academic staff members to share ideas.

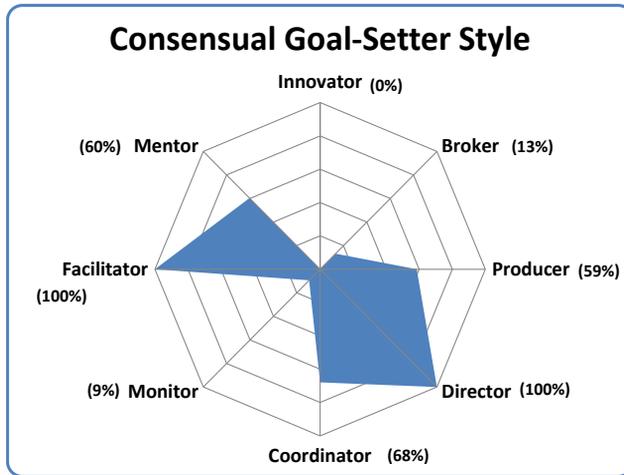
*The Focused Team Captain Style*



Note: The numbers in brackets represent the percentages of deans with this style who perceived each role as more important.

Figure 4. The Focused Team Captain Style

A total of 20% of the deans have the Focused Team Captain style. In contrast to the Competitive Consultant style, the Focused Team Captain dominant roles are facilitator, producer and, to a lesser extent, coordinator. In this style, the director role is less obviously present. This style emphasises behaviours such as team building; encouraging participative, consensus-oriented decision making; and encouraging academic staff members to share ideas. It also stresses behaviours in relation to achievements, results and performances, hard work, and high productivity. To some extent this style focuses on day-to-day operations, managing projects and minimising disruptions in daily practices.

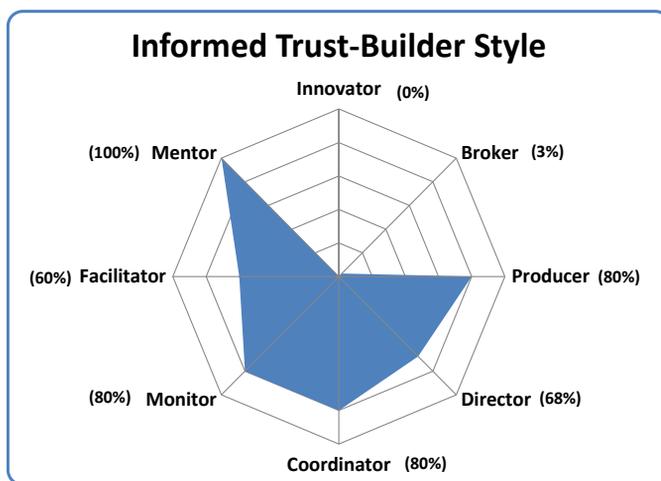
*The Consensual Goal-Setter Style*

Note: The numbers in brackets represent the percentages of deans with this style who perceived each role as more important.

Figure 5. The Consensual Goal-Setter Style

A total of 24% of the deans have the Consensual Goal-Setter style. This style emphasises the facilitator and director roles. The broker, monitor and, particularly, innovator roles are, by and large, absent. The deans who demonstrate this style have a strong focus on behaviours such as encouraging participative, consensus-oriented decision making; team building; and internal idea sharing. They, however, show minimal mentoring behaviours. These deans also claim to demonstrate behaviours such as setting clear faculty goals and objectives, defining areas of responsibility for faculty members, and clarifying faculty policies and future direction.

*The Informed Trust-BUILDER Style*



Note: The numbers in brackets represent the percentages of deans with this style who perceived each role as more important.

Figure 6. The Informed Trust-BUILDER Style

A total of 18% of the deans have the Informed Trust-BUILDER style. Like the Competitive Consultant, this style is comprehensive. It stresses the mentor, producer, coordinator, and monitor roles. Within their day-to-day actions, deans with this style very often listen to personal problems and show empathy and concern. They also frequently focus on control (e.g. reviewing detailed reports, files and records; working with technical data; and analysing written plans and schedules). These deans establish a productive work environment and value hard work and productivity.

With respect to the four distinctive managerial leadership styles of deans, none of the styles can clearly identify one of the four aspects of the CVF (i.e. the clan, the adhocracy, the market, or the hierarchy). In fact, each style is a configuration of different aspects of the CVF, defining the competing (opposing) roles of leading and managing. The Competitive Consultant style, for instance, combines a greater focus on the market-oriented aspect (the director and producer roles) with the facilitator role. The Focused Team Captain style combines the facilitator and producer roles, and the Consensual Goal-Setter style combines the facilitator and director roles. The Informed Trust-BUILDER style combines the mentor, producer, coordinator, and monitor roles. These findings indicate that the roles of facilitator, director, and producer are the more important roles perceived by the majority of deans. This is consistent with the previous

findings, showing that the deans very often play the roles of facilitator, director, and producer.

Based on the empirical findings, conflict statements like “John is too soft hearted, he is running this place like a country club” and “Sue is a pig-headed dictator, she runs this place like a prison camp” (Quinn, 1988, p. 45) may not be articulated in Indonesian universities. All the four leadership styles show a balanced approach to leadership. For example, the Competitive Consultant-style deans (see Figure 5) embrace lion-like characteristics when they clarify tasks, set objectives, and take actions. Goal clarification is defined by rules which subordinates are expected to follow. The deans, as lions, show themselves to be a directive and strong authority figure. At the same time, the Competitive Consultant-style deans embrace the lamb-like characteristics when they engage in social activities like teamwork and facilitating others. The deans, as lambs, are cooperative, participative, and approachable leaders.

### Demographic Factors and the Four Managerial Leadership Styles

Table 4 shows the gender distribution of the managerial leadership styles of deans. The findings indicated that there are some gender differences. For example, 22% of male deans have the Focused Team Captain style, emphasising the facilitator and producer roles, and 23% of female deans have the Informed Trust-Builder style, emphasising the mentor role. The findings showed that there is a very slight difference between the percentage of male and female deans having the Competitive Consultant style. This also holds true for the Consensual Goal-Setter style. These findings are, to some extent, in line with other studies of male and female leadership styles (e.g. Rosener, 1990; Eagly & Johannesen, 2001; Burke & Collins, 2001), indicating that female deanship is more characterised by showing more empathy and concern, being more people-oriented, and a willingness to listen.

Table 4 *Distributions of the Specific Managerial Leadership Styles of Deans by Gender (N = 218, in %)*

Specific managerial leadership style	Gender		
	MALE	FEMALE	Total*
Competitive Consultant	37%	39%	37%
Focused Team Captain	22%	13%	20%
Consensual Goal-Setter	24%	26%	24%
Informed Trust-Builder	17%	23%	18%
Total*	100%	100%	100%

Specific managerial leadership style	Gender		
	MALE	FEMALE	Total*
Competitive Consultant	37%	39%	37%
Focused Team Captain	22%	13%	20%
Consensual Goal-Setter	24%	26%	24%

Note: \*the sum of the columns may not be 100%, due to the rounding of decimals.

Table 5 presents the age distribution of the managerial leadership styles of deans. The Competitive Consultant style is the style most frequently exhibited across all age groups. However, only amongst the under 40s is this style exhibited by a majority of deans. In contrast, only 5% of deans under 40 have the Informed Trust-Builder style. Deans aged 51-60 and 60+ are more likely to demonstrate the Consensual Goal-Setter style, focusing on facilitating and directing. The findings of this study are supported by other studies (e.g. Kabacoff & Stoffey, 2001; Oshagbemi, 2004; Le & Thi, 2012), indicating that young managers are more likely to show a style which defines roles and tasks and maintains high productivity, while older managers are more likely to prefer a style which is more participative and consultative and shows greater commitment to solving problems through consensus.

Table 5 *Distributions of the Specific Managerial Leadership Styles of Deans by Age*

(N = 218, in %)

Specific managerial leadership style	Age (years old)				Total
	<40	40-50	51-60	>60	
Competitive Consultant	52%	38%	33%	36%	37%
Focused Team Captain	29%	22%	17%	18%	20%
Consensual Goal-Setter	14%	21%	28%	32%	24%
Informed Trust-Builder	5%	20%	22%	14%	18%
Total	100%	100%	100%	100%	100%

Note: \*the sum of the columns may not be 100%, due to the rounding of decimals.

Table 6 shows the term-of-office distribution of the managerial leadership styles of deans. The Competitive Consultant style is the most frequently

exhibited across all terms of office. However, 56% of the deans in the 5-6 years term of office group have this style and deans in this group are less likely to demonstrate the Focused Team Captain or the Informed Trust-BUILDER styles (11% for each). This implies that the longer the deans serve, the more likely they are to put greater emphasis on the directing behaviours manifested in the Competitive Consultant style. This may reflect the fact that the deans with longer service would have been appointed under the old organisational systems and were likely to be still serving under civil service terms and conditions. They may, therefore, be more likely to maintain their traditional ways of managing through firm rules and authority. In other words, maintaining the status quo is important for the more tenured deans. This is consistent with other studies (e.g. Bantel & Jackson, 1989; Moore & Ruud, 2006) that have found that leaders and managers with longer service are likely to resist change.

Table 6 *Distributions of the Specific Managerial Leadership Styles of Deans by Term-of-Office (N = 218, in %)*

Specific managerial leadership style	Term of Office (years)				Total*
	< 2	3-4	5-6	>7	
Competitive Consultant	37%	33%	56%	29%	37%
Focused Team Captain	22%	19%	11%	26%	20%
Consensual Goal-Setter Style	18%	36%	22%	26%	24%
Informed Trust-BUILDER	24%	12%	11%	19%	18%
Total*	100%	100%	100%	100%	100%

Note: \*the sum of the columns may not be 100%, due to the rounding of decimals.

Table 7 presents the distributions of the managerial leadership styles of deans across academic disciplines. This indicates that some difference in leadership styles exists between academic disciplines. While 25% of deans in the technical group have a Focused Team Captain style, 27% of deans in the non-technical group have a Consensual Goal-Setter style. Moreover, the findings show that there is only a marginal difference between the Competitive Consultant style and the Informed Trust-BUILDER style. These findings partially support other studies (e.g. Del Favero, 2006; Way, 2010) that indicated that non-technical deans are more oriented to a collegial style.

Table 7 *Distributions of the Specific Managerial Leadership Styles of Deans by Academic Discipline (N = 218, in %)*

Specific managerial leadership style	Academic discipline		
	Non-Technical	Technical	Total*
Competitive Consultant	37%	38%	37%
Focused Team Captain	17%	25%	20%
Consensual Goal-Setter	27%	20%	24%
Informed Trust-Builder	19%	17%	18%
Total*	100%	100%	100%

Note: \*the sum of the columns may not be 100%, due to the rounding of decimals.

## DISCUSSION

This study has demonstrated that deans in Indonesian universities are engaged in the 32 behaviours of management that we derived from Quinn's Competing Values Framework Instrument. These behaviours embrace the eight CVF managerial leadership roles. This outcome seems remarkable, and to some extent unlikely, because exhibiting an array of behaviours and roles with contrasting underlying values is demanding. Arguably the number of people with the skills and resources to perform such a variety of roles is likely to be small. This is exactly why the deanship is seen as such a challenging and crucial position in the management of universities. One explanation for this outcome could be that the behaviours of the deans are measured in this study through self-reporting, which might lead to a bias in overestimating one's capabilities or giving socially desirable answers. There could be aspects of wishful thinking ("This is the way I should run a faculty, and, therefore, I will report that I do run the faculty this way").

On the other hand, the deans were asked to report on how often they actually perform a particular activity. This reveals neither the intensity nor the effectiveness of a particular behaviour. The deans report, for instance, that they set targets or build consensus, but the study has not measured what this actually entails. Some behaviours may be executed superficially, in which case it becomes easier to perform a range of (contrasting) activities. Although Quinn assumes that such multifacetedness contributes to the effectiveness of leadership, measuring the effectiveness of leadership has not been part of this study. Whether or not the deans from this study are effective leaders remains to be determined and requires further research.

Other studies (e.g. Wolverson et al., 2001; De Boer & Goedegebuure, 2009; Thomas & Fragueiro, 2011) on the deanship have observed behaviour that

substantiates the results of the study that Indonesian deans perform many behaviours and roles. Indonesian deans are expected to perform many contrasting activities and have many different responsibilities. They are supposed to define strategies and policies for primary and secondary processes, to give direction in implementing them, and to serve and communicate with different audiences (Rector, academics, students). The multitudinous activities of deans at Indonesian universities reflect the greater responsibilities and multifaceted roles found worldwide (Wolverton et al., 2001; DiFronzo, 2002; De Boer & Goedegebuure, 2009; Thomas & Fragueiro, 2011). Exhibiting behaviours to deal with markets, clans, hierarchies and adhocracies has also been observed in universities in other countries. Deans are “directly involved with others in strategic planning, budget planning” (Fagin, 1997, p. 98) for “identifying new opportunities and developing policy” (Scott et al. 2008 cited in De Boer & Goedegebuure, 2009, p. 357). Deans have “finely tuned human relation skills” (Bragg, 2000, p. 75) by guiding their faculty and staff through “team building” (Hilosky & Watwood, 1997, p. 295) as they remain “visible and participative, and working toward a collective vision” (Wolverton et al., 2001, p. 18).

One example of similar research into another country’s deanship management was conducted by Gmelch and Wolverton’s (2002). Their study consisted of 1,370 deans and a response rate of 60% from 360 institutions in the United States. Gmelch and Wolverton define three dimensions for deanship: community building, setting direction and empowering others. Each dimension has eight items. Deans were asked to rate themselves on these 24 items. The mean score on each dimension was high and led to Gmelch and Wolverton’s (2002, p. 3) definition of academic leadership: “the act of building a community of scholars to set direction and achieve the empowerment of faculty and staff”. The 24 items that underlie their three dimensions have many similarities to the items that constitute the leadership style of Indonesian deans. Items referring to “caring about others”, “communicating priorities” or “providing information for effectively planning and doing work” are close to items from the CVF instrument. Though there is much communality, the CVF-based instrument (32 behavioural items and the underlying dimensions of clan, hierarchy, market and adhocracy) is more comprehensive than the dimensions and items used by Gmelch and Wolverton. Nevertheless, the results of the two studies indicating that deans are exceptionally ‘busy bees’ point in the same direction.

This study has revealed the four specific styles of deanship at Indonesian universities: the Competitive Consultant, Consensual Goal-Setter, Focused Team Captain, and Informed Trust-Builder. With respect to these styles, the market and clan aspects seem particularly important, referring to director-producer and facilitator-mentor roles. The outcomes of the study suggest that the deans are likely to challenge themselves to meet emerging global and competitive students markets and new government policies in Indonesia. They seem to understand that they need to provide direction by

developing the faculty strategic planning and agenda, strengthen the faculty missions, visions and goals, and communicate these new goals and strategies to the faculty members and other constituents. The rise of the 'executive' dean or 'academic manager' instead of the traditional *primus inter pares* is reported in various countries (e.g. De Boer & Goedegebuure, 2009; Meek, Goedegebuure & De Boer, 2010).

With respect to the four specific styles, the innovator and broker roles, in the adhocracy aspect, are the least important. This implies that the deans are less likely to perform activities associated with creativity, innovation, risk, and external legitimacy (Quinn, 1988; Cameron et al., 2006). These findings are somewhat similar to that of Nguyen's research (2013) which found that middle academic managers at Hanoi University of Industry in Vietnam were less likely to take risks and be creative. Nguyen's study indicates that the Vietnamese centralised planning approach limited the roles of the middle academic managers in entrepreneurial activities. In this study, traditional Indonesian values may prevent deans from being proactive and entrepreneurial change agents. Traditional values seem to underline a family culture which emphasizes harmony, mutual respect and assistance, collectivism and authority (Bowen, 1986; Irawanto, 2009). Indonesia has a strong cultural tradition of communal living and collective actions, which seems to encourage people-oriented leadership.

The leadership styles of Indonesian deans strongly focusing on people-oriented leadership and teamwork are in line with the findings of House et al.'s (1999) leadership study on Global Leadership and Organisational Behaviour Effectiveness (GLOBE). GLOBE examined the interrelationships between societal culture, organisational culture and practices and organisational leadership in 62 countries, including Indonesia. They surveyed thousands of middle managers in food processing, finance and telecommunications and identified six global leadership dimensions. Compared to the overall GLOBE sample, "the scores of Indonesian middle managers on all the six leadership dimensions are above the overall mean for five of the six leadership dimensions" (cited in Storey & Kenny, 2004, p. 3). This means that Indonesian middle managers are more likely to perform charismatic/value-based, team-oriented, and humane (caring) leadership. The Indonesian deans, though leading and managing in a sector that is supposed to be in several ways, seem to fit this pattern rather well.

A cultural study by Hofstede (Online) indicates that Indonesia has one of the lowest world scores for individualism (a score of 14), suggesting that Indonesian society is collectivist in nature. Dimensions of leadership that represent individualism are unpopular styles of leadership in Indonesia. Because of Indonesian's collectivistic culture, leadership that focuses on a sense of "we-like" and of "family-like" are particularly seen as effective. Where collective culture predominates, deans tend to work in and manage through groups/teams and involve others in participative and supportive consensual decision making. Apparently the macro (national) culture

strongly influences such beliefs and values as reflected in the deans' behaviours in leading and managing an organisation (see Ensari & Murphy, 2003; Raihani, 2008; Wirawan & Irawanto, 2007).

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## **USING STUDENT RESPONSE SYSTEMS FOR PEER INSTRUCTION AND ACTIVE LEARNING IN THE CLASSROOM**

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### **ABSTRACT**

More recently, research on active learning and the brain conclude that the most effective learning takes place when students are actively engaged in the learning process. (See for example, Mintz, 2015) Moreover, a recent meta-analysis of research found that active learning increases student achievement and reduces the risk of failure in science, technology, engineering, and math (STEM) classes. (Freeman, et al., 2015)

The purpose of this paper is to describe in a practical manner how to flip a classroom, and to engage students in active learning using audience response systems and group projects. The paper will present specific techniques that may be directly adapted to the classroom. The methods include flipping the classroom, a research-based active learning technique using a simple audience response system, a second, group-based active learning technique, and an example of group problem-solving projects. This paper will also discuss different audience response systems and student evaluation/grading options in an active learning environment.

The underlying concept behind this paper is that students do not learn by being exposed to material a single time. Effective learning takes place when students are engaged with the subject and use its concepts multiple times, in a variety of ways, similar to learning a foreign language. Active learning engages both the student and the professor in the process of learning.

### **1. Flipping the classroom**

One of the key ingredients to engaging students in active learning is to “flip” the classroom (see, for example, Brame 2013). Essentially, in a flipped classroom, students read the lecture materials on their own prior to class and then during class, students engage in activities, similar to what might be assigned for homework. The steps to flipping a classroom are as follows:

A. Post the class lectures online. Typically, those lectures should be posted to the college or university website, but other websites may also be used, such as Google Docs.

B. Optional: To ensure that students read the lecture notes before class, administer a short, 10-question quiz at the start of each class or require students to write a one-page summary of the lecture notes, to include: a

summary of the lecture, the most important points, and anything that was unclear or didn't make sense.

C. Do not lecture for the entire class time. Give short (no more than 10 minute) lectures interspersed with conceptual problems and group projects.

Those instructors who are used to lecturing will need to let go, step down from the stage in front of the class and become more of a moderator, facilitator, or maybe a coach. Interacting with students becomes the focus of the classroom.

Materials must be developed for the flipped classroom. These materials can be prepared by the instructor, obtained through academic organizations, or adapted from homework assignments. For example, the Center for Astronomy Education, sponsored by NASA, provides a wealth of classroom materials, conceptual questions, and group projects for use in astronomy classes.

There will be a learning curve. Once a class has been flipped, it will take some time to figure out the proper amount of material that can be covered and the kinds of activities that will work best for each class.

## **2. A research-based, active learning technique**

A. Decide upon an audience response system to use in the classroom. See Appendix A.

B. Prepare or obtain a set of conceptual questions for the subject matter being taught. Put these questions into a PowerPoint or Keynote presentation suitable for the length of the class session. Each question should be multiple choice with the number of choices being dependent on the response system being used.

C. If using clickers or a cell phone response system, use the following steps for each of the questions (Mazur, 2015a,b):

- 1) Without giving an introduction, display the first conceptual question.
- 2) Students can input their answers as soon as they are ready to answer.
- 3) Watch the answers coming in and, after a couple of minutes, encourage the last few students to put in their answers (there will almost always be a couple of stragglers).
- 4) Once all the answers are in, look at the results. If more than about 80% of the students got the correct answer, display the results to the students and congratulate them. Ask if there are any questions and then go on to the next question.
- 5) If less than about 20% of the students got the correct answer, display the results to the students and give a short lecture (no more

than ten minutes) about the concept. Ask if there are any questions and then go on to the next question.

- 6) If between about 20% and 80% of the students got the correct answer, do not display the results. Turn to the students and say the following: "I want you to turn to the students around you and find a student with a different answer than yours. Discuss your answers with each other and try to decide which is the correct one. Remember, you and the student you are talking to may or may not have the right answer." If the number of students who got the answer right is small, you can also provide some clarification at this point.
- 7) Typically, the classroom will erupt into discussion. Let the discussion go until you can see that the talking is beginning to quiet down. Walk around the classroom and listen in on some of the discussions. Without giving away the answer, you can provide some guidance and encouragement, such as, "Yes, you are on the right track!"
- 8) Once the discussion slows down, re-poll the students. Typically, the number who has the correct answer will now be 80% or more and you can congratulate the students and ask if there are any questions.
- 9) If the number of right answers has stayed the same or even gone down, you can do one of two things:
  - a) Ask the student if they have a question about the concept that would help them understand it better. Then go back to step 6 and have them talk with their neighbors again.
  - b) Give a short lecture on the concept (no more than ten minutes) and move on to the next question.

D. If using a paper or card-based response system, use the following steps for each of the questions (Brissenden and Prather, 2015):

1. Without giving an introduction, display the first conceptual question.
2. Turn your back to the class and slowly read the question and its answers to yourself, thereby giving the students enough time to read the question. Do not read the question out loud.
3. Turn back to the students and ask, "Does anyone need more time?" If anyone says they do need more time, turn back to the question and slowly count to ten. Then call "time".
4. Turn back to the students and ask them to prepare their answers. They will choose their card or fold their paper to display their answer.

5. Count to three and ask the students to show their answers to you, without showing them to the rest of the class.
6. From the front of the classroom, look over the answers to see, generally, how much of the class is displaying the right answer. If more than about 80% of the students got the correct answer, confirm the correct answer and congratulate them. Ask if there are any questions and then go on to the next question.
7. If less than about 20% of the students got the correct answer, give a short lecture (no more than ten minutes) about the concept. Ask if there are any questions and then go on to the next question.
8. If between about 20% and 80% of the students got the correct answer, say the following to the students: "I want you to turn to the students around you and find a student with a different answer than yours. Discuss your answers with each other and try to decide which is the correct one. Remember, you and the student you are talking to may or may not have the right answer." If the number of students who got the answer right is small, you can also provide some clarification at this point.
9. Typically, the classroom will erupt into discussion. Let the discussion go until you can see that the talking is beginning to die down. Walk around the classroom and listen in on some of the discussions. Without giving away the answer, you can provide some guidance and encouragement, such as, "Yes, you are on the right track!"
10. Once the talking has died down, ask the students to prepare their answers again. Count to three again and ask them to show you their answers. Typically, the number who has the correct answer will now be 80% or more and you can congratulate the students and ask if there are any questions.
11. If the number of right answers has stayed the same or even gone down, you can do one of two things:
  - c) Ask the student if they have a question about the concept that would help them understand it better. Then go back to step 5 and have them talk with their neighbors again.
  - d) Give a short lecture on the concept (no more than ten minutes) and move on to the next question.

In planning your class sessions, allow about five to ten minutes for each conceptual question. The length of time will depend on how many correct responses you get from the students, how long it takes the class to discuss a question, and how many questions are asked by the students. As can be plainly seen, you must remain flexible with the time and it is best to not try

to rush the students in order to get through all of the conceptual questions that were scheduled for that session.

In a long class, anything more than about an hour, don't try to spend the entire class time doing conceptual questions. Students can become fatigued and begin to lose interest. Keep your eyes open and switch to another activity if you can begin to see that your students are losing focus.

Typically, this activity is not graded, although you may give points for participation.

### **3. Another active learning technique using audience response systems**

A. Decide upon an audience response system to use in the classroom. See Appendix A.

B. Prepare or obtain a set of conceptual questions for the subject matter being taught. Put these questions into a PowerPoint or Keynote presentation suitable for the length of the class. Each question should be multiple choice with the number of choices being dependent on the response system being used.

C. Use the following steps:

1. Count the number of students in class and then have them count off so as to form groups of four or five students. For example, if there are 40 students in class, you could have them count off by tens, forming 10 groups of four students each or count off by eights to form 8 groups of five students each (all the ones, twos, threes, etc. form into groups). It is best to conduct the counting so that couples and cliques of friends are spread out into different groups.
2. Optional: These groups can be made permanent and kept together for the entire class. In that case, have them choose a name for themselves, based on the subject matter of the class. Each time there is a group activity in the class, the same group members will work on the activity together.
3. Give one response device or response card to each group.
4. Display the first conceptual question.
5. Ask the groups to discuss the question amongst themselves, within their group.
6. If using clickers or a cell phone response program, groups can answer as soon as they agree upon an answer. If cards or paper responses are being used, make sure each group has their answer and then count to three and have the groups display their answers all at the same time.

7. Since the discussion has already taken place, display the right answer immediately. Then ask for questions and/or give a short lecture (no more than ten minutes) to clarify the concept being discussed.
8. Optional: Keep track of the right answers by group and at the end of the session, announce which group got the most number of questions right.

Typically, this activity is not graded, although you may give points for participation.

#### **4. Group projects and problems**

The use of group projects and activities is another effective active learning method. Here, too, you must find or create group questions or problems that are related to the subject being taught. The best questions or problems are open-ended and require the student to apply the concepts being taught in the class to different, novel situations.

1. Give the question or the problem to the students, either by displaying it on the overhead or passing it out to the class. Give the students a few minutes to think about the question before the discussion begins.
2. Break the class up into groups of four or five students each, as described above or ask the students to form into their groups, if you are using permanent groups that were formed at the beginning of the class.
3. Tell the students to choose a group leader who leads the discussion, a recorder who writes down the group's ideas as they are developed, and a reporter who will report the group's findings to the rest of the class. Those roles should be switched around each time groups work together, so each student gets to participate in each role.
4. Give the students 10 to 15 minutes to discuss the problem. Walk around the room and listen to the discussions. Answer questions, if needed, and give encouragement, to help the discussion move forward.
5. When the discussion begins to wind down, tell the class that they have one or two more minutes to finish up.
6. Call time and ask each group to report their results to the rest of the class.
7. In group work, there typically is no one right answer, so at the end of the exercise, summarize the reports of the groups and comment on their conclusions.

Because group discussions often have no one right answer, the groups should typically not be graded for their answers, although participation points may be given.

### **5. Other active learning assignments**

Since the purpose of active learning is to get students up out of their seats and engaged with the material being studied, the following assignment may also be given:

- A. A paper on a topic appropriate to the subject matter in the class. In this regard, multiple, shorter papers would engage the student in a variety of course topics and be better than a single, longer paper.
- B. A field trip to a place (if available) related to the subject matter covered in the class. Students should be asked to produce some kind of proof of the field trip and write a brief summary of the experience.
- C. Group presentations on some topic appropriate to the class.
- D. Ask the class to look for articles in newspapers and magazines or online that are related to the class and write or give a short report on the article and how it relates to the course.

With these other types of assignments, a grading rubric should be used to ensure that grading is as fair and objective as possible.

### **6. Grading in the flipped, active learning classroom**

In the traditional classroom, students are typically evaluated by tests administered at different times during the class, with a midterm and a final exam at minimum. The flipped, active learning classroom presents us with an opportunity to rethink how we evaluate our students. Consider the following options:

- A. Continue to evaluate students in the traditional way with the same tests that have been used for the class in the past.
- B. Eliminate all exams and evaluate students based on their participation and engagement in the class.
- C. A blend A and B: Give a graded quiz at the beginning of each class session to make sure that the students are reading the lecture notes, give points for attendance and/or class participation, give grades for papers and class presentations, and give points for other active learning assignments, such as field trips and reports on news articles.

There is no one right assessment method. The important thing is to realize that when a classroom is flipped and students are engaged in active learning, we also have a chance to rethink how we evaluate and grade our students.

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## APPENDIX A. Audience response systems

Clickers are excellent response devices that are simple to use and give flexibility in designing questions and monitoring responses. Clickers have unique ID numbers, which can be associated with the individual students in the class. Clicker responses can be used for grading a quiz, for awarding attendance points, and for taking attendance. They can also be used to display responses graphically, showing the number of students who have responded to each of the multiple-choice answers. For a general overview of clickers, see:

[http://en.wikipedia.org/wiki/Audience\\_response](http://en.wikipedia.org/wiki/Audience_response)

Clickers are rather expensive (US\$30 to 40 each), but if an institution as a whole adopts active learning, they can sell clickers at the bookstore and a student need buy only one, which can then be used for all classes that the student takes at the institution.

Two well-known clickers are iClicker and the Turning Technologies Response Card.

<https://www1.iclicker.com>

<https://www.turningtechnologies.com/response-solutions/responsecard-rf?siloh=he>

There are two cheaper solutions:

1. There are polling programs that use cell phones, although that requires all your students to have a cell phone (which was a problem for me when I was teaching). Here is one example:

<http://www.polleverywhere.com/audience-response-system/?ref=PIW0qgbZ&gclid=CNuVrpao-8MCFYZffgodIH8AAw>

Another is the eClicker system available through the Apple app store.

<https://eclicker.desk.com>

2. You can also use a plain sheet of paper divided up into four squares. Each square has a large, bold number (1 through 4) and a different color. In response to a question, students fold the paper and to show their answer. The teacher visually inspects the number of red, green, yellow, and blue responses to see if the students understand the concept being discussed.

**APPENDIX B. Sample conceptual questions from the field of astronomy (Prather, 2012)**

1. According to Newton's law of gravity, the force of gravity between two objects is given by:

$$F = G \frac{m_1 m_2}{r^2}$$

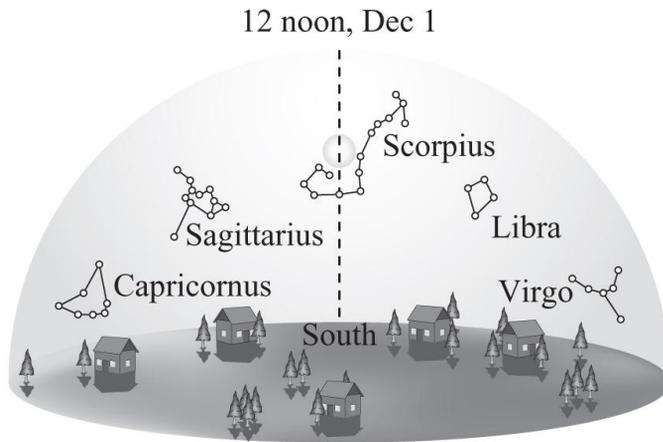
Where  $F$  is the force of gravity,  $G$  is a constant,  $m_1$  is the mass of the first object,  $m_2$  is the mass of the second object, and  $r$  is the distance between them.

Given that Earth is much larger and more massive than the moon, which of the following is true:

- A) The force of gravity of the earth on the moon is larger
- B) The force of gravity of the moon on the earth is larger
- C) The force of gravity of the earth on the moon is the same as the force of gravity of the moon on the earth
- D) None of the above are true

2. At noon on December 1<sup>st</sup>, in the picture below, the sun appears to be in the constellation Scorpius (if you could see the stars in the middle of the day). Three hours later, at 3:00 PM, where will the sun appear?

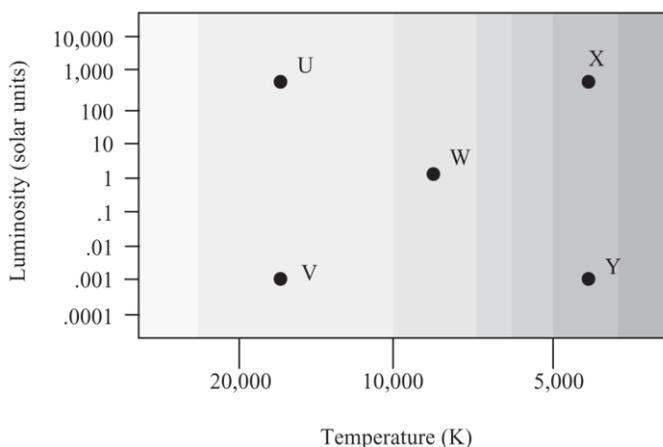
- A) In Capricornus
- B) In Sagittarius
- C) In Scorpius
- D) In Libra
- E) In Virgo
- F) You cannot tell from the diagram



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3. When plotted on the Hertzsprung–Russell (H–R) diagram, below, stars U and V have the same temperature, but star U is much more luminous (brighter). What can you conclude about the size of star U compared to star V?

- A) Star U must be much larger than star V
- B) Star V must be much larger than star U
- C) Because they are the same temperature, they must be the same size
- D) You cannot tell from the diagram which star is larger



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**APPENDIX C. Sample group discussion topics from the field of astronomy**

1. One of the most earth-like planet discovered to date is Kepler 438b, which is about 470 light years away from Earth. You and your group have been selected by the United Nations to prepare a message to send to Kepler 438b. You can send any digital message you want (pictures, audio, movies) and there is no limit on the size of the message. What will your group send and why?

2. In 2005, NASA estimated that it would cost US\$105 billion to send astronauts back to the moon. In your group, carefully consider the pros and cons. Should mankind return to the moon? Why or why not?

3. It is 2025 and the lunar shuttle carrying your group has crash-landed on the moon, about 80 km (50 miles) from the lunar outpost you were headed to. You decide to walk to the outpost. Inside the shuttle, you find the following equipment. Rank the items from most to least important to help you in your journey.

Inflatable life raft, oxygen tanks, space blanket, solar-powered, rechargeable light, signal mirror, water, first aid kit, food, magnetic compass, solar-powered radio/transmitter, map of the moon, rope, parachute, space suit repair kit, box of matches.

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## DEVELOPING 21<sup>ST</sup> CENTURY SKILLS OF VIETNAMESE STUDENTS THROUGH THE “GREEN SUMMER” MOVEMENT

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### ABSTRACT

Quality in higher education is reflected mainly in how the university graduates perform and behave in the social and workplace contexts. In the light of this view, in recent decades, universities around the world have placed an emphasis on developing 21st century skills for their students as these skills can significantly contribute to the quality of university graduates themselves. This paper presents a number of definitions on 21st century skills which have emerged recently and contrasts them with the traditional generic skills before introducing the Green Summer movement in Vietnamese universities. The Green Summer movement provides activities aimed at developing 21st century skills in students and is attracting so many students in Vietnam. Recommendations from the author include enhancing ICT literacy activities in the Green Summer movement, improving the role of the youth unions in Vietnamese universities, and increasing the collaboration among ASEAN countries or universities for promoting the Green Summer of Vietnam and such a movement in other ASEAN countries. Such collaboration will foster not only the 21st century skills for ASEAN students, but also the mutual understanding among ASEAN members and the solidarity of the organization.

**Key words:** *21<sup>st</sup> century skills, generic skills, youth union, Green Summer movement*

### What are 21<sup>st</sup> century skills?

In a frequently cited example, the Assessment and Teaching of 21 Century Skills (AT21CS) consortium which includes Australia, Finland, Portugal, Singapore, the United Kingdom, and the United States organizes 21<sup>st</sup> century skills, knowledge, and attitudes, values, and ethics into the following four categories (Saavedra & Opfer, 2012):

1. Ways of Thinking: creativity and innovation, critical thinking, problem solving, decision making, and learning to learn (or metacognition)
2. Ways of Working: communication and teamwork
3. Tools for Working: general knowledge and information communication technology (ICT) literacy
4. Living in the World: citizenship, life and career, and personal and social responsibility, including cultural awareness and competence.

Another definition comes from the book *The Global Achievement Gap* by Tony Wagner (2008), co-director of the Harvard Change Leadership Group. Informed by several hundred interviews with business, nonprofit, and education leaders, Wagner proposes that students need seven survival skills to be prepared for 21st century life, work, and citizenship:

1. Critical thinking and problem solving
2. Collaboration and leadership
3. Agility and adaptability
4. Initiative and entrepreneurialism
5. Effective oral and written communication
6. Accessing and analyzing information
7. Curiosity and imagination.

The Partnership for 21st Century Skills <sup>1</sup> (Minnesota, US) developed a unified, collective vision for 21st century learning that will strengthen American education. The Partnership defined 21<sup>st</sup> century skills are the skills students need to have in order to succeed in work, school and life. They include:

1. Core subjects (Economics, English, Government, Arts, History, Geography, Reading or language arts, Mathematics, Science, World languages, Civics)
2. 21st century content: global awareness, financial, economic, business and entrepreneurial literacy, civic literacy and health and wellness awareness
3. Learning and thinking skills: critical thinking and problem solving skills, communications skills, creativity and innovation skills, collaboration skills, contextual learning skills and information and media literacy skills
4. Information and communication technology literacy
5. Life skills: leadership, ethics, accountability, adaptability, personal productivity, personal responsibility, people skills, self-direction and social responsibility

In contrasting the 21<sup>st</sup> century skills with the traditional generic skills which have been mentioned since the last century, we can refer to the following definitions:

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<sup>1</sup> <http://www.21stcenturyskillsmn.org/About.html>

*A generic (transferable) skill is one which is not specific to work in a particular occupation or industry, but is important for work, education and life generally.<sup>2</sup>*

*A generic skill is a skill which can be applied across a variety of subject domains, and takes longer to acquire than domain-dependent (subject-area) skills<sup>3</sup>.*

*In any job you have worked in, you will have been developing a set of generic skills. These are skills you can use again in another job, even if it is a different job or in a different industry. You also might hear generic skills referred to as key competencies, core skills, transferable skills or employability skills<sup>4</sup>.*

A definition contrast can reveal that the 21<sup>st</sup> century skills cover not only generic skills but also understanding and values, and they put much emphasis on aspects of contemporary life such as ICT literacy, global awareness, and entrepreneurialism.

### **Why students need 21<sup>st</sup> century skills**

The reasons that our university students need 21<sup>st</sup> century skills can be identified in the followings (Saavedra & Opfer, 2012):

- As computers and machines can cost-effectively do more and more jobs, the workplace will soon need fewer people with only basic skill sets and more people with higher-order thinking skills.
- Supply and demand in a global marketplace increases competition for workers who can add value through applying non-routine, complex thinking and communication skills to new problems and environments.
- To promote civic engagement, the students also need to learn how and why to be engaged citizens who think critically—so that they can be able to solve problems or review policies to address social challenges.
- The students need to be able to work with others, need to be able to communicate effectively orally and in writing so that they can share their opinions, defend their rights, propose new policy, etc.
- The interconnectedness among countries created by globalization requires students around the world to learn how to communicate, collaborate, and solve problems with people beyond national boundaries.

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<sup>2</sup> <http://www.igi-global.com/dictionary/generic-skills/12058>

<sup>3</sup> <http://www.indiana.edu/~idtheory/methods/m7a.html>

<sup>4</sup> [https://nationalvetcontent.edu.au/alfresco/d/d/workspace/SpacesStore/b7da0007-4160-44e4-8d69-c5708b9a4a36/ims/content/u1\\_gettingstarted/wkpl\\_genericskills.htm](https://nationalvetcontent.edu.au/alfresco/d/d/workspace/SpacesStore/b7da0007-4160-44e4-8d69-c5708b9a4a36/ims/content/u1_gettingstarted/wkpl_genericskills.htm)

In order to promote 21<sup>st</sup> century skills for students, countries around the world have their own strategies and policies. The Figure 1 provides such strategies and policies from a number of countries (Saavedra & Opfer, 2012).

Hong Kong	Japan	China	Finland	Singapore	United States
Learning to Learn reform addresses applied learning and “other” learning experiences, including service and workplace learning <sup>5</sup>	Zest for Living education reform stresses the importance of experimentation, problem finding, and problem solving instead of rote memorization <sup>7</sup>	Greater emphasis on students’ ability to communicate and work in teams, pose and solve problems, and learn to learn <sup>8</sup>	New focus on “citizen skills”: (1) thinking skills, including problem solving and creative thinking; (2) ways of working and interacting; (3) crafts and expressive skills; (4) participation and initiative; and (5) self-awareness and personal responsibility <sup>9</sup>	New Framework for 21st Century Competencies and Student Outcomes is intended to better position students to take advantage of global opportunities <sup>10</sup>	Common Core State Standards Initiative redefines standards to make them “inclusive of rigorous content and applications of knowledge through higher-order skills, so that all students are prepared for the 21st century” <sup>11</sup>
2000	2006	2010	2010	2010	2010

Figure 1: How education systems are addressing 21st century skills

### History of the Green Summer movement

Traditionally, universities in Vietnam often have their own programs in bringing their students to local communities to participate in activities which help to protect the environment or improve people literacy, especially in remote areas. These activities are often held in summer time (July and August) when almost all students have finished their academic year.

In 1994, The Ho Chi Minh City’s Youth Union initiated the Summer Culture Light (Anh Sang Van Hoa He) movement which united all mentioned-above summer activities organized by universities located in Ho Chi Minh City. In 1997, The Ho Chi Minh City’s Youth Union renamed this movement to Voluntary Green Summer Movement which is presently often called in short Green Summer (Mua He Xanh). In 2000, the Vietnam Youth union decided to use the name Green Summer for all students’ summer community-based programs in Vietnam<sup>5</sup> and it is organized by the youth unions (including the Communist Youth Union and the Student Union) at each university during the summer time.

<sup>5</sup><http://hssv.tienphong.vn/hoc-sinh-sinh-vien/nguoi-gieo-hat-mua-he-xanh-611838.tpo>

The number of students participated in this movement has been increasing quickly in recent years. At Ho Chi Minh City, in 2014, over 90,000 students have registered in different programs<sup>6</sup>, compared with 57,000 students in 2013<sup>7</sup>. By the time, the movement has not been limited within Vietnam but gradually broadened to some countries in ASEAN such as Laos and Cambodia, and sometimes participated by volunteers from other countries, such as Korea and The United States in 2007<sup>8</sup>, Malaysia in 2014<sup>9</sup>.



Figure 2: A painting class organized by Green Summer volunteers in Laos

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<sup>6</sup> <http://www.thanhvien.com.vn/pages/20140714/hon-90000-sinh-vien-tham-gia-mua-he-xanh.aspx>

<sup>7</sup> <http://www.thanhvien.com.vn/pages/20130714/hon-57-000-sinh-vien-tham-gia-mua-he-xanh.aspx>

<sup>8</sup> <http://vietbao.vn/The-gioi-tre/Rao-ruc-Mua-he-xanh-tinh-nguyen/45246578/275/>

<sup>9</sup> <http://www.thanhvien.com.vn/pages/20140713/soi-dong-chien-dich-tinh-nguyen-mua-he-xanh-lan-thu-21.aspx>



Figure 3: Road construction in Mekong Delta area conducted by Vietnamese and foreign Green Summer volunteers

### **Goal and activities of the Green Summer**

The ultimate goal of the Green Summer, through community-based activities, is *to enhance students' perception about society, improve their self-consciousness and creativity, to link practice with learning, reality with theories and society with schools*<sup>10</sup>. This movement can be compared to place-based or community-based learning/education in Western countries. Based on this goal, popular activities held by universities in Vietnam are to help local communities in:

- cleaning up the environment (roads, beaches, rivers, etc.)
- repairing or building public infrastructure (bridges, roads, canals, etc.) and houses for the poor people
- enhancing children's capacity in writing, reading or using computer
- organizing short courses and transferring technology/techniques in different careers (mainly in agriculture sector)
- organizing culture and sport activities, mainly for the kids

<sup>10</sup><http://svtnhamrong.vicongdong.vn/news/view.aspx?newsId=48693600>

### Why the Green Summer attracts so many students

Every year, thousands of students around Vietnam participated in the Green Summer. The question may arise that why this movement can attract such a huge number of volunteers. According to Mr. Nguyen Phu Binh (recognized as the founder of the movement), there are four main factors that make the movement attractive to students<sup>11</sup>:

- The movement exploits typical personalities of the youth: involving and volunteering
- The movement has well inherited from the past initiatives, been broadened (to other groups of people and organizations) and socialized naturally (invested/funded by different organizations)
- The movement is recognized as an effective approach in educating young citizens, in training future leaders and therefore it is supported by all universities
- The movement has its own romantic style as the youth can find friendship, love and share their dreams during the activities

### Which 21<sup>st</sup> century skills the Green Summer provides

Through the activities provided by the Green Summer, students can get a number of skills which depend on the type and duration of the activities. The Figure 4 provides an estimate by the author about the student's attainment levels of 21<sup>st</sup> century skills through the Green Summer activities, based on the 21<sup>st</sup> century skills definition of AT21CS Consortium mentioned at the beginning.

21 <sup>st</sup> century skills	Levels of attainment
Ways of Thinking: <ul style="list-style-type: none"> <li>- creativity and innovation</li> <li>- critical thinking</li> <li>- problem solving, decision making</li> <li>- learning to learn</li> </ul>	<ul style="list-style-type: none"> <li>✓✓✓</li> <li>✓✓</li> <li>✓✓✓</li> <li>✓✓</li> </ul>
Ways of Working: <ul style="list-style-type: none"> <li>- communication</li> <li>- teamwork</li> </ul>	<ul style="list-style-type: none"> <li>✓✓✓</li> <li>✓✓✓</li> </ul>

<sup>11</sup> <http://hssv.tienphong.vn/hoc-sinh-sinh-vien/nguoi-gieo-hat-mua-he-xanh-611838.tpo>

Tools for Working:	
- general knowledge	✓✓
- ICT literacy	✓
Living in the World:	
- citizenship	✓✓✓
- life and career	✓✓
- personal and social responsibility	✓✓✓

Figure 4: 21<sup>st</sup> century skills attainment levels through the Green Summer

Beside the 21<sup>st</sup> century skills that students can get through the Green Summer, discussions with those students have discovered that the movement also helps them to recognize their real abilities, to be much more confident in applying their abilities in real world. In addition, they become much more open in communication and life, much more responsible in their learning.

### Advantages and challenges of the Green Summer

In comparison with the university youth unions around the world, the youth unions in Vietnamese universities have great advantages in having their official role in universities which is reflected in the Education Act and the Higher Education Act, and they are organized and directed systematically from the central unions to university classes. However, as reflected in annual reports from the Central Communist Youth Union Committee (2013, 2014), activities (including the Green Summer) organized by the university youth unions are facing typical challenges as follows:

- Do not have enough fulltime staff for managing and organizing activities as most of the staff in the unions are selected from the students and teaching/administrative staff and they work on a part-time or extra-work basis.
- Budget share (from the university budget) for the youth union activities is very limited so that the unions have to search donations from business for most of their activities.
- For maximizing the attainment of the 21<sup>st</sup> century skills, university students should have opportunities to participate in voluntary activities at national or regional levels. However, limited budget as mentioned above and lack of support from regional countries have hindered significantly such opportunities.

## Conclusions and recommendations

The above analysis has identified the importance of the 21<sup>st</sup> century skills to university students and contributions of the youth unions in Vietnamese universities on supporting them to attain those skills. In order to enhance such contributions, many efforts are needed and much support should be provided. The following recommendations aim to provide some solutions for such issues:

1. As evaluated (by the author) on the Figure 4, ICT literacy is the least attainment that students can get through the Green Summer programs because few programs adapt to this needs. This result is not only for the students involved in the programs as volunteers, but also for the young people in the communities participated in the programs. Therefore, the movement should create much more activities which can enhance ICT literacy for the youth.
2. The Green Summer movement cannot be successful without the participation and leadership of the youth unions in Vietnamese universities. However, their roles in Vietnamese universities are not always fully recognized, especially in investing human resource and finance. The universities should provide enough fulltime administrative/skillful staff and budget for the union activities.
3. In order to help university students to learn how to communicate, collaborate, and solve problems with people beyond national boundaries and enhance their global awareness, especially within the region (ASEAN), formal supportive agreements among regional countries or universities for the Green Summer of Vietnam and such a movement in other ASEAN countries are necessary. Such collaboration will foster not only the 21<sup>st</sup> century skills for ASEAN students, but also the mutual understanding among ASEAN members and the solidarity of the organization.

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He has worked in international education for twenty years, primarily, but not totally, in education-based international development. Most of his work is concerned with the effect of culture and beliefs on learning and work, particularly in the professions and technical/vocational fields. His experience and achievements in higher education include leadership in the design, implementation, and delivery of international development projects, short and long-term education programs, student recruitment, and teaching at the undergraduate and graduate levels.

As an educator, his development and academic practice serves to increase appreciation of the incredibly complicated nature of education and development by exploring learning, teaching, and educational administration in diverse communities and circumstances in vastly different settings. He values the opportunities that he has been given to carry out work in other countries because he believes that there is much to be learned from studying education and its processes in a variety of contexts. He has worked extensively in Southeast Asia, South Asia, sub-Saharan Africa, and the Middle East & North Africa. His long association with SEAMEO RETRAC began in 1998 when he assisted in the refocusing of the centre's mandate towards educational leadership and management and the implementation of a cost recovery model for many of its educational programs.

He holds a Ph.D. and a Master's degree from the University of Victoria Canada, and a Bachelor of Arts and post degree professional diploma in education from the University of British Columbia Canada.

## **CULTURAL CONSIDERATIONS IN THE ASSESSMENT OF CLASS PARTICIPATION IN INTERNATIONAL ONLINE COURSES**

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### **ABSTRACT**

Universities offering blended and online delivery options have discovered that in order to instil a sense of community among members of an online class, they must take measures to ensure that learners contribute to class discussions and participate in online learning activities, and not simply complete the required assignments. To accomplish this, many universities have developed an online participation assessment rubric that indicates to the student what kinds of class participation are expected, as well as the required frequency of posts. Observed from a Canadian context, it appears that these assessment rubrics are usually developed by curriculum development experts in an institution's learning and teaching centre, with input from interested faculty members, and go through a very rigorous institutional approval process. However, in most cases they are not developed with learners from other cultures, such as overseas students, in mind. A survey of faculty members assessing online participation through the use of such rubrics suggests that any considerations due to a learner's culture of origin are ad hoc and individual.

With the continued expansion of online and blended programming in higher education it is essential that when learners in one class can represent multiple countries, cultures, and value systems, the assessment of their online participation takes into account these important differences. This paper explores the consideration of different cultures in the assessment of online class participation and suggests possible ways to respect learners' values and social backgrounds while ensuring the development of a healthy and robust learning community.

### **Introduction**

The marking or grading of class participation as a part of the overall assessment of learners in college or university courses has a relatively short history. Prior to the 1980s and 1990s, assessment of class participation was rarely considered, and when it was, opinions as to its value were deeply divided (Bean and Peterson, 1998; Evans, 2011). Moreover, depending on the field of study and mode of instruction, many teachers in many courses still do not assess class participation at all, instead relying solely on submitted work and examinations for evaluation (Miller 2009). In online learning however, class participation is seen by many institutions as the most effective way of instilling a sense of community among members of a class or program and is considered an

essential element for individual success in such courses. Although there is on-going debate as to whether or not class participation is essential for success (Williams, 2004), there appears to be agreement that some form of interaction between participants is necessary for imparting the sense of community that often occurs in a face-to-face classroom (Chan, Chow, & Cheung, 2004).

Because of the typically asynchronous nature of the online learning experience, with learners working alone at a computer, separated by geography and time zones from their fellow students and teachers, it is not difficult to imagine class members as a group of disparate individuals with no sense of common purpose or camaraderie. When differences in language capability and cultures of origin are added to the mix, it becomes clear that some form of intervention is necessary if the institution's goal is to have online students form similar community groups as do students in traditional classrooms. Naturally, such communities of learning are more important in some courses and programs than in others. In the hard sciences and mathematics for example, it is suggested that class interaction is of less importance than it is in social sciences and humanities courses (Nathan, 2008).

Once considered a second rate option for higher learning, blended and online learning options have become increasingly popular with learners on every continent. The rise of MOOCS (Massive Open Online Courses) has made many potential students aware of the value of distance education, but also of the limitations of the MOOC model. Many learners are forsaking MOOCS for programs that are somewhat less massive and open, and more likely to supply an achievable, accredited credential (Basu, 2012). As more universities begin to offer blended and online programming to international learners, the more important it becomes to ensure that cultural considerations are included in all scoring and grading, but particularly in the assessment of learners' class participation.

Universities offering blended and online courses have also discovered that in order to instill a sense of community among members of their online classes, they must take measures to ensure that learners contribute to class discussions and participate in online learning activities, not simply to complete the required assignments in isolation. To accomplish this, departments in many universities have made the decision to assess and provide a mark for their students' class participation and have developed online participation assessment rubrics to indicate to students the kind of class participation expected of them as well as the frequency of interaction required to attain the full mark. The rationale behind giving marks for class participation is frequently based on research that suggests that, particularly for students that place a high value on grades, once they "see that their participation is being graded regularly and consistently, they adjust their study habits accordingly to be prepared for active participation" (Bean & Peterson, 1998, p. 33).

These grades may go by different names in different institutions, a common one being 'contribution to the learning community,' but what they appear to have in common is a method of assessment based on what would be expected of a typical English speaking Canadian (Australian, American, British, etc.) student in a typical classroom, albeit an online one. Because many online programs delivered by western universities are promoted worldwide, and boast the availability of a first-rate education without leaving one's own location, I was curious to discover if intercultural considerations were included in the assessment of a student's online class participation. An informal survey conducted with faculty members at one Canadian university specializing in online delivery suggested that any considerations of the culture of origin in assessing class participation were ad hoc and individual (Royal Roads University, School of Education and Technology, Participation Rubric Seminar, personal communication, May 14, 2015. <https://ca-sas.bbcollab.com/site/external/playback/artifact?psid=2015-05-14.1250.M.B424F81819CFCCEB18AD3CE6BE5482.vcr&aid=73694>). Based on this result I was interested to discover how the existing literature has approached the inclusion of intercultural considerations in such assessments, and what is being done with it.

### **Assessment of learner participation**

Because our field, like many others, has its own jargon and terminology, much of which may be unintelligible to others, it is important to be clear about what it is we are talking about. The term 'assessment rubric' refers to a guide for teachers and students listing the specific criteria for scoring the expected academic outcomes in a course. Usually in the form of a grid or a matrix, it explicitly outlines the range of performance expectations necessary to attain a specific mark. Assessment rubrics are valuable to both teachers and students since they allow the application of specific criteria to both quantitative and qualitative tasks and consistency in the evaluation of all class members. Teachers can therefore employ an element of objectivity in their marking, and students can know at a glance what is expected of them to achieve a certain grade (See appendix A for a sample assessment rubric in an education leadership course). Because they provide a reliable metric upon which to base scoring decisions, marking rubrics have become a very common tool at all educational levels.

Grading for class participation has become common in many university and college courses, particularly in the social sciences and humanities. The literature reveals a wealth of discussion and descriptive studies about the practice. Topmost among them are discussions of whether or not to assess participation (e.g., Bean & Peterson, 1998; Miller 2009), and how to assess participation (e.g., Dancer and Kamvounias, 2005; Statz, 2001). Because of the prevalence and thoroughness of these discussions it would be redundant to detail their arguments here. What is important to take from this body of knowledge is that while it is not without disagreement and debate,

most educators agree that some form of participation assessment is desirable.

There is also agreement that the assessment of student participation in class is difficult (Liu, 2007). Instructors struggle with questions of how to evaluate and mark a student's questions or comments in class. They wonder if there may be other forms of participation that ought to be assessed. And they ask how participation can be assessed in a fair and meaningful way without taking up an inordinate amount of time. In addition, unlike the evaluation of submitted student work, the assessment of class participation can be influenced by many subjective elements that do not present themselves in written work. It has become apparent therefore that the application of a marking rubric is necessary to ensure that class participation is graded as objectively as possible and is consistent with the stated learning outcomes of the course.

If the evaluation of class participation in the traditional face to face classroom is difficult, it is clear that it is even more difficult in the online environment. Where in a traditional classroom interaction occurs in real time and in one place; in online courses this does not happen, and there is no opportunity for the instructor to take an immediate role in leading or engaging in a discussion, and there is no body language or instant feedback to rely on to evaluate students' participation. On the other hand, while classroom interactions in the face-to-face environment are immediate and fleeting, student participation in online classroom forums or discussions are saved to the web-based learning platform (e.g., Moodle, WebCT, BlackBoard) and can be retrieved at any time, and multiple times if needed. Because of these factors, the online learning milieu is a natural medium for the application of a standardized, reliable, and transparent method of assessment that corresponds with the stated learning outcomes of the course or program.

Once the leadership in a department or program office delivering online learning decides to assess the class participation of its students, they must ensure that teachers are both able and willing to take on the task. An effective way of doing this is through the development and application of an assessment rubric for online participation that instructors can use alongside the rubrics they use for the other learning outcomes in a course. While many instructors develop their own rubrics, it has become increasingly common for programs, departments, or even entire institutions to employ a common rubric in order to provide consistency and objectivity over a number of participant groups or classes (Porto, 2006) (See appendix B for a sample *Contribution to the Learning Community* assessment rubric for a university's department of educational administration).

The development and application of a common participation rubric in a program or department has many advantages over requiring instructors to develop their own. A common rubric ensures that assessment criteria are clear to learners from one class to another. It is able to encourage the

development of a thriving learning community that extends beyond a single class.

In many Canadian institutions, participation assessment rubrics are typically developed by curriculum development experts in an institution's learning and teaching centre, with input from interested faculty members, and go through a very rigorous institutional approval process. This process allows for the development of high quality, pedagogically robust evaluation tools that can be applied similarly across many courses in a program. However, in most cases rubrics are not developed with learners from other cultures, such as overseas students, in mind. The situation is not surprising, as the majority of an institution's instructional design practitioners would not be expected to have international or intercultural learning experience.

The reality however, is that more and more frequently online courses are being taken by students from outside the countries offering them. For example, at Royal Roads University in Canada, a special purpose, public institution offering predominantly post-graduate social sciences programming, the percentage of online international students, while still lower than that of on-campus international students, has increased from 5% to 8% between 2007 and 2015 (Pedro Marquez, Vice-president Global Advancement, Marketing and Business Development, personal communication, June 25, 2015).

Assessment and evaluation processes, in English (or occasionally French in Canada), are based on western cultural norms & ways of learning and participating. They do not take into account any differences in subtleties of language usage that may be unfamiliar to non-native speakers, differences in the classroom experiences of students exiting secondary education, or different levels of comfort or discomfort with ambiguous or rhetorical directions or instructions.

While individual teachers can and should be aware of the differences in learning styles that exist between members of different cultures in their classes, and take measures to address them, it seems that it would be advantageous if the common marking rubrics were also to take these differences into account, particularly those rubrics assessing class participation.

### **Uncertainty avoidance and ambiguity tolerance**

It is well known that non-native speakers in any language will often have some difficulty with nuances, subtleties and rhetorical devices when writing academic papers in that language. Even speakers of the same language can experience this, for example English speaking Caribbean Islanders studying in Canada frequently have trouble with the language norms expected of them in their written work. Many universities have writing centres and language help centres, both face-to-face and online, to assist learners with such problems.

What is surprisingly less well known to many teachers and instructional designers without intercultural experience is that the classroom culture and personal communication styles between students and teachers varies from country to country. From facing learners reluctant to ask questions in class for clarification or discussion purposes, to others confused about engaging in pair or group work, instructors of students from another country may find their regular range of teaching methods unexpectedly challenged. Many institutions provide workshops for teachers of international students to provide ideas, techniques, and resources to assist them to cope with those challenges. Such workshops typically take as their starting points a need for cultural sensitivity on the part of instructors, and include guidelines and behaviours to take on in order to ensure a welcoming environment for their international students. Instructors are encouraged to make their expectations far more explicit than they may think is necessary, to represent learning material in multiple ways, to provide a wide-ranging array of procedures for student-student and student-faculty interaction, and to model the kinds of behaviours they want in their students (e.g., TRU World, 2007).

Understandably, such workshops, resources, and guides tend to be based on individual behaviours and situational concerns in classrooms or online. But with the recent trend for institutions to employ common class participation assessment rubrics, an individual behavioural based approach to intervention may not be the most consistent, effective, or sustainable conceptual foundation upon which to base an evaluation tool. Because a common assessment rubric must be grounded on factors that can be measured across groups, instructional designers may wish to build mitigations for cultural differences into the tool itself.

In online learning, where interactions are asynchronous and usually, but not always, in writing, the related concepts of *Ambiguity Tolerance* and *Uncertainty Avoidance* have begun to emerge as important factors to consider when contemplating the assessment of class participation. Originally introduced in the study of child psychology in the middle of the last century, and applied to higher education in the 2000s, *ambiguity tolerance* is defined as the measure of ones tendency to perceive ambiguous situations as threatening, desirable, or neutral, and is usually applied on individuals rather than groups (Clark, 2010). From its beginnings as a means to measure children's susceptibility toward authoritarianism and prejudice, the concept of ambiguity tolerance has evolved over time to include a more broad range of attitudes and behaviours over a multitude of organizations and institutions.

Related to ambiguity tolerance, but not synonymous with it, is the concept of *uncertainty avoidance*. Developed and described by Hofstede (1980) who also developed an index to measure it, uncertainty avoidance measures the degree to which people feel comfortable in situations where outcomes and conditions are unknown or unpredictable. Hofstede based

much of his concept on the earlier ambiguity tolerance literature in an attempt to expand the narrower term *ambiguity* to the more wide ranging *uncertainty*. He also took what was a measure of an individual's relationship with *ambiguity*, and broadened it to measure a society's or culture's relationship with *uncertainty* (Furnham & Ribchester, 1995). Consequently, the two concepts tend to be applied interchangeably, particularly in the education field, and suggestions for interventions by instructional designers and teachers of international students originate from both (Tapanes, Smith, & White, 2009).

Bentley, Tinney & Chia (2005) argue that as increasing numbers of international students choose to take online courses, institutions will discover that such students will select those that are more congruent with their cultural expectations. While students going abroad to study expect and anticipate an instructional style and evaluation regime that is different from the one they are accustomed to, students choosing online learning may not realize that they are, in effect, studying in another country even though they are staying home. At the same time, instructors and students from the country in which the course originates may not be aware of the differences in educational norms and academic discourse that the international online student may be facing (Bentley, Tinney, & Chia, 2005). In the case of a common assessment rubric, it is therefore up to the instructional designer to be aware of these differences and to somehow mitigate for them in the development of the evaluation instrument. This does not mean that content must be watered down, standards lowered, or different sets of performance criteria be required of international students and domestic students. Institutions are obligated to set and maintain the highest standards for all students.

Hofstede's uncertainty avoidance index identifies "the extent to which a culture feels threatened or anxious about ambiguity and how hard individuals will work to avoid it. These variables focus on how cultures adapt to change and cope with uncertainty" (Downey et al., 2004, p. 973). Countries with a low uncertainty avoidance index include the United States, Canada, the United Kingdom, Australia, and most of Western Europe. These countries tend to offer what we call a western-style education (Bentley, Tinney, & Chia, 2005). Those countries from which Canadian institutions receive the highest number of international students, both face-to-face and online, however, are those with a higher uncertainty avoidance index. These countries include Japan, China, Korea, Latin America, the Middle East, and Vietnam.

While it is folly, and ethically troubling, to suggest that all members of a society or cultural group behave the same and have identical levels of ambiguity intolerance or uncertainty avoidance, it serves the instructional designer well to consider applying the principles of ambiguity tolerance and uncertainty avoidance to the assessment of online class participation. If the rationale behind assessing participation online is to instill a sense of

community among a group of learners, it is sensible to ensure that all learners understand and feel comfortable with what is expected of them and the method by which they will be assessed. For learners from countries identified to have a higher uncertainty avoidance index this would mean that the educational values of the institution should be made explicit in the marking rubric, and actions that constitute class participation should be made perfectly clear. The reduction of communicative uncertainty will go far to ensure a more equitable learning environment for all students whatever their national origin.

It is not the purpose of this paper to provide a checklist of design elements to include in an assessment rubric, but to point interested educators to the existing literature and to suggest ways that a culturally appropriate method of assessment can be developed. The literature on the application of ambiguity tolerance and uncertainty avoidance to the online education field is relatively scant, therefore a suggestion for further research might be to conduct an action research project to measure the results for teachers and learners prior to the inclusion of a rubric based on these concepts and after its application.

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## Appendix A

Sample assessment rubric in an education leadership course

### HEAL 501: Assignment 4 – Leadership, Learning and Change: Why Academia? (Individual)

#### Learning Outcomes and Assessment Criteria

<b>PLO (1)</b> Communicate ideas, issues and conclusions clearly to students, faculty, staff, government and interests groups, to promote student learning and institution-wide improvement.	
(1.1) Produces effective written material for a specific audience	<ul style="list-style-type: none"> <li>● Organizes thoughts and writes coherently and concisely</li> <li>● Ensures that text is legible, accurate (spelling is correct) and conforms to the style, grammatical and formatting conventions that match the purpose of the writing (APA standards for formal writing).</li> <li>● Uses a structure that makes it easy for the reading audience to identify main points and to follow the sequence of ideas.</li> <li>● Provides attribution in accordance with APA citation specifications where material is copied from published and unpublished sources, including copyright approval where appropriate.</li> <li>● Proof-reads, re-drafts, and edits documents to ensure accuracy</li> </ul>
<b>PLO (2)</b> Engage in meaningful self-assessment and self-awareness to enhance leadership skills, positive relationships, and professional goals.	
(2.1) Engages in reflection on self as individual leader and	<ul style="list-style-type: none"> <li>● Reflects upon decisions, actions and choices with a sincere desire for self-</li> </ul>

<p>self as leader of others (teams).</p>	<p>improvement.</p> <ul style="list-style-type: none"> <li>● Seeks feedback and objectively considers both praise and constructive criticism.</li> <li>● Recognizes superior abilities in self and in others and works with that knowledge to better own performance and performance with others.</li> <li>● Assesses impact of self as leader on others as leaders and/or followers with intention to continuously improve leadership skills.</li> </ul>
<p><b>PLO (5)</b>Apply systems thinking, change theories and organizational improvement strategies to support student learning and institutional growth.</p>	
<p>(5.1) Applies theories in leadership, learning and change to constructively build and enhance a positive culture that supports student learning and institutional development.</p>	<ul style="list-style-type: none"> <li>● Recognizes different leadership styles in self and others and uses that knowledge to cultivate positive environments and productive teams.</li> <li>● Demonstrates an appreciation of different leadership styles.</li> <li>● Applies current leadership, change and learning theories to self in real-world situations.</li> <li>● Finds connections and patterns across theories that apply to self and others.</li> <li>● Recognizes how individual understanding of change theory and learning theory contributes to leadership success.</li> </ul>

**Marking Rubric – Assignment 4**

	4	3	2	1
<p><b>Context and Purpose of the Writing</b></p> <p><i>Includes consideration of audience, purpose, and the circumstances around the writing task(s).</i></p>	Demonstrates a thorough understanding of context, audience, and purpose that is responsive to the assigned task(s) and focuses all elements of the work.	Demonstrates adequate consideration of context, audience, and purpose and a clear focus on the assigned task(s) (e.g., the task aligns with audience, purpose, and context).	Demonstrates awareness of context, audience, purpose and to the assigned task(s) (e.g., begins to show awareness of audience's perceptions and assumptions).	Demonstrates minimal attention to context, audience, purpose, and to assigned task(s) (e.g., expectation of instructor or self as audience).
<p><b>Content Development</b></p>	Uses appropriate, relevant, and compelling content to illustrate mastery of the subject, conveying the writer's understanding, and shaping the whole work.	Uses appropriate, relevant, and compelling content to explore ideas within the context of the discipline and shape the whole work.	Uses appropriate and relevant content to develop and explore ideas through most of the work.	Uses appropriate and relevant content to develop simple ideas in some of the work.
<p><b>Genre and Disciplinary Conventions</b></p>	Demonstrates detailed attention to and successful execution of a wide range of conventions particular to a specific discipline and/or writing task(s) including	Demonstrates consistent use of important conventions particular to a specific discipline and/or writing task(s), including organization, content, presentation,	Follows expectations appropriate to a specific discipline and/or writing task(s) for basic organization, content, presentation.	Attempts to use a consistent system for basic organization and presentation.

	organization, content, presentation, formatting, and stylistic choices.	formatting, and stylistic choices.		
<b>Sources and Evidence</b>	Demonstrates skillful use of high-quality, credible, relevant sources to develop ideas that are appropriate for the discipline and genre of the writing.	Demonstrates consistent use of credible, relevant sources to support ideas that are situated within the discipline and genre of the writing.	Demonstrates an attempt to use credible and/or relevant sources to support ideas that are appropriate for the discipline and genre of the writing.	Demonstrates an attempt to use sources to support ideas in the writing.
<b>Control of Syntax and Mechanics</b>	Uses graceful language that skillfully communicates meaning to readers with clarity and fluency and is virtually error-free.	Uses straightforward language that generally conveys meaning to readers. The language in the piece has few errors.	Uses language that generally conveys meaning to readers with clarity, although writing may include some errors.	Uses language that sometimes impedes meaning because of errors in usage.

Source: HEAL 501, Royal Roads University, Master of Arts in Educational Administration and Leadership.

## Appendix B

Sample Online Class Participation Assessment rubric

### **Assessment of Your Contribution to the Learning Community**

While your instructor will discuss key ideas and raise important issues, parts of this course will be guided by dialogue, discussion and inquiry. Think about this course as a guided conversation that begins on the first day we meet and ends on the last scheduled day of class. In order for this learning experience to be beneficial and worthwhile to everyone, it is imperative that you read the assigned material, contribute to the discussions, and participate in all class activities. Conversations and ideas develop best when everyone has read the assigned material, reflected on their relevance and meaning, and/or contributed to the class discussions. Participation should be **thoughtful, meaningful, timely, and relevant**. Participation should also provide active support to the learning community, by attempting to motivate contributions, acknowledging alternative viewpoints, and supporting others.

In responding to your colleagues, you should feel free to suggest that they explore appropriate websites or resources to expand the discussion to a deeper level. However, please do ensure to provide explanations on why such resources are relevant and interesting to the rest of the class and provide an accurate reference to the resource. For example, the response “In the document that I am attaching, Joe Scholar gives examples of cases where technology brings people closer together and argues that empathy matters more than technology” is a much better response than “Please see the attached document for a different perspective.”

In responding to others, strive to work towards a culture that is collaborative, respectful, encouraging, and supportive. You should be receptive to change and use conflict resolution techniques when required. Posts that show evidence of ongoing negative behavior, that impede the flow of discussion, and seem unaware of or uninterested in responding to others without being prompted degrade the learning experience and do not advance opportunities for everyone to learn from each other.

Also, please consider how your contribution will advance and extend the discussion. For example, in your response, you can

- draw from the assigned readings, concepts and perspectives introduced in the course, and outside readings
- pose constructive questions,

- reflect back to your own experiences,
- connect to a course reading/assignment,
- ask for clarification,
- build connections between your thoughts and other students' perspectives, and/or
- offer alternative perspectives

When responding to your classmates, you are expected to respect others' values, perspectives and experiences. Use good netiquette and care.

The following rubric can help guide your participation in the activities. The rubric will be used by your instructor to assess your contribution to the learning community.

Contribution to the Learning Community Rubric

	<b>Excellent Contribution (A+ to A-)</b>	<b>Good Contribution (B+ to B-)</b>	<b>Poor Contribution (F)</b>
<b>Critical Thinking</b>	Consistently provides posts that are analytical and that demonstrate the author's insights, observations, and reflections; includes relevant examples; offers substantive questions and suggests ideas to enhance further discussion; includes citations to external materials of high academic quality; provides ideas, alternatives or actions not previously identified.	Provides some posts that are insightful and reflective but usually offers only a surface level analysis that lacks insights, observations and reflections; provides some follow-up questions that are cursory and unsubstantive and do not help move the conversation forward; rarely includes citations to external materials of high	Provides post(s) that lack analysis, insights, observations and reflections; does not provide follow-up questions for the group to consider.

		academic quality.	
<b>Response and Synthesis</b>	Consistently provides responses to colleagues that include a thoughtful treatment of the original post; provides responses that demonstrate the student's ability to synthesize information and share this synthesis in a way that deepens the class's collective understanding and move the discussion towards a thoughtful conclusion; provides posts that demonstrate application of learning and are based in the course readings, conceptual materials presented, outside reading and experiences.	Occasionally will synthesize others' posts and current information and share this in a way that contributes to the class's understanding; provides some contributions that lack connections to the responses from others and do not represent intentional, synthesized thought or advance the discussion in a substantive way.	Provides responses that offer minimal analysis, lack depth, and do not advance the discussion.
<b>Communication</b>	Provides timely individual postings that are well-written and succinct (2-3 paragraphs on average), on topic, and written in a style appropriate for the particular kind of activity or exercise; uses appropriate grammar; spells correctly; and shows consistent evidence of appropriate proof-reading.; provides excellent constructive feedback and seeks feedback from others; comments and	Provides posts that contain some spelling, grammar and punctuation errors; lack brevity; or distract from the comments or questions made by others; provides some good feedback and sometimes seeks feedback from others; comments and questions are usually relevant and sometimes contribute to moving the discussion forward.	Provides contributions that contain numerous grammatical, spelling or punctuation errors; shows evidence of a style of writing that consistently fails to facilitate communication. Rarely provides

	questions are excellent, on topic, original and contribute to moving the discussion forward.		relevant input or feedback in a timely or constructive manner.
<b>Professional Knowledge</b>	Consistently provides excellent responses in posts that demonstrate a breadth and depth of understanding, integrates course materials, are analytical and makes linkages to professional practice; solve problems using principles and educational theories; includes citations to external materials of high academic quality.	Provides responses in posts that demonstrate some breadth and depth of understanding, integrates course materials, are analytical and makes some linkages; identifies principles and educational theories for problem solving; includes some citations to external materials of high academic quality.	Provides minimal, if any, demonstration of application of learning, contribution of facts, theories and principles in discussions.

Source: School of Education and Technology, Royal Roads University

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## Using rubrics in higher education: Some suggestions for heightening validity and effectiveness

Author:  
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### ABSTRACT

After isolating several intrinsic problems with the generic structure of assessment rubrics, especially in relation to their validity and effectiveness, the paper canvasses an alternative approach that has been trialled successfully with large, diverse cohorts of primarily online students undertaking graduate level, pre-service teacher education—but with much broader application. Requiring only modest, additional preparation, and with various options available for semi-automation, the alternative approach is able to sustain valid, reliable, and efficient assessment of rich, contextually embedded, problem-based learning by teams of independent assessors, with each assessor generating a combination of bespoke, individualised feedback and structured, proximally relevant, feedforward commentary. The essential difference between the two approaches—instantiating pre-populated analytic rubrics versus interleaving qualitatively bounded tiers of dialectically differentiated commentary—is then accounted for, both mathematically and sociologically. The paper concludes with some pedagogical implications and allied recommendations for assessment design.

**Key words:** *rubrics, higher education, assessment, pedagogy, dialectics*

### Introduction

The use of rubrics has a lengthy tradition, but one that differs significantly from current practices in the design and application of assessment rubrics. Historically, rubrics have denoted the various means of marking, distinguishing, and amplifying textual content through the addition of headings or marginalia, often within a liturgical setting (Popham, 1997); typically, these inscriptions would be made in red lettering, the term rubric being etymologically related to the use of ochre as a writing material (Stevenson, 2010). Now, within a more recent, educational context, assessment rubrics have emerged to form a distinct, structured, educational genre (Martin & Rose, 2008) conveying statements of hierarchically differentiated performance (Goodrich, 1996), with direct (or sometimes implicit) reference to another educational genre: the assignment specification.

Importantly, since the mid-1990s, there has been continued advocacy for the broader use of assessment rubrics in higher education, with calls coming from multiple disciplines (Connelly & Wolf, 2007): that is, not just from within faculties of education (Allen & Tanner, 2006). Nonetheless, within the educational context, assessment rubrics are frequently used in schooling, particularly secondary schooling (usually as a pre-requisite for cross-sector

moderation), with coverage now encroaching on junior primary (elementary) schools. Moreover, this progress has seen growing levels of institutionalisation, with assessment rubrics (as a means of ‘objectifying’ assessors’ judgements) becoming embodied within institutional policy statements—and, more significantly, within student expectations: from personal experience, many newly enrolling students will ask immediately, upon receiving a detailed assignment specification: ‘where is the rubric?’

High levels of operationalisation (i.e., the materialisation of intellectual product through the design of systems) are now encountered in major software products, with assessment rubrics (or frameworks for their ready production) typically provided as optional toolsets within digital learning management systems.

Indeed, as with many successful ‘innovations’, assessment rubrics have reached the point of becoming naturalised, as one of many habitual (and, therefore, often unquestioned) practices within higher education.

How, then, to evaluate this situation?

### **Research focus**

Although the uptake within higher education has been broad and rapid, the conceptual basis of assessment rubrics has been inadequately explored. The research literature tends towards advocacy, with the preconditions for valid and effective application not being subjected to rigorous questioning (Reddy & Andrade, 2010). Indeed, the literature contains very limited critique: where present, critique has tended towards purism (i.e., better design execution) rather than reconceptualisation (Baryla, Shelley, & Trainor, 2012).

As a potential remedy, this paper is an initial contribution towards more a thorough, rigorous questioning of assessment rubrics: indeed, as a more radical, constructive critique, framed in relation to an alternative approach that has arisen in response to the emergence of significant deficiencies in the application of assessment rubrics within large, complex settings—deficiencies in terms of both validity and effectiveness.

Overall, the paper will argue that the alternative approach (sketched below) is superior on several grounds: i.e., mathematically, sociologically, and pedagogically.

The counter claim, that rubrics are invalid and ineffective, will not be maintained: rather, that the preconditions for their valid application demand a much more restricted application (i.e., they need to be kept within their theoretical and practical limits; the limits of their validity and effectiveness).

Or, to say this more pointedly, is the continued use of invalid rubrics worth the risk? Or again, pragmatically speaking, is there a sound alternative, with a comparable preparation workload, that can bring superior results during the assessment process, in terms of both heightened validity *and* greater efficiency?

### **Generic structure**

In general terms, assessment rubrics can be considered as a type of psychometric instrument, reflecting (ideally) the professional judgement of impartial, qualified assessors.

There are several distinguishing features.

It is important to note that an instantiated assessment rubric accompanies (or supplements) an entirely separate specification: namely, the assignment, the set task or project, or a statement of the capabilities under examination. In particular, each individual assessment rubric isolates a small, pre-specified set of independent factors, which represent anticipated characteristics of successful performance (see **Fig. 1**). Each factor is further divided into developmental gradations: i.e., a short, discrete sequence of performance strata. Furthermore, each stratum is assigned a generic, objective statement of typical, commensurate performance.

The performance statements within a sequence usually share nominal and verbal elements (in the case of English), and gradation or stratification is usually achieved through adjectival and adverbial modification (Tierney & Simon, 2004), including quantitative and qualitative differentiation, and sometimes polarity to designate non-attainment. Conceptually, this organisation equates to a per-factor spectrum of performance achieved through intensification and attenuation of the target behaviour.

Assessment rubrics are often arranged in tabular form, with the effect that the strata become co-aligned across factors: i.e., they map by ordinal position. The tabular format (being algorithmically suggestive) encourages the development of scoring rubrics (Moskal, 2000), where factors and tiers (of strata) are weighted and then aggregated (usually as a linear combination, potentially summing to unity).

Assessment rubrics are typically distributed separately from the assessment items (forming, *de facto*, a supplementary specification), and various claims have been made for improving the transparency of assessment, increasing the clarity of expectations (Goodrich Andrade, 2000), and in promoting students' self-assessment (Andrade, 2007).

### **Intrinsic problems**

The preconditions for valid usage are not well understood, and are usually overlooked at the point of application.

What are some of these preconditions?

Perhaps most importantly, scoring rubrics with pre-weighted factors and strata need adequate calibration before use, a non-trivial pre-assessment task, which (in practice) tends to promote the over-solidification of assessment items, thus heightening the risk of students' academic misconduct—the recycling of assignments and their responses.

Such calibration, of course, is standard practice in academic research (i.e., trialling, configuring, and refining psychometric instruments before broad-scale administration), but this knowledge hasn't transferred readily to the teaching domain. Indeed, this scenario supports a broader thesis concerning the general *non-transferability* of endemic, disciplinary-based practices: in this case, the conceptual basis is psychology, with the disciplinary boundaries of cognates (such as education) largely impervious to the successful transmission of scientific praxis. Accordingly, deliberate interdisciplinary intervention is required to re-ground the desired practice with an alternative context and discourse, such as is occurring in this paper. (Several disciplines are active here: education, linguistics, mathematics, sociology, and philosophy.)

	High (Weighted)	Medium (Weighted)	Low (Weighted)	None (Weighted)
Factor 1 (Weighted)	Statement of performance	Statement of performance	Statement of performance	Statement of performance
Factor 2 (Weighted)	Statement of performance	Statement of performance	Statement of performance	Statement of performance
Factor 3 (Weighted)	Statement of performance	Statement of performance	Statement of performance	Statement of performance
Overall (Aggregate)	General commentary			

**Fig. 1.** A generic assessment rubric (with optional scoring)

An assumption of contextual consistency (or commensurability), which is needed to apply the same rubric to the same cohort, usually won't hold for rich assignments and tasks requiring individuation (whether affected by setting or personal requirements).

Tiered, factor-based pre-specification violates the constructivist principle (Oxford, 1997): an openness to creative, unanticipated performance. Indeed, factors are often not orthogonal (i.e., they are variously interdependent, perhaps to uncertain degrees). Moreover, the co-alignment of ordinal strata across factors is not accounted for in the design, which assumes that the separate factors share the same rates of intensification and attenuation: on what basis is there a single rate? Factors can often be combined in different ratios to achieve similarly valid outcomes, undermining the assumption of contextually pervasive orthogonality.

The next problem is very significant for students. Presenting the full developmental spectrum for each factor violates the principle of proximal development (Poehner, 2012): many students won't make adequate sense of statements concerning distal (higher) performance, which easily leads to confusion, reduction, and the projection of existing attitudes.

In terms of the assessment process, administration of the instrument requires reliable identification (from the submission) of an applicable stratum for each pre-identified factor: this step is not fault-tolerant, and potentially unreliable. Moreover, with scoring rubrics, the factor-based scores aggregate into an overall grade, a bottom-up approach, which is ineffective for grade-based certification, as it requires additional grade-based calibration.

When interacting with students, instructors' pre-submission and post-assessment distribution of the very same performance statements (embodied in the rubric) conflates the different purposes of assessor feedback and feedforward advice. Indeed, the rubric (as a document), if pre-distributed, acts as a supplementary specification, with high potential to mislead or misdirect students through its compartmentalised, reductive, and linear structures: there is an essential gap between post-performance analysis and the synthesis of capabilities needed for *in vivo* execution.

### **An alternative approach**

Is there an alternative approach that avoids many of these problems (particularly those relating to validity), yet retains most of the benefits of assessment rubrics?

The following approach (**Fig. 2** refers) is offered as a potential candidate, and incorporates these principal design characteristics:

- encourage students' canvassing of possible valid responses (both likely and unlikely), tolerating approximation and partially competent articulation;
- encourage pre-submission discussion of proximal improvement (e.g., through the narration of progressive attainments and strategic sharing);
- as feedback, report on meaningful clusters or 'constellations' of disciplinary practices needed to complete the assessment task;
- as feedforward commentary, advise on feasible, proximal improvements only (cf. Lantolf, & Poehner, 2004);
- differentiate proximal performance nominally and verbally: i.e., neighbouring performance statements should be conceptually discontinuous, ensuring that they are neither quantitatively nor qualitatively commensurable—without this condition there is no disjunct, no spur to reconsider the earlier approach taken;
- certify the totality: i.e., grade at a coarse level only, thus producing a statement about the overall validity of each student's response (within

broad grade bands, three levels can usually be managed reliably: e.g., C–, C, and C+);

- partial deviations from the gross attainment can be used to temper the grade allocation, without having to reconsider or abandon any preset weighting scheme (e.g., episodic conceptual weakness might shift a C– to a D+);
- any single, pre-identified constellation of performance characteristics need not be invoked: it is permissible for a response to underplay or even omit a particular sphere of performance (and still remain valid); and
- no pre-written statement of performance need be invoked: there is an option for bypassing or overriding preconceived expectations for any particular constellation.

### **Additional preparation**

This alternative approach typically requires the following, additional preparatory activities (as compared with those needed to develop a successful rubric):

- locate the criteria necessary for the allocation of coarse grades: usually, grade-level characteristics will be specified institutionally; otherwise, identify the threshold criteria for competent performance;
- decide on the priority areas of focus for assessment feedback or feedforward advice;
- identify the main, non-exhaustive, non-mandatory suites of typical performance characteristics (previously termed ‘constellations’) whose integral (or synthetic) fulfilment provides clear evidence towards the grade assignment and the feedback/feedforward focus;
- anticipate a range of potential responses (varying in disciplinary sophistication) for each element of the assignment task (identifiable from directives and imperatives);

	Actual	Proximal
Constellation 1 (non-mandatory)	Statement of performance	Advice for improvement
Constellation 2 (non-mandatory)	Statement of performance	Advice for improvement
Constellation 3 (non-mandatory)	Statement of performance	Advice for improvement
Overall (Threshold)	Bespoke commentary	

**Fig. 2.** An alternative approach

- map the constellations of disciplinary performance (or conceptual sophistication) needed to produce these responses onto meaningful ordinal categories (recommend  $k \leq 4$ ): threshold performance is either at either positions one or two (position zero being reserved for non-performance);
- for each constellation, prepare statements that substantially differentiate the ordinal categories (i.e., distinct tiers of performance), taking care to address actual performance together with practical advice (or, alternatively, interrogative prompting) on attaining the next (proximal) tier of performance;
- the key to this last step is to use ensure that actual *versus* proximal performance levels are distinguished categorically: i.e., in English, nominally and verbally through the use of different noun/verb combinations; indeed, with some care and experience, a progressive chain of suitable noun/verb combinations can often be derived dialectically (n.b., this is a non-trivial task, requiring domain expertise and proficiency in dialectics); and
- group and then partially order the salient constellations according to the anticipated hyperthematic structures (Martin, 1992) of the generic texts (or work products) that you have encouraged students to produce through the design of your assignment and its written specification: in other words, always consider your workflow.

Note that most of these steps are amenable to operationalisation, allowing for semi-automation of the assessment process: e.g., the performance statements (coupling actual and proximal performance) can be added to a comment bank prior to receiving students' submissions.

## **Trialling**

This alternative approach has been developed, trialled, and fully implemented in complex, semestral higher education modules delivered biannually since 2012.

The teaching context comprises graduate entrants undertaking postgraduate teacher education in cross-curricular capabilities: literacy and numeracy, with an emphasis on pedagogy and multi-disciplinary coherence. Usually, individual students find at least one of these areas to be very challenging, reflecting disciplinary biases and linguistic backgrounds (which also include substantial numbers of ESL and EFL learners). The student cohorts are large, ranging between 200 and 800 enrolments per module (on a steady, upward trajectory). The delivery modes are predominantly external or blended.

Students typically undertake complex, problem-based assignments with substantial, multiple design elements and expectations for personal contextualisation, two aspects which students often find difficult to combine. (The contexts are multi-jurisdictional.)

Assessment is conducted by multiple markers (small teams, up to four) with mixed levels of experience in the teaching domain and with the marking approach. Various institutional protocols determine a need for ongoing cross-marker moderation, as well as expectations to explain patterns of performance (criterion rather than norm-referenced), particularly in relation to deviations from historical grade distributions. Non-completions are monitored carefully.

At several points in the trials, carefully crafted (invalid) scoring rubrics were introduced alongside the alternative approach (sometimes in response to students' demands), with very interesting repercussions. Students were generally unable to discern, without assistance, that the preconditions for valid application of assessment rubrics were not being met (i.e., that application of rubrics within their educational context was invalid). Nor could students account for the large variance in grades (determined by aggregate scores) produced by the invalid rubrics (which were not exhibited by the alternative approach). Even so, some students would continue to advocate for the use of assessment rubrics, even in the face of considerable, mounting rationale against the rubrics' contextual validity and educational value.

## **Heightened outcomes**

Some of the advantages that arose from the trialling and the subsequent implementation of the alternative approach include:

- the ability to use the same assessment instrument for students either requiring or preferring personal accommodations;
- tolerance for contextual variability (indeed, students' contextual exploration was greatly enhanced by adopting the alternative instrument);

- attainment of a high level of semi-automation: a bespoke (and readily customisable) guided marking environment, attuned to assessors' workflows, was created by integrating low cost, cloud-based software services;
- rapid uptake in the use of the guided marking environment by new assessors;
- high assessment throughput: complex, contextual, project-based assignments (multi-modal, with sometimes non-linear presentation) were routinely processed within twenty minutes, including the composition of individualised commentary;
- certification (i.e., grade allocations) could be performed reliably within five minutes (on average), with two assessors marking in tandem;
- limited variability in cross-assessor gradings and structured commentary (comment bank) selections, with discrepancies usually confined to a single inter-grade level (typically working to three distinct levels per grade band); and
- very limited contestation of grades and comments by students: usually only one or two cases per semester, with the grounds often linked to external factors (e.g., scholarship conditions or intervention by mentors unfamiliar with the instrument).

### **Accounting for the difference**

The difference in outcomes between the two approaches (assessment rubrics versus the alternative approach) can be accounted for in the following way. Compared to the design requirements of assessment rubrics, the alternative approach:

- relaxes the requirement for orthogonality (no assumption of independent factors);
- respects the constructivist principle (performance need not be predictable);
- adheres to the principle of proximal development (distal statements are not routinely made);
- avoids the need to calibrate factor weights, the weights of ordinal positions, and grade thresholds (constellations are non-mandatory and may vary in their effect);
- removes the assumption of gradated development (there is no requirement for uniform stages within factors, nor co-alignment of ordinal positions across factors); and

- avoids the requirement for complete contextual consistency (greatly expanding the domain of validity).

### **A mathematical account**

Analysing at a more detailed level, the difference between the two approaches can be accounted for in mathematical terms:

- during assessment, the population of an assessment rubric prioritises the act of identification: i.e., matching performance to pre-specified strata, which is an essentially equalising activity;
- the alternative approach prioritises comparison: locating areas of superior and inferior performance, relative to each constellation's ordinal categories;
- instead of looking for equality, the alternative approach shifts to mathematically analytic (i.e., non-equating) enquiry, with assessors looking for the local infimum and supremum (respectively, greatest lower bound and least upper bound) within each constellation;
- with the alternative approach, students' development moves beyond the intensification and attenuation of performance characteristics (of their quantity and quality)—the rubric's implicit model of factor-based capability—replacing this with a dialectical model of conceptual transformation: i.e., the next, proximal performance statement pushes beyond the limits of the current one categorically (i.e., objectively and ontologically); and
- (by contrast) rubrics are statistically categorical or non-parametric—i.e., factor scores and aggregate values are likely to be discrete, non-normal (i.e., essentially arbitrary) probability distributions (Simonoff, 2003)—while with the alternative approach there is no need to impose (or even assume the presence of) a recognised probability distribution per constellation.

### **A sociological account**

Continuing a more detailed analysis of the difference between the two approaches, this time sociologically:

- the emphasis on strata-directed performance equating (per factor) in assessment rubrics helps to perpetuate a restricted world-view comprising pre-established meanings;
- this world-view is inherently normalising, with interpretative deviations and unanticipated (yet still valid) responses being much harder to assimilate;
- if valid deviations are accommodated, the rubric's design framework is unable to adequately justify the accommodations, which undermines the presumed 'objectivity' of the instrument and its surrounding institutional policies;

- the alternative's emphasis on the testing of limits and thresholds (qualitative boundedness per constellation and at a gross level) reflects an approach that is inherently open to novel, creative (and still valid) responses, including those that exceed or depart from existing norms and expectations;
- with the alternative approach, meaning is created dynamically through the assessors' interrogation of the submissions, mediated by testing the connotations of the specification and the assessors' own presuppositions;
- the dialectical sequencing of performance statements in the alternative reflects contemporary understandings of social organisation (e.g., societal forms as variously emergent, dynamic, complex, self-organising, and potentially chaotic); and
- scrutiny of the pragmatic efficacy of the alternative approach's dialectical model leads towards a much richer appreciation of social ontology and its various problematics (i.e., that successful performance involves much more than the intensification/attenuation of desirable/undesirable behaviours).

### **Pedagogical implications**

Given these brief accounts of the differences between the two approaches, a choice made to apply the alternative approach (over assessment rubrics) gives rise to various pedagogical possibilities. For example, the alternative approach encourages use of an interactive pedagogy (primarily student-to-student), which helps the instructor—invoking now a central psychoanalytic concept—to displace the role of the “subject who is supposed to know” (Davis, 1987, p. 750). Within this interactive mode, students can readily share their work, and narrate their emerging practices collaboratively, prior to the submission of assessable work. Similarly, students and assessors are able to explore potentially valid responses prior to the commencement of certification without compromising the assessment process. Content can also be made fairly light (or as laden as required) to help encourage student autonomy (self-directed or cooperative learning) in response to rich assignment specifications.

### **Recommendations for assessment design**

Considering further a broader framework of ‘assessment for learning’ (William, 2011), the alternative approach:

- allows for the under-prescription of assessment requirements, encouraging students' exploration of open possibilities;
- enables, more specifically, vague or ambiguous specification (Thomas, 2008), promoting debate, dialogue, and demarcation: i.e., students taking and defending a position or a particular design approach;

- permits the inclusion in the specification of conflicting or mutually incompatible requirements and constraints (as a means of ensuring students' decision-making);
- prompts designers to prepare pathways for students' creative exploration of disciplinary practices, including an openness and willingness to try interdisciplinary strategies; and
- readily accommodates contextual variation and individual differences and needs within a common, inclusive (and still valid and effective) approach to assessment.

### **Conclusion**

The suggestions offered in this paper are intended to be neither normative nor didactic: instead, they trace the foundations of a general approach towards complex, project-based assessment, with the expectation that evaluation, adaptation, and specific configuration will be required within local settings. Indeed, as the implementation of changes to assessment practices are rarely straightforward, there is a serious risk of negative consequences and potential counter-productivity arising if local, contextual realities are not carefully scrutinised and managed (Richard & Mark, 2010).

In summary, the paper has argued that it is important to acknowledge, articulate, and test the preconditions for valid usage of assessment rubrics, as indeed you would do with any other psychometric instrument. The paper has also defended the claim that the alternative approach presented here has a less restrictive set of preconditions, and therefore maintains (at least theoretically) a wider domain of validity. Trialling and subsequent implementation of instances of the alternative approach has also demonstrated (in context) substantive increases in effectiveness, with significant potential for improving throughput, quality of feedback, and the reliability of grading and certification. In addition, the alternative approach, in comparison with assessment rubrics, lends itself to a more open, responsive pedagogy, which is also scalable, and provides support for student creativity and contextualisation.

This coverage (of validity and effectiveness) also opens onto broader, contemporary topics on assessment and its relationship to learning: topics such as the inter-relationship between assessment approaches and particular value-preferences (Boud & Falchikov, 2007), and the intrinsically interpretative (mediated) nature of performance codification and pre-specification (Sadler, 2014). Being able to use these broader topics to help students and teachers distinguish and differentiate theoretically distinct approaches to assessment becomes crucial in the related task of addressing the issue of 'pedagogic literacy' (Price, Handley, Millar, & O'Donovan, 2010). For, it is through a general heightening of pedagogic literacy that students can become important allies in helping institutions to validate (or invalidate)

their preferred modes of assessment—particularly through students’ ability to generate rapid shifts in scale and new orders of magnitude.

Of course, this paper has raised—and diplomatically avoided—the question of how this entire situation has arisen (of the prevalence of assessment rubrics), but to conclude, the answer lies principally within the sociological domain, with significant conceptual and pragmatic transformations required to break the appearance of its naturalisation. The attempt made in this paper to commence this process has relied, as we’ve seen, on multiple academic disciplines, and it can be expected that further interdisciplinary interventions (or the adoption of a general, transdisciplinary approach) will be required to make further progress. This task would also benefit from the establishment of multiple, cross-institutional collaborations to help promote a better understanding of educational contextualisation and its related effects (Bernstein, 2000).

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In 1999, he won a Fulbright Scholarship to do his master's degree in Educational Administration and Policy Studies at the State University of New York, USA. Upon his return to Cambodia in 2001, he was appointed as a manager of Quality Assurance Unit (QAU) of the RUPP. When he was a manager of QAU, he conducted a number of quality assurance activities for the University.

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## QUALITY ASSURANCE AND ACCREDITATION IN CAMBODIA

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### ABSTRACT

The accreditation Committee of Cambodia (ACC) was established in 2003. ACC's mandate is to ensure and promote the quality of higher education in Cambodia aligned with the international standards. The status of ACC was the Agency Model Two-Independent Authority, meaning that it was independent of the Ministry of Education, Youth and Sport (MoEYS). It was under the supervision of the Council of Ministers of Cambodia and the objective of the assessment was to provide accreditation to higher education institutions (HEIs) on a mandatory basis.

In 2013, ACC was integrated to be part of the Ministry of Education, Youth and Sport. Its status became the Agency Model One-Centralized Government Authority. In response to the development of higher education, ACC was advised to revise its assessment tools which are now called the National Standards. The new standards are more qualitative and evidence-based ones, compared with the previous Minimum Standards. They correspond to the needs of the current reform of Cambodian Higher Education context.

However, the objective of the assessment is now not clear as whether to provide accreditation to HEIs or just to diagnose their symptoms on a voluntary basis and then give recommendation to HEIs for continuous improvement. In addition, ACC is now in the face of many challenges, including budget plan for conducting assessment and accreditation in 2015 has been canceled; qualitative-based and evidence-based assessment tools are new concept for both HEIs and assessors; there is a lack of trust on quality assurance system among implementers and relevant stakeholders; the assessment results have not been fully used in developing policies by ministries, development partners and other institutions; and the culture of quality assurance has not yet been embedded in the Cambodian higher education context.

In response to the above-mentioned challenges, ACC is required to prepare its internal regulations, continue to enhance capacity of assessors and ACC staff, organize field trainings for higher education institutions on accreditation, embed the culture of quality in the mindset among relevant stakeholders, establish the data-base system for storing accreditation results and assessor profiles, as well as develop and revise the guidelines and procedures for institutional accreditation.

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## **INNOVATING TO WELCOME ASEAN ECONOMIC COMMUNITY (AEC)**

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### **ABSTRACT**

The ASEAN Economic Community (AEC) is founded on a vision of a single market and production base for ASEAN member states to promote free movement of goods, services, investment, and skilled labor across the ASEAN region. AEC aims to foster equitable economic development across the region and the creation of highly competitive economic region that will be fully integrated into the global economy (*Introduction to ASEAN Economic Community in AEC Handbook for Business*). AEC, therefore, has opened its door for Vietnam to enter into a very potential but challenging market. As the suppliers of intellectual labor force for the whole country and even for the ASEAN community in the future, with what should Vietnam universities and colleges equip themselves and their students for the next coming chance and challenge? The paper would state some general background information about AEC, discuss the present problems of higher education institutions in Vietnam in terms of the perception and preparation for AEC and suggest some innovative solutions to be ready for the integration and competition in this new market.

**Key words:** *AEC, innovation, perception, preparation, competition*

### **1. Introduction**

#### **1.1. AEC & its historical missions:**

In 2003, ASEAN leaders decided to establish the ASEAN Economic Community (AEC) by 2020 (Bali Declaration II). In 2007, the leaders affirmed their strong commitment to accelerate the establishment of AEC to 2015 (Cebu Declaration on the Acceleration of the Establishment of ASEAN Community by 2015). According to the AEC blueprint, the establishment of AEC aims to achieve:

- 1) A Single Market and Production Base
- 2) A Highly Competitive Economic Region
- 3) A Region of Equitable Economic Development
- 4) A Region Fully Integrated into the Global Economy

An ASEAN single market and production base shall comprise five core elements:

- 1) Free flow of goods
- 2) Free flow of services

- 3) Free flow of investment
- 4) Free flow of capital
- 5) Free flow of skilled labor

## **1.2. Vietnam's contribution to AEC:**

According to the Minister of Industry and Trade Vu Huy Hoang (*Vietnam plus*), for Vietnam, ASEAN is one of important pillars in implementing the foreign policy of independence, self-reliance, diversification and multilateralism with active regional and international integration. Although having a lower level of development in comparison to other regional countries, Vietnam is one of four ASEAN countries with a high proportion of fulfilling commitments in the master roadmap to implement the AEC. In 2010, Vietnam successfully assumed the role of ASEAN Chair, and focused on accelerating the implementation of the AEC. At the 16th ASEAN Summit in Hanoi under the chairmanship of Vietnam, ASEAN leaders issued the "Statement on sustainable recovery and development", affirming the determination to strengthen and build the ASEAN Economic Community by 2015.

## **2. Possible impacts of AEC to Vietnam after joining AEC by 2015**

### **2.1. Opportunities**

The establishment of AEC will mix the economy of 10 ASEAN members (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam) to create the regional economic market with the population of 600 million and the total national income (GDP) up to 3,000 billion USD. This process of integration will bring Vietnam opportunities to fully exploit comparative advantages and use available resources more efficiently. The common market created by AEC will not only be confined in the region but also expanded to six counterparts of ASEAN members including China, Japan, Korea, Australia, New Zealand, and India. This creates big opportunities for developing the production and attracting more foreign investors.

The establishment of AEC will create favorable conditions to attract high-quality labors from other countries. On the contrary, Vietnam labor will have more chances to find jobs. Rector of University of Economic and Business (Hanoi National University), Mr. Nguyen Hong Son said that joining AEC was an important factor to promote the country's reform, especially in terms of improvement of economic institutions and international trade policies to improve [Vietnam business environment](#). This is also a great occasion for [Vietnam enterprises](#), under the pressure of the international competition, to make technological innovation, enhance management skills of high quality human resource.

## **2.2. Challenges and problems of Vietnam enterprises and Higher Education Institutions when Vietnam joins AEC:**

Besides golden opportunities, AEC will also create many big challenges, in which the biggest challenge comes from the comprehensive competitiveness in both domestic and international markets. Vietnamese enterprises have to compete with other enterprises not only from ASEAN region, but also from other countries in the world such as Korea, Japan, and China, etc. The competition is also not only confined in commodities but also in other aspects like services, investments or the movement of labors in the region.

Chairman of Hanoi Young Business Association said that although the Government made careful preparations for the integration process, nonetheless, many Vietnam enterprises were not yet carefully invested, provided knowledge, and prepared themselves for the new challenges. A great number of enterprises are indifferent, not interested, or have not yet recognized the importance of the integration. Small and medium enterprises will be most affected when they are not capable of reaching out internationally. Not only that, these enterprises can meet difficulties in the domestic market when big international enterprises entering the market.

It is really worrying that though AEC would have big impacts on the society and national economy, the awareness of Vietnamese people and businesses about AEC remains limited (Vietnam net, 18/11/2013). A report released recently by the ASEAN Network Forum in Singapore showed that less than 20 percent of businesses in ASEAN countries know how they should prepare for the community.

In Thailand, small and medium enterprises have begun receiving the government's support to prepare for joining AEC. Thai trade ministry has announced the plan on assisting small and medium enterprises to boost exports to ASEAN markets, and help solve the difficulties when Thai do business in neighboring countries.

The government of Indonesia has been stepping up its communication campaign to explain the benefits and opportunities that AEC can bring to enterprises, so that Indonesian businesses can best prepare to grab the opportunities.

In Vietnam, only big enterprises, which have been exporting products to ASEAN markets, or have been running investment projects in ASEAN countries, can say they understand the ASEAN market well. Meanwhile, small and medium enterprises still don't have any knowledge about it.

How about the perception and preparation for AEC in Vietnam Higher Education Institutions? What problems have existed in the nursery gardens for the future intellectual labor force?

Firstly, there is a big gap in the students' perception about AEC. A survey recently carried out in the College of Business in Danang City revealed that 57/100 of the students have no ideas about AEC; 30/100 know the phrase

AEC but have vague knowledge about it; only 13/100 have preliminary understanding about AEC but have not much interest in the community. In their research about the young's attitude towards the labor market of AEC carried out in a numbers of Vietnam universities and colleges, the writers (*Cong Nhat& Dieu Nguyen, Tuoi Tre online, 08 June, 2015*) state that most of the students have the same answers when being asked about their perception and preparation for AEC: "This is the first time I have heard of AEC", "I have heard of AEC somewhere, but actually have no ideas about it", "No need to worry since only students majored in economy will be influenced", "I know there will be more competition on the job market, but I don't know what to prepare", "There will be no "gate" for foreign candidates to enter into our state companies, which have not been well- prepared adequately to recruit international employees" and so on.

Therefore, where will the future position of Vietnam be located in AEC if our future labor force has no correct and comprehensive view on AEC?

Secondly, to make the matter worse, Vietnam students are extremely lacking soft skills, which are always emphasized in most of higher education institutions in developed countries. In the recent years, soft skills have been included in curricula of most of universities and colleges, the quality and quantity, however, have not met the target since soft skill courses are not invested seriously.

Thirdly, low English proficiency is another challenge for Vietnam students. As the grammar- translation and teacher- centered methods have been applied to English teaching for a long time, Vietnam students' English level, especially, communication skill, lags far behind other ASEAN countries like Singapore, Malaysia and Philippines. This indicates that Vietnam students need to improve their English skills to compete with other countries or many will lose their jobs or find it hard to work when the AEC takes effect.

Fourthly, investment in Education is not adequate in most of Higher Education Institutions. The teaching curricula are not updated regularly to catch up with the practical development. Although the teaching and learning methods have been improved, it still takes a long time to reach the expected target.

Fifthly, the lack of teaching staff well- qualified in English is really an obstacle for the education. With the National Foreign languages 2020 Project, the Ministry of Education and Training has made a great effort to upgrade the English proficiency for Vietnam teaching staff. However, the implementing method has not proved to be efficient enough since learning a foreign language cannot be successful in one day.

The last problem mentioned in this paper is the students' consciousness. If they continue ignore the future of the country and of themselves, no one and no way can assist them. In this event, students must put themselves in the position of the insiders so that they will be more aware of their importance and responsibilities.

### **3. Solutions to the mentioned problems**

At the end of 2015, whether we like it or not, the doors of AEC will open. Obviously, a lot of measures have to be implemented in various fields such as focusing on the training of high- quality human resources and skilled workers, quickly renovating science and technologies, raising labour productivity, strengthening supporting industries, increasing the role of Associations in awarding professional certification within ASEAN, moving towards free flow of investment, and so on. The paper particularly focuses on the solutions for universities and colleges in Vietnam to overcome the challenges so that they are able to complete the mission of providing a well-qualified labour force for Vietnam to compete in the market of AEC. These solutions, however, will merely promote their effect when being carried out intensively and comprehensively in all of the relating parties.

**3.1 For the higher education Institutions:** In order to enable the students to have correct and comprehensive views on AEC, the following tasks should be carried out:

#### **3.1.1 Propagandizing:**

Information about AEC must be updated and informed to students regularly, attractively and comprehensively through various channels such as seminars, posters, bulletin boards, game shows, competitions, etc. to help students be aware of the history, missions, opportunities and challenges when Vietnam join AEC, so that they can be cognisant of what to prepare for themselves to be confident in this regional market. In order to be successful, however, the propaganda must be implemented creatively to avoid the dogmatism.

#### **3.1.2. Upgrading education quality through reforming the management policy and the teaching and learning method**

The management policy should be open to be suitable with the internationally oriented education. More investment should be carried out to upgrade education quality as well as the infrastructure. Schools, libraries should be modernized in accordance with the international standards. Additionally, more international training courses should be added to provide the students with adequate hard skills and soft skills. English and soft skills must be emphasized as English is the business language in AEC and better English means more opportunities. In addition to the major knowledge, the following understanding and skills must be part of the training programs:

- Knowledge of integration
- Knowledge of the civil life including the traditions, customs, cultures, etc. of the countries in the region
- Knowledge of the environment
- Skill of creating and innovating
- Skill of criticizing and problem- solving

- Skill of information exchanging and co-operating
- Skill of collecting and processing information
- Skill of communicating
- Skill of using information technology
- Skill of living and working
- Adaptability
- Interpersonal skill
- Research skill, and so on.

### **3.2. For the instructors:**

In order to confidently compete in single universities when Vietnam joins AEC at the end of 2015, instructors must equip themselves with profound knowledge about the majors they are teaching and soft skills as well. There will be free flow of teaching staff from other countries in the community such as the Philippines, Singapore, Malaysia, which have the advantage of English- speaking countries. Vietnamese instructors, therefore, have to be well- prepared to work and compete with the regional colleagues through self- learning, training courses, seminars, workshops. With the support of the institutions, the instructors need to obtain the necessary international degrees and certificates such as TOEFL, TOEICS, IELTS so as to facilitate the integration. Besides, they also need to improve the teaching method towards the learner- centered and design the curricula close to the practical demands.

### **3.3. For the students:**

Students need to equip themselves with comprehensive knowledge of AEC and be aware of the difficulties as well as chances that AEC brings back for them and their country in the future. Besides mastering well the major knowledge, students must focus on the soft skills and upgrade their English proficiency. They cannot look on with indifference, as far as world developments are concerned, and they are part of the movement whether they like it or not.

## **4. Conclusion**

The paper has drawn out some aspects of AEC, in which the concept, opportunities as well as challenges when Vietnam join AEC are mentioned. Within the limit of a paper, only the perception and preparation in the field of education is focused. It is expected that the solutions suggested from the paper will be useful for those who are interested in the upcoming event of the region and ready to welcome opportunities as well as encounter difficulties. In a word, AEC will bring back golden chances for those who are well- prepared for it.

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## **A FRAMEWORK FOR AN ICT-BASED DEVELOPMENT PROGRAM FOR SCIENCE TEACHERS IN STATE UNIVERSITIES AND COLLEGES IN REGION VI: DESIGN AND IMPLEMENTATION**

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### **ABSTRACT**

Curricular reform is central to the aspirations of many developing countries as they strive to deliver a quality education to their citizens. In State Universities and Colleges in Region VI, with its remarkable achievement of a high literacy rate in a few decades, the next step is bringing its resources to bear on providing a quality education so that Filipino science professors and students may take their places in the global labor force.

This study concerns the integration of information and communications technologies into the science curriculum of higher education institutions in SUC's in the Philippines particularly in Region VI, and the training and development requirements of science professors. A mixed methodology was employed to obtain qualitative data.

The findings confirmed that teachers' access to training is affected by time constraints, ineffective ICT course material, unavailability of ICT infrastructures and facilities, and high cost of ICT trainings. The policy makers perceived the teachers as having a positive attitude toward ICT integration in the science curriculum, quantitative data from the teachers pointed to a high interest in ICT integration, and their willingness to pursue further professional development in the effective use of ICT in the science curriculum.

Age and length of service factors exhibited from significant to a very significant difference in ICT skills, utilization, attitudes and individual barriers of science teachers in SUC's Region VI. Gender and educational attainment, home and school location, were not significantly related attitudes, skills, utilization and perceived barriers.

**Key words:** *Science Teachers, ICT-Based Framework, Faculty Development*

### **INTRODUCTION**

Colleges and universities invest billions of dollars per year for the acquisition of instructional technology through ICT and other ICT tools.

Today, everyone needs a basic understanding of ICT and how to make productive use of it, just to be good teacher, students and citizens. Teaching people how to be basic competent users of ICT technologies is an important role of ICT education so that they will be successful in their academic and

work careers, especially in teaching and learning; and so that they can efficiently participate in modern technical society.

Although ICT has several definitions depending on the nature of its use, for this study, ICT (information and communication technology) is used as an umbrella term that includes any communication device or application, encompassing: computer and network hardware and software, as well as the various services and applications associated with them, such as videoconferencing and distance learning. We refer to ICT in the particular context of ICT provision, policy and teacher factors that variously support teaching, learning and a range of activities in education.

Information Communication Technology (ICT) is increasingly becoming more widespread throughout university education worldwide. This is in line with UNESCO's policy paper for change and development in higher education which urges higher education institutions to make greater use of the advantages offered by the advancement of communication technology to improve the provision and quality of their education (Chitanana et al., 2008).

The widespread belief that ICTs can and will empower teachers and learners, transforming teaching and learning processes from being highly teacher-dominated to student-centered, and that this transformation will result in increased learning gains for students, creating and allowing for opportunities for learners to develop their creativity, problem-solving abilities, informational reasoning skills, communication skills, and other higher-order thinking skills.

However, the performance of ICT utilization in higher education is not expressly evident. Although most teachers may have considerable skills in ICT, they cannot integrate ICT into regular teaching effectively. This phenomenon has been the concern of the present researcher and has put forward worthy outcome and consideration to solve this problem. It is in this premise that this research study was conducted.

### **STATEMENT OF THE STUDY**

The main purpose of this research study was to develop a framework for an ICT-Based development program for Science teachers in State Universities and Colleges in Region VI. This study was performed with the guidance of the following research questions:

1. What was the extent of ICT skills, utilization, attitudes, and barriers of Science teachers of SUCs in Region VI regarding ICT?
2. What actions had been taken by the State Universities and Colleges (SUC's) in Region VI to integrate ICT into teaching and learning in science curriculum?
3. What programs had been introduced by the SUC's in Region VI to provide professional development for science professors to employ ICT in their classes?

4. What are the professional development needs of science teachers in Region VI regarding ICT use in science curriculum?
5. How did the science teachers' ICT skills, utilization, barriers, attitudes, and belief regarding ICT differ in terms of:
  - a. Age, Gender, Highest education attainment, Length of service, School location; and Home location?
6. What prototype professional framework is proposed based on the results of the research study?

## RESULTS AND DISCUSSIONS

### Respondents' Attitudes towards ICT in SUC's Region VI

The data revealed that science teachers of SUC's Region VI strongly agreed that they were eager to learn more about using ICT for it had a positive impact on their teaching and learning methods. Furthermore, they also strongly agreed that ICT training was very beneficial for their personal and professional development and they were willing to use it if there was sufficient and relevant equipment available at their school. (See Table 2)

This implies that in spite that there was science teachers in SUC's Region VI who felt confident about their ICT attitudes and usage in the classroom there were still a significant majority of Science teachers who do not see considerable learning benefits from using ICT, regardless of the sophistication of ICT systems. Therefore, Science teachers showed that their attitudes of ICT was more ambivalent unpredictable and sometimes doubtful about current advantages of ICT in their teaching learning process. (See Table 2)

**Table 2**

#### Respondents Attitudes towards ICT

	X	S.D.	V.I
I am eager to learn more about using ICT for it has a positive impact on my teaching learning methodology.	4.741	0.472	S.A
ICT training is very beneficial for my personal and professional development.	4.748	0.468	S.A
Using ICT technology decreases student teacher interaction.	2.482	1.144	D.A
The use of ICT is not necessary for science lesson and laboratory activities.	1.82	1.118	D.A

I am willing to use ICT if there is sufficient and relevant equipment available at the school.	4.576	0.742	S.A
I prefer to use traditional method rather than the using ICT equipment such as LCD projectors and e-board on my teaching learning settings.	2.151	1.063	D.A
I do not have enough skills in using ICT equipment for my teaching methodology.	2.691	1.307	NA/DA
Excellent teaching is possible without using ICT equipment.	2.978	1.025	NA/DA
ICT training programs are aligned to novice teachers.	2.849	1.049	NA/DA
Using ICT requires more time and effort in preparing science lessons	2.799	1.193	NA/DA
<b>Mean</b>	<b>3.184</b>	<b>0.442</b>	<b>NA/DA</b>

### Science Teachers in SUC's Region VI ICT Skills

Data showed that the science teachers are in within adaptation level with a mean of 2.821. This means that science teachers were already familiar with the various applications and uses of ICT in their teaching learning process and use it occasionally to support their teaching process. (See Table 3)

However, the skills level of Science teachers on designing and publishing internet pages on science subjects, organizing email group and using chat program were in there *entry level* or teachers have already been introduced to the basic skills and understand the numerous potential of ICT to contribute to their teaching strategies but used it very seldom. (See Table 3)

The findings showed that there moderate ICT skills was due to lack of ICT training of Science Teachers, and it was confirmed by the respondents' responses that the majority of teachers had not attended any ICT training courses or development programs during their years of teaching,

**Table 3****Science Teachers' in SUC's Region VI ICT Skills**

	X	S.D.	V.I
Familiarity with computers, (computers and accessories such as LCD projectors, screens, printers, scanners, modems, digital cameras, etc)	3.209	0.821	AD.L
Managing operating systems (changing desk top settings, date, time region, the degree of screen clarity)	2.928	0.941	AD.L
Organize and save educational files in folders	3.259	0.828	AD.L
Prepare summaries, abstracts, and educational material using text based programs (eg Microsoft Word)	3.237	0.873	AD.L
Prepare audio-video presentations for class activities	2.928	0.889	AD.L
Use programs to analyze data and create diagrams, register exam results (eg Microsoft Excel)	2.907	1.042	AD.L
Setting up and deleting educational programs ( scientific programs and CD information programs such as encyclopedia)	2.734	0.921	AD.L
Use science programs for laboratory activities.	2.727	0.931	AD.L
Use search engines to collect science information for lesson preparation	2.892	1.005	AD.L
Design and publish internet pages on science subjects or for student assignments	2.374	0.919	E.L
Use emails to communicate with teachers, students, and parents	2.669	1.093	AD.L
Organize emails groups for distributing information and	2.41	1.027	E.L

instructions			
Use chat programs (Messenger, blog)	2.396	1.019	E.L
<b>Mean</b>	<b>2.821</b>	<b>0.724</b>	<b>AD.L</b>

Furthermore, the unavailability of ICT equipment such as computer wide network, computer in classroom and science laboratories and LCD projectors in classrooms and science laboratories makes their skills more evidently become moderate.

### Science Teachers' in SUC's Region VI ICT Utilization

As shown on the previous data, the majority of the science teacher respondents had the uncertain attitudes and on adaptation skills level to use ICT. However, the future for ICT is in its appropriate use in the science curriculum, and to enhance the teaching learning process and the critical thinking of the students.

Data reveals that Science teachers of SUC's in Region VI *almost always* utilizes and integrates ICT tools and infrastructures in their teaching learning process as shown by the data with a mean of 2.536. However, there were Science teachers' who *seldom* used ICT tools in posting homework in their websites, communicating using internet, using digital artifacts from student's assignments and monitor and evaluate students' achievements using online services. (See Table 4).

Based on the profile of the respondents, one of the reasons why most of the science teachers in Region VI do not use ICT much is due to lack of access and unavailability to equipment in classroom, and lack of teachers' training skills in the use of the equipment.

**Table 4**

### Science Teachers' in SUC's Region VI ICT Utilization

	X	S.D.	V.I
ICT equipment such as laptop, LCD projectors and TV is fully integrated in my instructional program.	3.065	0.818	AA
I browse/surf the internet to collect learning materials or resources to be utilized in my lessons.	3.288	0.773	AA
I create my own presentation and digital learning materials for student's consumption.	2.935	0.878	AA

I post home works and exercises/drills for students on school website or other social networking sites such as Google and yahoo.	1.914	0.952	SE
I use ICT equipment such as online network in giving feedback and assessing students learning.	1.799	0.942	SE
I communicate using internet online with parents, students and colleagues.	2.065	1.058	SE
I utilize the internet in looking for online professional development opportunities such as scholarship grants.	2.475	1.138	SE
I used computerized evaluation materials for student's examination and computation of grades.	2.734	1.12	AA
I conducted researches using computer.	2.942	1.089	AA
I prepare my own instructional materials such as hand-outs teaching manual resource units, and etc. using computer.	3.259	0.896	AA
I post additional information to school website or other social network to reinforce and assist students in their lessons.	2.000	1.029	SE
I access various online researches and best practices as my teaching references.	2.705	1.073	AA
I use digital artifacts from my student's assignments as evidence of achievement.	2.23	1.002	SE
I use online internet in disseminating important announcements and reminders to students and colleagues.	2.05	1.031	SE
I monitor, evaluate and report students' achievement with the use of ICT such as computer and online	2.115	1.091	SE

services.			
I indulge myself on online professional development.	2.554	1.029	AA
I use ICT equipment such as computer aided materials on my science laboratory lessons and activities.	2.734	1.011	AA
I use digital images to discuss science topics and lessons.	2.791	1.032	AA
<b>Grand Mean</b>	<b>2.536</b>	<b>0.715</b>	<b>AA</b>

### Barriers that Limits Science Teachers in SUC's Region VI Integrating ICT

Based on the results of the study, the organizational, technological, and policy were the barriers that *somewhat limits* Science teachers in SUC's Region VI in utilizing ICT, while their perceived individual barriers *slightly limits* them in integrating ICT in their teaching and learning process.

The results of the findings showed that the perceived technological barriers of Science teachers was due to lack of ICT infrastructures of the different SUC's in Region VI, as majority of the respondents revealed that SUC's in Region VI provide computer laboratories. However, there were insufficient number of computers and LCD projectors provided in classrooms and in science laboratories for teaching and learning process.

As to the perceived policy barriers, the Sciences teachers revealed that there was no government support as to ICT policies in the academe; and that budget for the procurement of ICT facilities and infrastructure were limited, and no priority and concrete plans for the integration of ICT in every State Universities and Colleges in Region VI.

**Table 5**

### Barriers that Limit Respondents' Integration of ICT

	X	S.D.	V.I
<b>Organization culture barriers</b>			
Lack of training availability to learn ICT	2.646	1.049	NA
Limitations of technical support from organization.	2.676	0.965	SO.L
Interpersonal barriers to share among co-teachers.	2.403	0.953	SL.L

Lack of awareness on the availability of ICT.	2.518	1.072	SO.L
Unavailable ICT training centers to update ICT knowledge.	2.647	1.089	SO.L
Unwillingness of some colleagues to teach others what they have acquired.	2.579	1.052	SO.L
<b>Mean</b>	<b>2.57</b>	<b>0.814</b>	<b>SO.L</b>
<b><i>Individual barriers</i></b>			
Lack of confidence and ability to use ICT.	2.413	1.092	SL.L
Lack of learner's motivation towards the use of ICT.	2.352	1.055	SL.L
Language problems towards the use of ICT.	2.331	0.981	SL.L
Fewer preferences in using ICT.	2.425	0.970	SL.L
There is a lack of skills to use ICT.	2.403	0.976	SL.L
Time management problems in learning to use ICT.	2.489	0.981	SL.L
Hectic schedule to use ICT.	2.518	0.981	SO.L
Lack of awareness on various analytical software (SPSS, STATA etc).	2.662	2.020	SO.L
Poor attitude towards acquiring ICT skills.	2.381	1.038	SL.L
Lack of competence in internet searching skills on the part of many Science professors.	2.439	1.036	SL.L
Lack of knowledge about ways to integrate ICT to enhance curriculum.	2.374	1.016	SL.L
Lack of time in school schedules for projects involving ICT.	2.489	0.995	SL.L
<b>Mean</b>	<b>2.439</b>	<b>0.842</b>	<b>SL.L</b>
<b><i>Technological barriers</i></b>			
Poor infrastructure development in Science Education on ICT integration	2.698	1.068	SO.L

The cost of internet and online connection is too high.	2.705	1.106	SO.L
Less-availability of ICT equipment intended in Science Education.	2.842	1.065	SO.L
Low computer literacy level in Science Education community.	2.712	1.016	SO.L
Restricted use of available ICT in Science Education	2.604	1.039	SO.L
Inadequate ICT facilities like computer and electronic board in the university.	2.705	1.099	SO.L
High cost of ICT equipment.	2.799	1.098	SO.L
<b>Mean</b>	<b>2.724</b>	<b>0.917</b>	<b>SO.L</b>
<b><i>Policy barriers</i></b>			
Government Mandates related to ICT policies in Academe is not supported.	2.640	1.056	SO.L
No policies in implementation that include special rate for internet and online services for universities.	2.612	1.032	SO.L
Budget for ICT availability in academe sector is limited.	2.662	1.081	SO.L
Priority issues on ICT use on the part of the faculty and the university.	2.655	1.048	SO.L
ICT integration is not a school priority.	2.597	1.088	SO.L
<b>Mean</b>	<b>2.633</b>	<b>0.969</b>	<b>SO.L</b>

The majority of SUC's have plans or strategies on how to implement ICT into teaching and learning process in their respective institutions; however, these are still on the planning stage and far behind for the implementation stage in which teachers respondents implicates that they have no such skills and capabilities on the integration of ICT in their teaching process.

The programs provided by the SUC's in region VI for science teachers' professional development in integration of ICT appears to be inadequate with responses on the programs implemented in their respected institutions.

The professional development needs of science teachers regarding ICT use in the science curriculum focus from administrative support and viable planning program, establishing ICT infrastructures and Teachers training programs.

Furthermore, age factor exhibit a significant difference in ICT skills, utilization and individual barriers of science teachers in SUC's region VI, the length of service also shows a very significant difference as to the ICT skills, utilization attitudes, and individual barriers of the teacher respondents. However as to their gender and highest educational attainment, home location and school location, there is no such factor implicating a non significance difference on the attitudes, skills, utilization and perceived barriers.

## **CONCLUSIONS**

The dissertation study conclusions were drawn from the findings. The fundamental issue that emerged from this study is that the integration of ICT into science curriculum of Science teachers in State Universities and Colleges (SUC's) in Region VI are impeded by structural and operational factors relating to the different SUC's programs and policies.

The role of the teacher in developing ICT use in different SUC's in Region VI is utterly critical, yet there are many obstacles to be faced, in addition to those already listed that emerged more generally. A primary barrier to teachers' readiness and confidence in using ICT – despite general enthusiasm and belief in benefits for learners – is their lack of training, either initially or in-service. This results in lack of proficiency in using ICT, and knowledge of all of the potential uses and roles of ICT in teaching and learning.

The discussion above highlighted several issues that appeared to influence on teacher utilization and integration of ICT in their profession. The three major Issues and findings of this study reveals that inadequate ICT resources, management of ICT integration, and teacher ICT training and attitudes skills, utilization and barriers were considered as a factor issues.

## **RECOMMENDATIONS**

The recommendations were drawn from the summary and conclusions of the study. The fundamental issue that emerges from this study is that the integration of ICT into science curriculum of science teachers' in region VI is impeded by structural and operational factors relating to the SUC's programs and policies.

1. A 5-year development plan in every state universities and colleges in region VI should be standardize which ICT integration program in the teaching learning process of science teachers be evident;
2. There should be a revision of curriculums were in ICT integration should be mandatory to be implemented within the system;
3. A training need analysis should be conducted for evaluation purposes of the skills and competencies of the teachers to attend trainings and seminars.

4. More funds should be allocated to augment the needs to improve the existing and securing more ICT infrastructure, facilities and resources.
5. Full financial support should be provided to augment the implementation and sustainability of such program either local funds or outsource funds from private or government partners.
6. An immediate need to change teachers' attitudes toward adoption of modern educational methodologies, such as cooperative and constructive learning process. For this, teachers need suitable training in ICT; this could be achieved by strong training programs to develop their occupational skills in the use of ICT, to remove psychological barriers, and to facilitate their use of ICT in the classroom.
7. Professional and material incentives should be given to encourage teachers to attend training programs to raise their occupational skills.
8. There should be proper monitoring and evaluation on the effect of the implementations of programs.
9. Subsequent research is recommended to explore in more depth and other contexts trends and constraints on ICT integration in the science curriculum in SUC's, and could include observational studies which were beyond the scope of this study. Finally, the theoretical issues in integrating ICT into the science curriculum and the teachers' enhanced role through professional development provide interesting pathways for further research.

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**PROPOSED FACULTY DEVELOPMENT FRAMEWORK FOR SCIENCE TEACHERS  
OF STATE UNIVERSITIES AND COLLEGES, REGION VI**

Goals/Objectives	Intended Outcomes	Key Implementation Strategies	Responsibility	Time Frame	Budget	Monitoring
<p><b>LEADERSHIP/ ADMINISTRATION</b></p> <p>1. To develop the ICT Strategic Plan to ensure that is aligned with views of the school community and is referenced by the appropriate National, State and SUC's policies.</p> <p>2. To establish clear criteria for evaluating the effects of integrating ICT within teaching, learning and administration.</p> <p>3. To submit annual reports that document the progress towards the goals within the ICT Plan</p> <p>4. To create ICT Integration team</p> <p>5. Appropriate level of</p>	<p>1. <i>The school has a clearly articulated shared vision for ICT in teaching, learning and administration, as a result of collaboratively consulting with key stakeholders and makes reference to the appropriate National, State and SUC's policies</i></p> <ul style="list-style-type: none"> <li>To develop the ICT Strategic Plan to ensure that is aligned with views of the school community and is referenced by the appropriate National, State and SUC's policies.</li> <li>To establish clear criteria for evaluating the effects of integrating ICT within teaching, learning and administration.</li> <li>To submit annual reports that document the progress towards the goals within the</li> </ul>	<p>4. Complete ICT Review Tool – survey of School Administrators, Director/chairman of ICT and all teachers</p> <p>5. Reference to National, State and SUC's policies</p> <p>6. Discuss criteria with Curriculum Committee</p> <p>7. Establish reliable methods of collecting data evaluating the effects of ICT within teaching, learning and administration</p> <p>8. Set up SUC's based collaborative teams for ICT integration</p>	<ul style="list-style-type: none"> <li>ICT Directors/ Chairmen</li> <li>SUC's Integration Team/ Committee</li> </ul>	<p>June-September, 2014</p>		<p>Annual</p>

<p>funding to achieve the goals for the integration of ICT.</p> <p>6. To continue current budget planning to ensure a steady spending pattern that will achieve the school's goals for ICT integration</p>	<p>ICT Plan</p> <p>2. <i>E-Learning leadership is distributed across the school to ensure the integration of ICT is a focus in planning.</i></p> <ul style="list-style-type: none"> <li>• To extend current ICT Integration team</li> </ul> <p>3. <i>ICT resources are up-to-date and allow the school to respond to modern trends and rapidly take advantage of future improvements in ICT delivery and infrastructure.</i></p> <ul style="list-style-type: none"> <li>• To review the ICT levy to ensure an appropriate level of funding to achieve the goals for the integration of ICT.</li> <li>• To continue current budget planning to ensure a steady spending pattern that will achieve the school's goals for ICT integration</li> </ul>	<p>9. SUC's coordinator becomes responsible for strategic leadership for ICT within their system</p> <p>10. Documentation of ICT integration strategies used in each subject area</p> <p>11. Maintain budget plans which are always forward-planned to the life of the current equipment.</p> <p>12. Review ICT priorities to adapt to current pedagogical trends and emerging technologies – conferences, professional learning, magazines, newspapers, online subscriptions, school visits, purchase of new software and hardware for testing.</p>				
<p><b>ICT PROFESSIONAL LEARNING</b></p> <p>1. Prioritization of</p>	<p><i>There is a high priority of professional learning with ICT and about ICT for science</i></p>	<p>1. Use TNA survey from the basis for understanding ICT PD</p>	<ul style="list-style-type: none"> <li>• ICT Directors/Chairm</li> </ul>			

<p>professional learning with ICT and about ICT:</p> <ul style="list-style-type: none"> <li>• To develop to a high priority within total Professional Learning program for Science Teachers</li> <li>• To establish a formal process for developing and recording ICT skill development for the use of ICT and for the integration of ICT within teaching and learning.</li> <li>• To ensure that course writing includes specific integration of ICT for science teachers and for student use.</li> <li>• To provide more time and access for professional learning with ICT and about ICT</li> <li>• To maintain flexible delivery of ICT</li> </ul>	<p><i>teachers.</i></p> <ol style="list-style-type: none"> <li>1. <i>Professional learning with and about ICT allows teachers to:</i> <ul style="list-style-type: none"> <li>• <i>Explore, understand and utilize ICT in teaching, communication, management and administration</i></li> <li>• <i>Integrate ICT in ways that produce more effective and more efficient teaching and learning</i></li> <li>• <i>Evaluate, create and share online learning resources with colleagues and students locally and globally</i></li> </ul> </li> <li>• To develop to a high priority within total Professional Learning program</li> <li>• To establish a formal process for recording ICT skill development and for the integration of ICT within teaching, learning and administration</li> <li>• To ensure that course writing includes specific integration of ICT for teachers and for student use</li> </ol>	<p>needs of teachers and to assist in setting goals</p> <ol style="list-style-type: none"> <li>2. Include ICT skill development report from TNA survey in Annual Review Meeting with the Administrators and Stakeholders</li> <li>3. Set specific dates for ICT in-services and pre-service training for science teachers.</li> <li>4. Develop a database for recording all professional learning</li> <li>5. Establish a train-the-trainer model with time given to trainers to work with others</li> <li>6. Employ ICT Coaches to assist integrate ICT in the classroom</li> <li>7. Utilize emergency to cover teachers doing PD</li> <li>8. Increased teacher PD to implement to ensure productive results in ICT integration process.</li> </ol>	<p>en</p> <ul style="list-style-type: none"> <li>• VP-Administration</li> <li>• VP-Acad. Affairs</li> <li>• Curriculum Planning Officers</li> <li>• Prof. Dev't. Coordinator</li> <li>• SUC's Planning Officers</li> </ul>	<p>S.Y. 2014-2015</p>		<p>Annual</p>
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<p>professional learning through face-to-face and online activities provided by in-house or pre-service trainings of colleagues or external experts</p> <ul style="list-style-type: none"> <li>To provide time for more staff to support others in professional learning with ICT and about ICT</li> </ul> <p>2. To develop Professional Learning Plans that:</p> <ul style="list-style-type: none"> <li>Are regularly audited</li> <li>Take into account individual, school and system needs and targets</li> <li>Enable on-going access and flexible use of resources and facilities</li> </ul> <p>3. To develop an online database to enable teachers and administrative staff record achievement of</p>	<ul style="list-style-type: none"> <li>To provide more time and funding for professional learning with ICT and about ICT</li> <li>To maintain flexible delivery of ICT professional learning through face-to-face and online activities provided by in-house colleagues or external experts</li> </ul> <p>2. <i>Staff members maintain Professional Learning Plans and the impact of ICT professional learning is constantly evaluated on the basis of meeting individual, school and system needs and targets.</i></p> <ul style="list-style-type: none"> <li>To development of Professional Learning Plans that Are regularly audited</li> <li>Take into account individual, school and system needs and targets</li> <li>Enable on-going access and flexible use of resources</li> <li>To develop an online database to enable teachers and administrative staff record achievement of</li> </ul>	<p>9. Development of ICT Integration Website for use by teachers</p> <p>10. Professional Learning Plan template developed</p> <p>11. Online database developed to allow entry of information on all aspects and allow auditing</p> <p>12. Subscription of teachers to online groups</p> <p>13. Development of teacher blogs and forums</p> <p>14. Published list used to assist others to find people to help with specific ICT advice</p>				
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<p>individual, school and system targets for the use of ICT</p> <p>4. To share innovative practice</p>	<p>individual, school and system targets for the use of ICT</p> <p>3. <i>Teachers use ICT tools to plan, access and share professional learning online within the school network and globally in timely, focused and practical ways.</i> To share innovative practice</p> <ul style="list-style-type: none"> <li>• Maintenance of KLA based sharing</li> <li>• Publishing of innovative practice online</li> <li>• Development of "experts" list to assist others learning specific practices</li> </ul>					
<p><b>ICT INFRASTRUCTURE</b></p> <p>1. Network</p> <ul style="list-style-type: none"> <li>• To integrate and expand wireless access to cover all areas of the school to achieve successful implementation of ICT integration</li> <li>• To development and implement a Content Management System</li> </ul>	<p>1. <i>The ICT infrastructure provides an integrated, efficient system for the full range of teaching, learning and administrative requirements</i></p> <ul style="list-style-type: none"> <li>• To integrate and expand wireless access to cover all areas of the school to achieve successful implementation of ICT integration</li> <li>• To development and implement a Content</li> </ul>	<p>1. Infrastructure Audit</p> <p>2. Upgrade wireless controller to 802.11n and purchase of more access points</p> <p>3. Install access points as required throughout school</p> <p>4. Plans developed as part of library, classroom and laboratory redevelopment Submission to College</p>	<ul style="list-style-type: none"> <li>• ICT Directors/Chairmen</li> <li>• VP-Administration</li> <li>• VP-Acad. Affairs</li> <li>• Curriculum Planning Officers</li> <li>• Prof. Dev't. Coordinator</li> </ul>	<p>S.Y. 2014-2015</p>		<p>Annual</p>

<p>for 24/7 availability of resources</p> <ul style="list-style-type: none"> <li>To improve internet connection for Science Teachers and students to achieve successful implementation of Integration.</li> </ul> <p>To improve power supply and secure charging stations and storage to achieve successful implementation of Integration</p> <p>2. Hardware Delivery</p> <ul style="list-style-type: none"> <li>To purchase computers and other ICT facilities for teachers and student use in classrooms and library, and science laboratories.</li> <li>To complete data projector system installations to all classrooms, and laboratory rooms.</li> <li>To install some</li> </ul>	<p>Management System for 24/7 availability of resources</p> <ul style="list-style-type: none"> <li>To improve internet connection for science teachers and students to achieve successful implementation of ICT integration</li> </ul> <p>2. <i>Hardware, software and network infrastructure is systematically and routinely monitored and upgraded in light of emerging technologies and future requirements in curriculum and administration.</i></p> <ul style="list-style-type: none"> <li>To purchase computers and other ICT facilities for teachers and student use in classrooms, library, and science laboratories</li> <li>To complete data projector system installations to all classrooms and laboratories</li> <li>To install some Interactive White Boards if criteria for use are met</li> <li>To develop video</li> </ul>	<p>Board</p> <ol style="list-style-type: none"> <li>Purchase a mixture of laptops on trolleys and computer desktop systems</li> <li>Research Work</li> <li>Annual budget submitted to Business Manager and the College Board</li> <li>ICT Levy provides some income from parents</li> <li>Adjustments made as required</li> </ol>	<ul style="list-style-type: none"> <li>SUC's Planning Officers</li> </ul>			
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Abstracts, Biographies and Full Papers

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<p>Interactive White Boards if criteria for use are met</p> <ul style="list-style-type: none"> <li>To develop video conferencing systems</li> </ul> <p>3. Software Delivery</p> <ul style="list-style-type: none"> <li>To continue current arrangements with software delivery</li> <li>Technical Support</li> </ul> <p>4. To continue current arrangements with technical support</p> <p>5. Budgeting of Resources</p> <ul style="list-style-type: none"> <li>To continue current arrangements with budgeting</li> </ul>	<p>conferencing systems</p> <p>3. <i>Technical support is readily available to minimize disruptions to learning, teaching and administration</i></p> <p>4. <i>ICT budgeting provides for continual upgrading to allow the school to rapidly take advantage of future improvements in ICT delivery and infrastructure.</i></p> <ul style="list-style-type: none"> <li>To continue current arrangements with budgeting</li> </ul>					
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## ATTITUDES OF EDUCATIONAL MANAGERS AND TEACHERS TOWARD INFORMATION AND COMMUNICATION TECHNOLOGY UTILIZATION IN THE CLASSROOM

*Authors:*

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### ABSTRACT

The study determined the attitude of educational managers and teachers towards ICT utilization in the classrooms of HEIs in the province of Capiz. Specifically, it determined the profile of HEIs, the profile of educational managers and teachers, their skills in the use of ICT, the extent of utilization in the classrooms, the differences of their attitude towards ICT utilization, the relationship of their ICT skills and attitudes towards ICT utilization, and identifies the problems encountered in ICT utilization in the classroom. One hundred seventeen (117) educational managers and 242 teachers of HEIs responded to survey questionnaire. Frequencies, percentages and means were used to create profiles, while t-tests and chi-squares were used to test for the significance of the differences and the relationship of attitudes and skills. FCU had the biggest enrolment and number of ICT facilities, while CPC had the largest number of courses offered. Educational managers and teachers were mostly 46 years old or older, female and professors, with 26 years or more of seniority, had finished education-related courses, with doctorate degrees, but only had local ICT trainings.

HEIs offered educational courses which utilized ICT, and teachers in major subjects frequently used computers for encoding and cellphones for communication among peers. Both groups of respondents had positive attitudes towards ICT utilization in the classroom. There were differences noted on their attitudes towards ICT utilization and their skills in the use of technology. Relationships were noted between their skills and attitudes. Educational managers were more supportive in the use of ICT than were teachers, both groups however encountered similar problems in technology utilization.

**Key words:** *Attitude towards ICT, ICT Utilization in the Classroom, Attitude of Educational Managers and Teachers*

### INTRODUCTION

The world is fast becoming a global village as a result of the development in information and communication technology (ICT). The key instrument in this globalization is the computer. Computer mediated communication is increasingly becoming the fact of everyday life, particularly in the developed

and some developing countries. In these countries, information and communication technologies have changed how people live, work and play (Berenfeld, 1999). Education is not left out in this wave of change. Most of the developed countries have exploited the potentials of ICT to transform their educational landscape at the tertiary, secondary and even primary school levels particularly the instructional process (Kosakowski, 1998). Generally, ICT holds out the opportunity to revolutionize pedagogical methods, expand access to quality education, and improve the management of the educational system.

The use of information and communication technology in higher education has increased substantially over the past several years. ICT provides students and teachers with unprecedented opportunities to transform the teaching - learning process from the most common and simple strategies to the most sophisticated ones. Educators are readily embracing the challenges of integrating the technology into their teaching. However, authors and educators still question whether its use has positive impacts on the learning process. Research is beginning to focus more on the evaluation of the use of the technology, but results remain inconclusive (Sulla, 1999, in Draude, 2001).

In the Philippines, a number of Higher Education Institutions (HEIs) have already begun or, at the very least, are on the brink of fully using information and communication technology (ICT) in their curricula. Most, however, continue to lag far behind. The use of new technology in education continues to be an exception rather than a norm, and the danger remains that key higher education officials perceive ICT as a "bonus," not a necessity.

The use of ICT in teaching and learning in the province of Capiz is still at its infant stage. This situation implies that, because of the relative novelty of ICT in education, no statistical data on the actual pervasiveness and level of use of ICT among HEI's are available. Currently, only a small number of HEIs have the capacity to incorporate ICT tools in the delivery of educational processes. Some institutions are willing to use ICT in education, others are adamant on the actual use of ICT as an aid in teaching and learning. The inability of many HEIs to use ICT resources limits the attraction and opportunity for the faculty themselves to invest time and effort in learning ICT as an instructional aid.

The teachers are not the only ones to effect all the innovations needed in the school. Educational managers too, have a role in creating the right kind of atmosphere for innovations and changes (Ornstein, 1990, in Atog, 2000).

Adaptability and sensitivity to change in a school organization, or any other group for that matter, depends upon the attitude of the head and members of the organization. If the educational system has to survive, it should meet the existing demand for development. Thus, school administrators and teachers should be change-oriented.

Such educational situations, though crucial, but have been taken for granted. Thus, the researcher decided to conduct this study to determine the attitude of educational managers and teachers towards information and communication technology utilization in the classroom.

### **STATEMENT OF THE PROBLEM**

Generally, the study sought to find out the attitude of educational managers and teachers towards ICT utilization in the classroom.

Specifically, the study sought to answer the following inquiries:

1. What is the profile of the different HEIs in Capiz in terms of enrolment, courses offered, faculty size, number of available ICT facilities and number of ICT facilities used in the classroom?
2. What is the demographic profile of educational managers and teachers in HEIs in Capiz in terms of age, gender, civil status, academic rank, length of service, course taken, educational attainment, subject taught, number of preparation, and in-service training related to ICT?
3. What ICT skills do educational managers and teachers in HEIs in Capiz possess?
4. What courses/subjects offered in the different HEIs in Capiz are taught using ICT facilities?
5. What is the extent of ICT utilization in the classroom?
6. What is the attitude of educational managers and teachers towards ICT utilization in the classroom?
7. Is there a significant difference between the attitude of educational managers and that of teachers towards ICT utilization in the classroom?
8. Is there a significant relationship between the ICT skills and attitude of educational managers and those of teachers?
9. What are the problems encountered by the educational managers and teachers of HEIs regarding the use of ICT in the classroom?

### **THEORETICAL FRAMEWORK**

The present study was anchored on **Skills Theory** of Kurt Fischer (1980), **Theory of Attitude** of Davis Foulger (1979), and **Diffusion and Innovation Theory** of Everett M. Rogers (1995).

#### **Skills Theory**

The basic unit of analysis for representing individual action, thinking and feeling is the concept of skill. A skill refers to an individual's capacity to

control elements of behavior, thinking, and feeling within specified context and within particular task domains. As such, a skill is a type of control structure. It refers to the organization of action that an individual can bring under her own control within a given context. A skill is not simply an attribute of an individual. Instead, a skill is a property of an individual-in-a-social-context. The production of such, a change in the context in which a given act is performed can result in changes in the form and developmental level of the skill in question. In this way, context plays a direct role in the construction of skilled activity (Fischer, 1980).

### **Theory of Attitude**

Attitude is defined as “a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object” (Leckenby, 2000). People learn these attitudes over time by being exposed to the object directly or through receiving information about the object. Our learned attitudes serve as general guides to overt behavior with respect to the attitude object, giving rise to a consistently favorable or unfavorable pattern of response.

Theories of attitude have generally constructed attitudes out of cluster of belief. Although attitude is best treated as a derived term within a theory of attitude, treatment of belief as a root term to such a theory leaves something to be desired, especially when attitudes are examined from the perspective of information processing (Foulger, 1979).

The very idea of examining attitudes from the perspective of human information processing suggests that information is a root term for attitude theories. If attitudes do reflect our experience of the world, it is reasonable to expect that it is from that experience, from the information we have concerning an attitude object, that we construct attitude. Even if this were not true, moreover (and it is hard to imagine it not being), the attitude itself is information (Foulger, 1979).

According to Foulger (1979), attitude is an independent measure of affect for or against the attitude object, which is a function of belief strength and evaluative aspect associated with each attribute. He drew his support for this proposition from behavioral leaning theory. Simply stated, his contention was that an attitude toward an object is more or less automatically learned as one learns about the object itself.

### **Diffusion of Innovation Theory**

Rogers (1995) is the best-known scholar in the area of diffusion research. His book, *Diffusion of Innovations* (4<sup>th</sup> ed.), is the most often cited work dealing with diffusion. As he points out, diffusion is not a single, all-encompassing theory. It is several theoretical perspectives that relate to the overall concept of diffusion; it is a meta-theory. Diffusion is the process by which an innovation is adopted by members of a certain community. There are four factors that influence adoption of an innovation. These include 1) the

innovation itself, 2) the communication channels used to spread information about the innovation, 3) time, and 4) the nature of the society to whom it is introduced (Rogers, 1995). The work of Ryan and Gross (1943) in rural sociology is cited as the beginning of diffusion research. They used interviews as their main method of data collection. This has been a trend in diffusion research since. Rogers (1995) explains that there are four major theories that deal with the diffusion of innovations. These are the innovation-decision process theory, the individual innovativeness theory, the rate of adoption theory, and the theory of perceived attributes.

## **METHODOLOGY**

This provides information as to the description of sampling procedures, the variables used, the data gathering techniques, the instrument and the statistical procedure employed in the treatment of data.

### **Research Design**

The descriptive method of research was used. The descriptive research method is designed to investigate and analyze facts relevant to the attitude of educational managers and teachers. According to David (2002), the descriptive type of study finds answers to the questions who, what, when, where and how. This type of research describes a situation or a given state of affairs in terms of specified aspects or factors.

An explanatory study goes beyond description of the problem or situation. It attempts to explain the possible factors related to a problem or situation, which have been observed in a descriptive study. This type is of research in which the researcher investigates the relationship between factors or variables. Certain factors or variables are assumed to explain or contribute to the existence of a problem or a certain condition in a given situation.

### **Place of the Study**

This study was conducted in nine higher education institutions in the province of Capiz, namely: Colegiodela Purisima Concepcion, Dean Alberto Villarruz College, Filamer Christian College, Hercor College, St. Anthony College of Roxas, Sta. Maria Mater et Regina Seminarium, Capiz State University – Roxas City, Pontevedra and Mambusao Units.

## **RESULTS AND DISCUSSIONS**

### **Profile of HEIs**

The biggest number of enrolment came from Filamer Christian College. Colegio de la Purisima Concepcion has the most number of courses offered. Filamer Christian College has the greatest number of faculty, the most number of ICT facilities available and utilized in the classroom.

### **Profile of Educational Managers**

Most of the educational managers were 46 years and above, female and married. Majority has academic rank of Professor and has been serving the institution for 26 years and above. Thirty-nine finished education-related courses and mostly has doctoral degrees. Majority has taught major subjects with 1-2 subject preparations. Most of them attended local ICT related trainings, but no regional and national training in ICT

### **Profile of Teachers**

Majority of the teachers had ages between 36-45 years, female and married. Seventy-six were occupying an academic rank of Assistant Professors and seventy-five were Associate Professors. Almost one-third was new in the service, mostly finished education-related courses and had master's degree. Forty-four percent were teaching general education subjects and had 3-4 subject preparations. Most teachers attended local ICT trainings, with no regional and national trainings related to ICT.

### **ICT Skills**

As to basic skills, educational managers and teachers possessed an intermediate skill. In terms of intermediate skills, both respondents had similar intermediate skills. On the expert skills category, both respondents possessed beginner skills.

### **Courses/Subjects Offered with ICT Facilities**

Majority of the HEI's offered BEED and BSED courses which utilized ICT facilities. Teachers in major subjects were the frequent users and computers were commonly used in the classroom.

### **Extent of ICT Utilization in the Classroom**

The most commonly used ICT was the use of cellphone to communicate to students and co-teachers was dominant to both respondents. Surfing the internet and encoding handouts using MS Word was also utilized in the classroom.

### **Attitude towards ICT Utilization in the Classroom**

Educational managers and teachers had positive attitude towards ICT utilization in the classroom

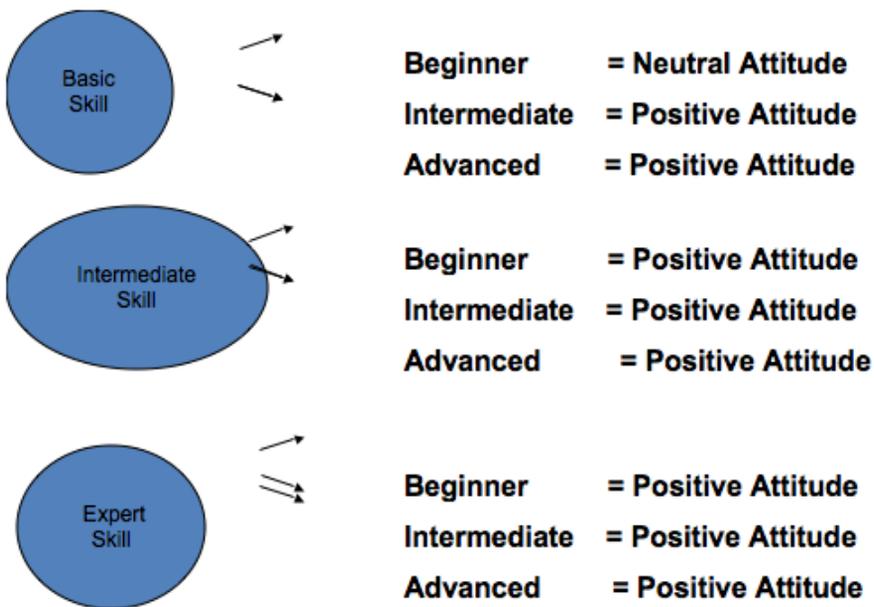
### **Differences between the Attitudes towards ICT Utilization in the Classroom**

Significant difference is between the attitude of educational managers and teachers towards ICT utilization in the classroom on item number 2, 7, 8, 9, 10, 11, 13, 14, and 15.

### Relationship between Skills and Attitude

ICT skills were related to attitude of educational managers and teachers. In basic skills, majority of those with beginner skills had neutral attitude, those with intermediate and advanced skills had positive attitude. In intermediate skills, those with beginner, intermediate and advanced skills had positive attitude. In expert skills, both beginners, intermediate and advanced had shown positive attitude.

### Illustration of Relationship between Skills and Attitude



### Problems Met

Educational managers' problems were as follows: No available computer, inadequate number of facilities, absence of technical support, limited time to prepare resources and not applicable to subject handled or office setting.

Teachers' problems include: No computer available, inadequate number of facilities and no skill/training related to ICT.

### CONCLUSIONS

Based on the findings of the study, the following conclusions are drawn:

1. Private institutions have the biggest number of enrolment, courses offered, faculty size, number of ICT facilities available and utilized in the classroom.

2.
  - a. The educational managers are in their middle age, females and married. Most of the teachers are in their mid 30's and early 40's, females and married.
  - b. The educational managers are occupying Professor 1-VI; with a long period of service in the workplace. On the other hand, teachers are occupying Assistant and Associate Professor positions and are new in the service.
  - c. The educational managers finished education-related courses and are doctoral degree holders. Teachers also finished education-related courses and are master's degree holders.
  - d. Educational managers taught major subjects with 1-2 or 3-4 preparations. Teachers taught general education subjects with 3-4 subject preparations.
  - e. Educational managers and teachers attended local ICT training, with no regional and national ICT related training.
3. Educational managers possess intermediate skills in basic, intermediate in intermediate category and beginner in expert skills. Teachers are intermediate in basic skills, intermediate in intermediate category and beginner in expert skills.
4. Education courses are the dominant course offered by both private and public institutions using ICT facilities.
5. Cellphone is the most common ICT facility that is often used by the respondents. In the classroom, surfing the internet and handouts preparation are frequently used.
6. Both respondents have shown a positive attitude towards the use of ICT facilities in the classroom.
7. Regardless of the skills possess, both respondents have manifested positive attitude.
8. The ICT skills have influenced the attitude of both educational managers and teachers.
9. There are a lot of problems met by both respondents; however, the most dominant problem is the unavailability of computer units, inadequate ICT facilities and absence of technical expert.

## **RECOMMENDATIONS**

1. A feasibility study and or system analysis should be undertaken and focus on areas whose improvement could be administered.
2. Attendance to regional and national training related to ICT should be given budget appropriation to upgrade the technical skills of educational managers and teachers.

3. Educational managers should develop their basic skills, intermediate and expert skills. Ideally it is desirable to develop ICT skills of the teachers to the fullest.
4. A study be conducted to enhance the ICT facilities not only in education but also in other academic programs subject to availability of funds, people and other resources.
5. The educational managers should be provided with cellphone and/or load to enhance communication in the system. Teachers should encourage students to do assignments not only from the library books but also from the internet, to enhance knowledge.
6. The gap between educational managers and teachers' attitude should be look closely by the top level management. The ICT needs in the classroom, logistical support and technical requirements should be properly addressed.
7. Educational managers and teachers should form a committee and strategize on the optimum use of ICT for educational purposes.

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***International Projects Desk at the Saxion University of Applied Sciences, the Netherlands***

Mr. S.L. Littooi (Siep) manages the International Projects Desk at the Saxion University of Applied Sciences, the Netherlands. He is attached to the Research Strategy Programme. He holds a Masters degree in Sociology and a bachelors degree in Agriculture.

Leading a small team, he supports international activities, fund raising and grant applications by the Saxion Schools and Research centres. As EU-liaison officer, he is the linking pin between institutional, regional and European policy initiatives. He matches strategic initiatives and innovation and research programmes with funding opportunities and projects that facilitate international mobility, research and innovation, training or capacity building. He leads the Vietnamese Ministry of Education & Training project "Profession Oriented Higher Education (POHE)" phase 2 as part-time international co-director, implemented with NUFFIC funding.

Before joining Saxion, he has worked for more than 15 years as a consultant with international organisations, mostly in Asia.

## UNIVERSITY BUSINESS COLLABORATION TO ENHANCE GRADUATE EMPLOYABILITY

*Author:*

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### **ABSTRACT**

Quality of students is judged more and more by the performance of graduates on the labour market. Student quality therefore needs to be seen through the eyes of (future) employers. Higher Education Institutions need to deliver the right kind of graduates to the labor market.

The emerging question is how policy making by stakeholders, rectors and deans, both in EU and in Vietnam, affects graduate performance. Enterprise partnerships were studied in the 2011 EU survey on University Business Collaboration (UBC), enabling comparison along 8 different collaboration results. Insights into outcome delivery as well as the contributing factors, drivers and barriers were derived.

Sharing experience from Saxion UAS, representative of the Netherlands system of HEI's, shows how student learning can be realized through partnerships with enterprise. A wide array of educational approaches exemplifies the partnerships with an equally wide array of enterprises.

Graduate tracer studies in Vietnam, mirrored to Dutch monitoring systems, show that universities where curriculum development is done in collaboration with enterprise, show a jump in employability.

A study (results June 2015) on Vietnamese University collaboration with business aims to identify collaboration, influencing factors and mechanisms. A study (2013) on Business preparedness to collaborate with universities concluded that partnerships are a rather unknown concept. A study on the Vietnamese state (2015) as stakeholder identified potential policy measures to enhance UBC. A learned lesson is that when University Business Collaboration is found, it generates spin-off effects on both sides.

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<sup>1</sup><http://www.ub-cooperation.eu/> accessed 7 May 2015

### **Graduate quality perspectives in society**

Employers around the world(Sharma, 2013), in Europe (McKinsey, 2014) and not less in the Asian region are vocal and united, sharing their inability to find suitable candidates for all kinds of jobs, including the professions. Their view on those graduating from universities is that they lack the skills needed to succeed at the job. The Worldbank (WorldBank, 2008) concludes in their extensive reporting on 'Higher Education in East Asia – Skills' that "Skills that employers require are communication, critical and creative thinking skills, teamwork abilities, command of foreign languages, and ICT skills". The report then continues by stating that "Higher education has a critical function in supplying employees who have higher-level academic and technical skills, as well behavioral ones. Its inability to supply graduates with these skills may, therefore, have dramatic consequences on economic growth.". The Vietnam Development Report 2014(WorldBank, 2013) stresses strongly the same skills gap that employers experience. Real companies in Vietnam experience difficulties on the labour market as Ngoc Chau Anh(Anh, 2015) reports, illustrating that the labour market challenge, the skills gap challenge, is quite present in Vietnam.

Quality of students is therefore judged more and more by the performance of graduates on the labour market. The purpose of education is shifting from instilling knowledge in students towards the training of graduate competencies. Student quality therefore needs to be increasingly seen through the eyes of (future) employers. Institutions of Higher Education have to take up the challenge to deliver the right kind of graduates to the labor market.

### **Performance of graduates on the labour market**

#### **Required competences as measure of quality**

In the European Qualification Framework, knowledge is described as theoretical and/or factual. Indeed, higher education institutes have a long history of teaching students all kinds of theories. Skills on the other hand, described as cognitive (involving the use of logical, intuitive and creative thinking), and practical (involving manual dexterity and the use of methods, materials, tools and instruments) are often neglected in higher education. In the context of European Qualifications Framework, competence as a word then is described in terms of responsibility and autonomy in the application of knowledge. This translates well to the ability to consciously and methodically apply knowledge in a concrete context, such as in a place of employment or in the implementation of a professional work.

One avenue to deliver more employable graduates is to (re-)develop the curriculum, in such a way that graduates acquire skills, knowledge and attitudes that employers are looking for. The emerging question then for stakeholders, rectors and deans, both in EU and in Vietnam, is what to do to increase employability? What are the decisions to take and what policies and

strategies to pursue, aiming for the positive effects on graduate quality and graduate performance on the labour market.

**Monitoring employability, The Netherlands**

Understanding graduate quality and graduate performance is key to the success of higher education. The desired learning outcomes, such as defined by the EQF or by employers, are measured most accurately by the performance of graduates on the labour market. In other words: do graduates find jobs for which they are educated?

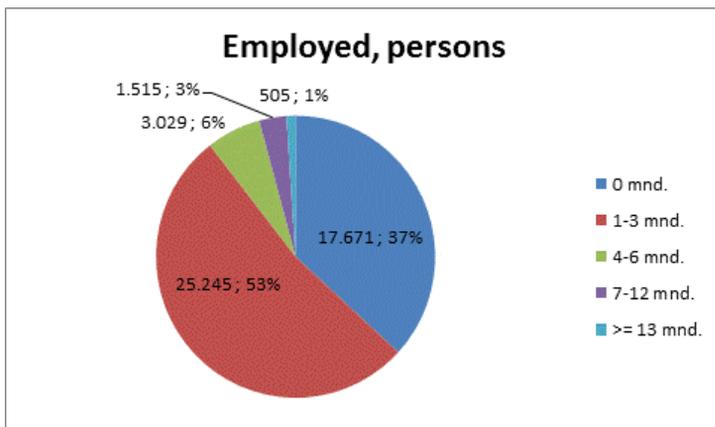


Figure 1 Graduates Employed NL, per timeblock after graduation

Monitoring periodically the university performance in delivering employable graduates provides strategic and operational feedback to the university leadership. Graduate labour market performance monitoring for UAS graduates, as outsourced to the ROA research institute, has been conducted since the 1991. Semi-annual monitoring in the Netherlands is nationally coordinated by the Dutch Association of Universities of Applied Sciences for its members, at the level of degree programme. Other education sectors have comparable monitoring since 1998. The two most important indicators are the time to first job and the fit of the job to the competencies of the graduate (substantive and level). Many detailed indicators add insights and background to the understanding.

Table Key employability indicators Netherlands (Vereniging Hogescholen, 2015)

University	Employed within 18 months*	Match education to job (high/good)
Saxion UAS	92%	78%
All Netherlands UAS	94%	74%

*\*Not including graduates that continue studies*

The journey to employment takes time, so categories for the search period used gives more details. In figure X the national average search time after graduation is displayed. Within 3 months after graduation, a cumulative 80% has found a first job. The remainder of students takes longer to find a job, while 1% needs even more time.

### **Monitoring employability, Vietnam**

According to MOET(Thùy, 2015), employability reported by 100 universities in Vietnam as ‘a job within 3 months after graduation’ is approximately 50%, although some universities reported 80-90%. Unfortunately, no comparable country-wide data exist to compare to a Vietnamese graduate performance average, though mass media articles suggest that graduate employability in Vietnam scores rather less. Yet more statistical data are required to represent national data or to suggest cause and effect.

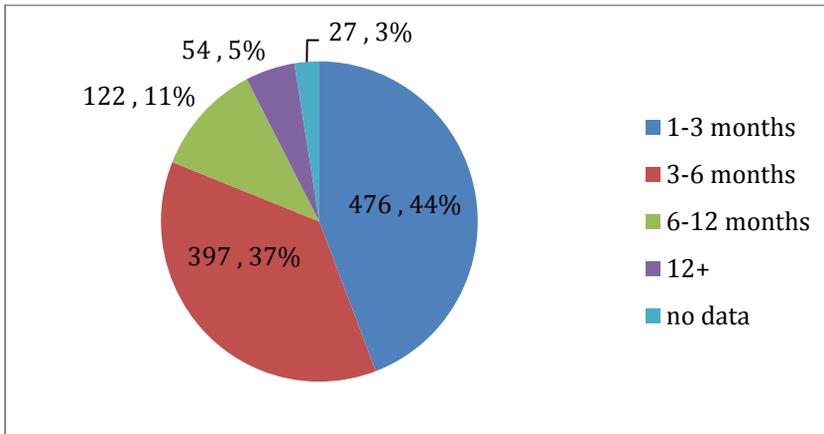
Mirroring the Dutch monitoring systems, the POHE project<sup>12</sup> has measured employability through a tracer study in 2014, receiving data from 1360 out of 1922 alumni, graduated between 2010 and 2013 of 10 revised (POHE) programmes in the eight pilot universities. The statistical indicators describing graduate employment and the match of Education to job from Vietnamese POHE programmes are comparable to the Dutch HBO employability monitor 2012.

Table Key employability indicators Vietnamese, POHE programmes (POHE2 project, 2014)

8 POHE pilot Universities	Employed within 18 months	<i>Searching for employment</i>	<i>Unknown</i>	Match education to job (high/good)
All programmes	79,2%	15,4%	5,4%	74%

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<sup>12</sup> Project title “Strengthening Profession Oriented Higher Education (POHE) in Vietnam” supported by NUFFIC (Netherlands) <http://pohevn.grou.ps>



**Figure 2 Graduates Employed VN, per timeblock after**

Detailing the graduate performance down to the time to first job for those students with employment, the graph below illustrates that 44% of students have found a job within 3 months. 81% of graduates has found employment within 6 months after leaving university.

The consensus among POHE pilot universities is that universities where curriculum development is done in collaboration with business and professions, graduate employability shows a jump. While very good verbal reporting is received, the MOET figures over 100 universities suggest that a positive conclusion about POHE programmes in Vietnam is premature.

Performance comparison with Dutch data indicates especially a higher overall employment ratio in the Netherlands, with especially a shorter search period towards the first job. The perceived match of education to job in the Netherlands is slightly better.

### **Tailoring Profession Oriented Higher Education to societal demands**

The challenge of employability is not only experienced globally, the solutions are sought after everywhere as well. A comprehensive University Business Collaboration (UBC) model that brings the relation between all required actors together is the UBC model pioneered in the European “State of European UBC Report” ( Science-to-Business Marketing Research Centre, 2011). The study developed a model to explain the complex issues, actors and factors that have impact on the UBC. The model implies, still being validated through further research, causal relations. That enables stakeholders to look upon the model as an inspiring source for measures and policies.

Integrating measures aiming towards a high employability requires policy decisions at system, university and programme level. Actors at these different

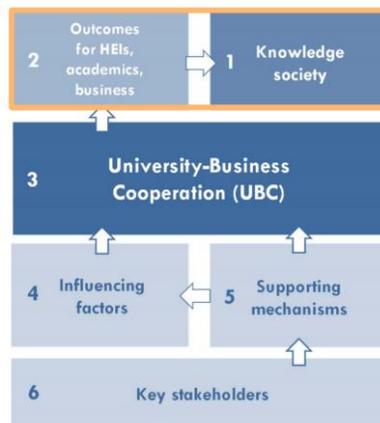
levels need to work coherently towards the same goal, a process that in the Netherlands has emerged over the last decades.

### Modelling University Business Collaboration (UBC)

Centre point attention is the actual UBC (3), which the model labels as Results. Aggregating from and beyond traditional knowledge transfer through patents and beyond the recruitment of graduates, the model features eight types of Results. Each Result focuses on a different way in which a university and a business cooperate:

1. Collaboration in research and development (R&D),
2. Mobility of academics between business and university,
3. Mobility of students between business and university,
4. Commercialisation of R&D Findings,
5. Curriculum development and delivery,
6. Lifelong learning (LLL),
7. Entrepreneurship,
8. Governance

Figure 3 University Business Collaboration policy



### The UBC model applied as managerial tool

The UBC model has useful applications, among that a descriptive reporting or analytical study, for example of a comprehensive overview of any university collaboration with business. Any university could be analyzed through the lens of the model. Caution is necessary as, the model appears simpler than it really is, the number of the built-in sub-variables is large, which require considerable effort to collect. The UBC model claims a integral approach of policy instrumentation, all within the system of higher education. The UBC model also coincides with the Triple helix model of analysis of innovation systems, going full circle towards the benefits of UBC for society. While also competing descriptive models abound e.g. MultiRank, that have less policy related instrumentation.

The UBC model is quite useful as a policy making tool, as an heuristic thought model, which has inspired Saxion to support Vietnamese universities in building curricula more responsive to business and professional requirements. The POHE project in Vietnam contributed to the development of curricula that respond to labour market demands. The project tailors its

interventions especially on Results nr 3 and 5 acting from the perspective of the state/government. Influencing factors (4) are context variables that have impact on the UBC results, as they are captured largely in the university financial regulations. The inspiration for policies and measures by stakeholders emerges from the (5) Mechanisms that enable UBC, which are subject of the POHE policy studies. The how and where and when of measures can be debated at each level of stakeholder. Key stakeholders (6) in UBC are of course the University and the Business involved in UBC at micro level, but especially at an intermediate and national level, where interest groupings takes place. The Government is a stakeholder of considerable importance, by setting the overall framework. Stakeholders at meso and micro level can perform comparison or benchmark with the 8 different collaboration Results. Desired performance on Result nr 3 and 5 can be arrived at by tweaking a select set of Mechanisms, as captured in both national and university level regulations.

### **Saxion UAS collaboration with business: pursuing co-creation**

The Saxion UAS mission and vision takes the local economy as a guide to the development of its education, both in terms of types of degrees as well as the quality of the education programmes. Saxion has policies that affect the distributing of students over degrees programmes, favouring STEM subjects. Saxion has a history as a sensitive and responsive university, delivering graduates for industry. Graduate employability is therefore taken to be a key indicator of success, which leads to a considerable investment in its educational approaches so students acquire the required competencies.

Student learning and competence acquisition is realized through intensive exposure to real life context in business and the professional work environment. Co-creation of graduate competences, in which both university and industry take responsibility, has taken the form a set of educational formats beyond classroom teaching. A wide array of educational approaches exemplifies the partnerships with an equally wide array of industries and business. The emerging co-creation strategy is a highly relevant example of UBC in general and the UBC model in particular.

Programmes were and are developed to answer needs expressed through extensive consultation with employers. The classic collaboration style is that of (higher) education institute relating to (categories of) employers. Government policies have come into force to regulate and formalize structures to societal relevance and labour market needs, to institutionalize employer voice in curriculum development, alumni and employer voice in accreditation, etc. Collaboration has taken the shape of structured, extensive and in-depth arrangements. The classic perspective pays due to and strictly respects the primacy of each of the parties over respectively the graduate quality (through the education programme) and the labour market requirements (job openings). Joining to generate a more forceful voice from the side of employers and professions, more strategic level collaboration and higher level policy makers have become involved to generate longer term

'Human Capital Agenda's. These Human Capital Agenda's have taken shape along economic sectors, associations of professions and regional geographies.

Increasingly, Saxion UAS and representatives from society, industry and the professions have come up with more sophisticated and fine grained collaboration modalities. The university-industry collaboration (UBC) that Saxion engages in is shifting along two interacting perspectives. This two perspectives are jointly incorporated in the Saxion premise of 'co-creation'. The shift to more sophisticated forms of co-creation confirms well to the expectations in the national and European policy environment that UBC can yield a larger degree of business innovation and economic growth.

The first perspective stands for the moment in the curriculum that student competencies are developed with and judged by industry. In which industry here stands for actual work-based learning, the industrial place where skills can be acquired. Developing away from the classical student competency assessment at the moment graduation, the industry interaction is moved to much earlier stages in the curriculum, with different moments, each fitting different learning goals.

The second perspective is that business wants to reap more benefits from UBC. Moving away from a general social responsibility to train young people, more and better contributions to business performance are expected from the interaction with students. A large part of business expectations has become that students can assist with product or service innovations. Access to students, with students as direct conveyor of new knowledge and skills, has become the 'new normal'. The balance of benefits to either the student or Saxion as the education provider, versus the business actor, is an important factor contemplated in designing new educational formats.

Co-creation between partners involves many input decisions but also output expectations, giving a degree of benefit or gain. The different input-output benefits over the different educational format accumulate at different partners in the co-creation process. Aiming for an optimal balance of benefits between partners may be called the "win-win" situation. The inputs into co-creation from Saxion starts with teaching and research, yet increasingly demands inputs into format development, maintaining relations with business, coordination, grant searching, etc. The outputs are graduate learning and knowledge accumulation in staff and scientific/professional body of knowledge. The inputs from business are the articulation of specific innovation needs suitable to be addressed by students, the maintenance of relations with students and university staff, and the translation of student outputs into their business process. The business outputs are most easily translated as continued profitability.

### **Saxion education formats for co-creation**

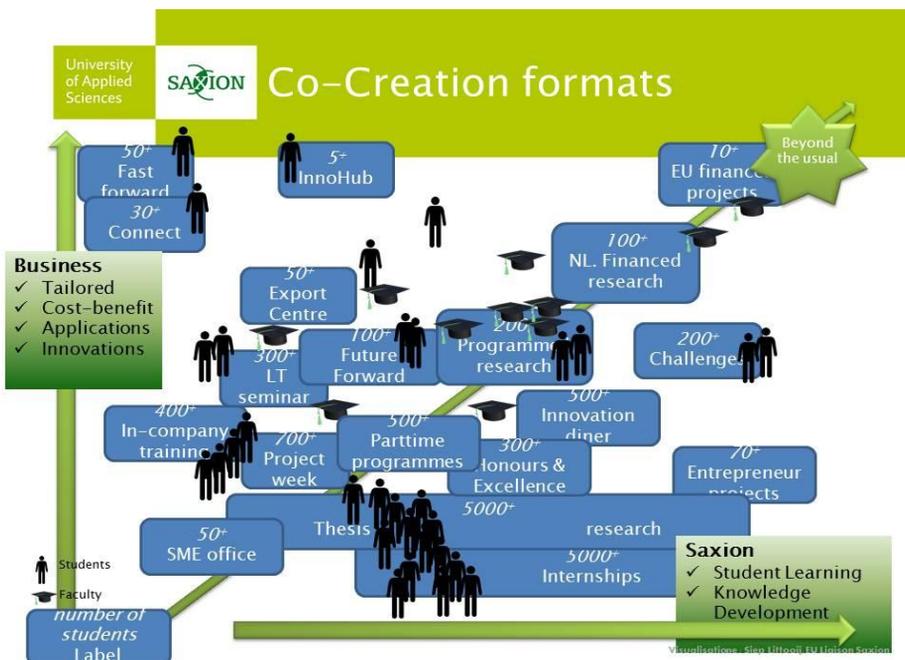
Educational formats are developed over the years to establish co-creation as an educational experience for students. Different schools, teams and degree

programs have developed a host of different formats to match their program content, curricula structure and the possibilities and requirements of the professional or business partners.

The educational formats have a multitude of design variables, e.g. duration, location, costs, professors/lecturers involvement, teaching process/ style, group composition/size, student maturity, disciplines/multidisciplinarity, assignment output, reality level, staff engagement, etc, etc. Above all of importance is the amount and type of engagement and control of the involved company over the assignment and outputs.

Without claiming to cover all formats practices within Saxion UAS, the most visible formats as operating in real practice are displayed in the diagram below. The two axes display in a very simplified and abstract way the amount of benefit for either Saxion as education provider to its students versus business. The dimensions along the axes aims to show the amount of benefit, from small, distributed or fragmented to large, concentrated or coherent. On the bottom left, the total benefit is supposedly less, the upper left generates a more considerable benefit.

Figure4Co-creation formats Saxion



### Stakeholder views on employability in Vietnam

Concluding from the employability statistics above and taking note of the positive qualitative evidence gathered, POHE programmes hold promise for graduate employability in Vietnam. POHE assumes that students need to

develop competences required by employers during the regular education programme. Integral part of curriculum development therefor is obtaining the employers views and needs on competences, followed by the translation of these competences into educational provision through new formats. Enhancing universities capacity to deliver more employable graduates to the labour market may then be expected from more, deeper and strengthened university business collaboration. Given future adoption of more intensive UBC, employability statistics may be expected to improve.

The POHE2 project contributes to building the capacity in Vietnam to teach labour market relevant programmes, with adequately trained faculty facilitated by a suitable regulatory framework at institutional and national level education system.

Realizing the potential of UBC for the development of fitting human capital in Vietnam, it is essential to understand the mechanisms of delivery and the perspectives of stakeholders. Between 2012 and 2015 three separate studies were therefore conducted at a national scale, covering viewpoint of three main stakeholder, namely the perspective of business, of universities/academics and of the state/government (beyond MOET)

A study (T&C, 2013) on Business preparedness to collaborate with universities concluded that collaboration is a rather narrow concept. However, collaboration is certainly there. Out of 169 business interviewed, almost two-thirds reported mobility of students and almost half reported to have involvement in some form of curriculum development or delivery. However, given the frequently reported benefit pursued by business only as 'recruiting', the study concluded that business are currently "collecting" rather than "cultivating" talents, rather than collaboration.

## Type of UBC result reported by business(T&amp;C, 2013)

Type of UBC Result	Number of enterprises reporting to participate	% of total companies
1. Collaboration in research and development (R&D)	5	3%
2. Mobility of academics between business and university	13	8%
3. Mobility of students between business and university	107	63%
4. Commercialisation of R&D Findings	3	2%
5. Curriculum development and delivery	80	47%
8. Governance	4	2%

Relevant to the requirement of the POHE programmes to collaborate with business to develop curriculum, to arrive at co-created education formats leading to desirable competencies, business shows willingness and even some experience. The extrapolation of the experience reported in the study in relation to total required graduate level exposure to business in Vietnam however is still very modest.

The role of the state, beyond MOET, as stakeholder in UBC is considered mostly through policy making and the creation of a regulatory framework, while a supportive role in the generation of UBC is also recognized(Tran Thi Ha, 2015). UBC related issues are occasionally mentioned in high level legal documents in the field of higher education, science and technology and enterprise management but are missing at implementation level. In terms of implementing legal regulations, dissemination activities are not effective; attention is not paid to supervision, monitoring or management of UBC. Statistics and information on labor market is in short supply. The state role, it may be concluded, is rather invisible or not fully deployed. Business and universities are left largely to themselves.

A study (forthcoming July 2015) on Vietnamese University and academics perspectives on UBC, with over 350 respondents, aims to identify collaboration results, with the influencing factors and mechanisms. Findings will be presented later.

All studies agree that the skills gap is really experienced, and collaboration between supply-side universities and demand-side business is absent, but for modest efforts. All stakeholders in the UBC policy model are at one hand noting the challenge, on the other hand waiting for other parties to solve the challenge.

As (preliminary) conclusion across the three studies, UBC is perceived to contribute strongly to graduate competences and to be very beneficial to employability. This constitutes a considerable driver, that needs to be strengthened. The barriers to deliver UBC as results however, as educational formats that fit within the educational system at institutional and national system level, are reportedly large. The findings do support that the UBC as model can be a useful instrument to develop and tailor different policies at national and institutional level, to empower leadership and academics in pursuing UBC Results

A heartening learned lesson in the three studies is that, when University Business Collaboration is found, UBC generates spin-off effects to both the University and to Business. There is great opportunity to further adopt educational formats in style with the POHE project. This is a promising finding that, given expansion of POHE principles throughout Vietnamese higher education landscape, bodes hope for future graduate employability in Vietnam.

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## EDUCATION AND BUSINESS - PARTNERS IN TRANSITION

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### ABSTRACT

Business education courses, such as those being taught in Vietnam and elsewhere, generally draw on the concepts advocated by the likes of Weber, Fayol, Taylor, Barnard, Mayo and Mooney etc. The experiences of such theorists that have largely contributed to today's canon of management and organisational theory, primarily draw from management theorists who lived in the early 19<sup>th</sup> – mid 20<sup>th</sup> centuries. Until now, such concepts have had their rightful place in modern management thought, especially Fayol's stress on long-range planning - an idea as important today, as it was in his own time.

However, circumstances change, and in business there can also be limitations to the present day application of historical theory. In business, it is expected that the appropriate people with the appropriate qualification will perform the right actions that will ultimately yield the desired results. Controls are implemented to guide the actions that take place at different levels in an organisation. These can be further classified into behavioural restrictions, pre-action appraisal, and action accountability. But what of, for example, the cultural, contextual and other pertinent influences and impacts?

Today, investigation by some commentators suggests that we may be witnessing the emergence of a unique social phenomenon not witnessed previously: five generations of people are shortly to be working alongside each other. A multi-generational workplace is either going to be a happy and productive place of engagement or, challenging and stressful. In a large part such outcomes will arise from the type and style of management that is implemented in a particular setting, derived from the education and understandings that we, as educators, seek to instil in those that will take their place in this new workforce paradigm.

In anticipation of this inescapable quantum shift in organisational relationships occurring, perhaps it is time now to re-think and realign certain fundamentals in business and management education.

This paper considers such necessary aspects as:

- Future business needs and present day education development;
- Attitude variables and job performance;
- Behaviour and Engagement.

The paper suggests a possible refocussing of higher education and training beyond the usual subject-by-subject level of engagement, thereby helping learners towards, for example, a greater level of embrace and understanding regarding diversity.

**Key words:** *Higher Education, Management, Multi-generational Workplace, Behaviour, Competencies, Diversity.*

## Introduction

*' You must remember this....*

*The fundamental things apply,*

*As time goes by.'*<sup>13</sup>

Once upon a time, in a working environment as time would march on in a linear fashion, younger workers entered the workplace to replace older workers – it was the natural order of things; a churn, somewhat insufferably and predictably bland. But there is no rule that says that one age group should always make way for another.

Such a stereotypical analysis of the young replacing the old has tended to dominate government, educational and perhaps business thinking towards trying to engineer an appropriate fit between education and training towards appropriate workforce participation. In short, a shaping of programs to cater for the largest common denominator, also guaranteed to offend the least number of participants.

If a trend (e.g. courses in business education) became popular, the engines of education, business synergies, and a supportive governmental environment can converge to make it huge. Things are changing, the workplace is changing, so perhaps the seemingly dated homogenised educational approach to the business environment needs further attention and revision.

Further, changes to courses subject delivery to also include on-line methods (or a blended mixture) are also creating additional factors worthy of consideration. For example, the general profile of the average on-line student is:<sup>14</sup>

- Female (70%);
- 33 Years Old;
- Working and earning a salary; and

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<sup>13</sup> Lyric drawn from the song: '*As Time Goes By*', written by Herman Hupfield, 1931. See also: URL= <<http://www.durango-songwriters-expo.com/as-time-goes-by.html>>

<sup>14</sup>Source: URL=<<http://www.franklin.edu/blog/profile-of-the-average-online-student/>>

- Studying business (34%).

The future workplace will be one of multi-generations working side by side. In considering this overall issue, there are a number of possible enablers that might contribute towards facilitating alignment of employee competencies towards sustainable organisational success. However, for the purpose of this Paper, necessary educational underpinnings towards this new workplace world will be the primary consideration. One reason for this is that if educational enhancement towards the new paradigm may not be seen as necessary, then it follows that student enhancement is likewise not necessary; and this is not so. It is not logical to ignore that which will be the case. Thus, it may be time to consider making an educational transformational leap to cater for the new situation arising, as the impact on the employer-employee and employee-employee relationships is bound to be huge and wide ranging.

In tandem with this, persuasion of educational authorities (and other related stakeholders) towards a re-think of the construct of, for example, business courses may need to be cast in terms relevant to necessary motivation – this also means as an economic argument - without precise knowledge of the pending situational needs or the possible consequences of action towards this.

### **1. The Coming Workplace World**

A scan of the working environment of the near future reveals developments that have not been experienced before – a multi-generational workforce consisting of four-five generations working side by side.

Those at the more senior end of the working life are extending their careers for various reasons; those that are younger and with appropriate qualifications are expecting to find employment otherwise there would be no point to it all. A pessimistic view of this multi-generational workplace is that it could be destructive in the working environment; behaviour patterns, age perceptions and relations are deeply in-grained. But an optimistic view is that the traditional, inherited or more established way of approach, especially by way of education, may not necessarily be a precondition for future sustainable business development. Thus, we can study and work towards bringing about a new way.

The question to consider is what type of education development may be feasible to address the workplace condition that we know is coming?

In the relatively near future, the five generations working side by side will be:<sup>15</sup>

- Those born prior to 1946;

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<sup>15</sup>URL = <<https://hbr.org/2009/10/are-you-ready-to-manage-five-g/>>

- Those born between 1946 and 1964;
- Those born between 1965 and 1976;
- Those born between 1977 and 1997; and
- Those born after 1997.

Just by identifying the various age groups, however, does not create either an identifiable correlation between similarities, or the possible depth of interaction between actors that may exist in the multi-generational workplace.

Enablers, for example, such as Information Technology should also be factored into the equation. Further, in a globalized world, it also cannot also be assumed that cultural antecedents may necessarily be coherent. For example, an employee in the 2020 workplace may be born in one country, educated in another, work in a third, and be on-line studying in a fourth. Thus, we cannot make the usual artificial distinctions (e.g. those born 1946-1954 act may have certain definable characteristics, those born 1977-1997 may have others) as such may create a synthetic subjectivity when attempting to view interpersonal interaction.

There appears to be ample literature regarding, for example, variations of culture on behaviour and associated organisational practices (e.g. Schneider and DeMeyer (1991); Pagellet *al.*, (2005)). But a question for this Paper also relates to how future workplace performance, where such might be affected by certain cultural attributes and practices, might also be addressed.

### **1.1 The 2020 Workplace**

According to Meister and Willyerd (2010), companies are already preparing their strategies to attract the most suitable employees. They suggest that the '2020 Workplace' will be one that is intensely personalised and socially networked to attract, develop and engage employees across generations and geographies. We, as educators need to prepare for this, similarly.

Those wishing to enter the workforce are growing in greater numbers, yet the workforce in many countries is also ageing. Different countries are also ageing at different speeds. For example, looking at Australia in the year 2020, the median age will be almost 40 years (1980: 29 years), with more people aged 50 than any other age. The present median age in Australia is 37 years.<sup>16</sup> In Vietnam, by contrast, the present median age is 30 years; in 2020 it is expected to be 33 years.<sup>17</sup>

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<sup>16</sup> Source: URL = <<http://www.worldometers.info/world-population/population-by-country/>>& URL = <<http://www.yourmarketingmentor.com.au/a-snapshot-of-the-future-australia-in-2012/>>

<sup>17</sup> Source URL = <<http://www.worldometers.info/world-population/vietnam-population/>.

There can be several explanations for an ageing workforce including socio-cultural influences that can affect the supply and demand situation for older workers, attitudes towards extending a person's working life, and the age-productivity profile concept which sees productivity viewed in terms of job context, job requirements and age, and perhaps also differing industry sectors (Mahlberget *al.*, 2013). Perhaps, as part of the working environment that to date has had overall 'aged related' considerations, it might be more appropriate to contextualise such as an 'age free' environment, where behaviour and influence might become a primary determining characteristic towards organisational success.

Understanding the specific nature of the changing workforce and then seeking to educate towards a generational divide falls to us as the educators of *now* that will be training the business leaders of *tomorrow*. Training in business matters aside, the educational attributional approaches such as personality theories, trait theories, behaviour theories and the like will need to be utilised more dimensionally – to correlate between implicit beliefs with actual reality; in terms of Task Performance Vs. Contextual Performance. But how might the workplace organisation of tomorrow be viewed to give us a necessary framework towards educational action?

Schein (2010), suggested that organisations should be thought of as:

*' ... a complex social system which must be studied as a total system if individual behaviour within it is to be truly understood.'*

Given the forthcoming multi-generational workplace, there are further considerations needed to be addressed to enable us to educate towards an education-organisational equalising effect. Some of these are considered below.

## **1.2 Dissecting the 2020 Workplace**

The modern and forthcoming workplace might be less about organisational loyalty than it is about team work, collaboration, relationship-building and a form of '*aggregated individualism*'. This also finds traction in a common and recurring theme between engagement, meaningfulness and identification – elements of employee cognition, emotion and behaviour. And it is for the organisation to manage the situation (Pech and Slade, 2006).

Thus, organisations might be seen as being essentially about behavioural interaction. Any consideration of an appropriate educational course design to assist students grapple towards being part of an organisation that will be competitive based, should also consider (and perhaps accommodate) the constraining institutions and influences (Braithwaite, 2004), notably behavioural matters in this context. Behaviours are functional in nature. Thus, less functional behaviours can create negative consequences and/or involve direct costs to the individuals that comprise the organisations, and to the organisations themselves (Griffin *et al.*, 1998).

Argyris (1993), identified the inevitable tensions in this area. As just one example, he identifies there must be some basic incongruencies between the growth trends of a healthy personality (expletory) and organisational requirements (limiting). Argyris suggests that such changes can reside on a continuum. This is illustrated in the Figure below.

**Figure 1: The Immaturity/Maturity Continuum<sup>18</sup>**

Insert [Figure 1: The Immaturity – Maturity Continuum] here

But let's take this one step further. Many new employees joining an organisation, while being within the adult age range (i.e. over 18 years of age) are not mature adults. They may no longer be adolescents, but they are not yet adults – perhaps '*emerging adults*' (Arnett, 2000). For that matter, maturity is not dependent on age. What organisations may encouraged to emerge is a shift from dependence to interdependence (rather than autonomy) – a helping and cooperative system of relationships.

### 1.3 Implications for the Education System

In an organisational setting, validating opinion, group belonging and behavioural relationships would appear to be intertwined. In this regard, Lopes *et al.*,(2007) consider that when groups are structured by way of individualism with a high independence among their members, heterogeneity flows within the dynamic (e.g. consensus to attribute validity to an opinion); whereas with groups of high interdependence (collectivism), groups use an overall construct of consensus, rather than that of heterogeneity.

To enhance business education towards a strategic match with the forthcoming business environment requires consideration of contextual variables, task uncertainty, and effectiveness of organisational structures. There are necessities facing both the organisational environment and primarily for educators as the feeders to this environment.

Wollfe (1979) suggests:

*' ... individuals create, not groups, and individuals tend to become dissatisfied and leave if they feel the organisation does not recognise that they want to be recognised for their individual contributions.'*

Thus, business education should not seek to preserve the '*status quo*' by way of the structure of courses. We need a strategic re-orientation of educational thinking from educating towards what '*is*' towards '*what will be*'.

### Educating for an Equalising Effect

#### 2.1 Education Considerations towards Integrative Change

<sup>18</sup> Source: Drawn from URL = <[http://www.accel-team.com/human\\_relations/hrels\\_06ii\\_argyris.html](http://www.accel-team.com/human_relations/hrels_06ii_argyris.html)>

Those presently studying business courses are the future organisational leaders and future key influencers towards organisational competitive sustainability. Presumably, and in this space, organisational competitive sustainability might also relate to educational institutional sustainability. So, in considering the direction of business courses to take account of the forthcoming multi-generational workplace, the probability of that which is forthcoming is known, we are just dealing with uncertainty regarding an appropriate correlation of education in the 'now' towards a temporal distance.

Here there is a situation of clear choice, but there will be distortions in appropriately quantifying the scale of the probability and there is also the problem of country workforce homogeneity to consider as the workforce becomes increasingly globalized (both actual and virtual).

Further, and as just one example, the call for international business education to include strategic fit with business and sustainability with landscapes has been announced via the United Nation's (2008) Principle for Responsible Management Education initiative.<sup>19</sup> Principle 5 states:

*'Partnership: We will interact with managers of business corporations to extend our knowledge of their challenges in meeting social and environmental responsibilities and to explore jointly effective approaches to meeting these challenges.'*

It is acknowledged that this will be no easy task. Integrating such concepts into the education curricula presents challenges that are abstract, theoretical and practical. Such education will need to be both 'transformative' and 'transformational' (Mezirow et al., 2009).

## **2.2 Educating for Appropriate Graduate Outcomes**

*'Insanity: doing the same thing over and over again and expecting different results.'*<sup>20</sup>

Education always takes meaning from context – it never gives meaning to context (Thompkins, 1992). If we are to knowingly embrace the forthcoming multi-generational workplace, then there is a pressing educational need to change and enhance the delivery of business education courses, although this is coupled with a somewhat pervasive uncertainty regarding the level of speed necessary to achieve the required objective.

Certainly, given the forthcoming workplace situation identified, the present educational atmosphere should be anything but calm, and yet it is. The pressure of global business expansion coupled with an expanding workplace age demographic appears to collide directly with the present system of business education that has been pursued for decades. The general level of aspiration and expectation of those studying business subjects and that we,

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<sup>19</sup>Source: URL = <<http://www.unprme.org/>>

<sup>20</sup> Attributed to Albert Einstein (1879-1955). German-born theoretical physicist.

as educators, seek to reinforce will also commence to change (if it has not, already).

The workplace is becoming an increasingly sophisticated relationship environment and we must seek to provide that workplace with uniquely skilled persons, not only in terms of grades and marks which are highly subjective, but by, perhaps, also adding subjects to the business canon that might also have a predictive value from an interpersonal relationships perspective.

The essential issue therefore, is what should be permitted to be included in courses now as a basis for addressing the multi-generational workplace. The unbreakable, but generally unacknowledged, rule is that there must be an expanding totality of learning experiences for the student (Thompkins, 1992). Thus, perhaps as educators towards the multi-generational workplace, the learning experience that needs to be created should be sociological as well as pedagogical. What may count for future successful employment for those we teach, will be information beyond the traditional forms of business analysis education, to give perspective, thereby creating working professionals accurately equipped by education and training to provide the kinds of skills that the multi-generational workplace will demand.

Knowledge is the essence of any skill that can be used to solve a problem (Leplat, 1990). So, translated to the workplace, information will become knowledge when people understand, interpret, put into practice, and integrate information into their duties (Lee and Yang, 2000). Lyotard (1984), identified that knowledge in the modern society can be regarded as '*exteriorised*' that is, there are '*knowers*.'

Exteriorisation further gives rise to the view that knowledge might be seen a commodity, so it has both tangible and intangible value. This is also important when the 'value' of education and training is considered in the wider context. Thus, as educators, we seek to instill knowledge capital in our students which, all things considered, will then convert this into organisational value and profit as employees. Hence, there is the economic argument to seek to ensure that the knowledge we seek to instill has actual value, now and into the future.

Effective education towards the multi-generational workplace will give students opportunities for skills, knowledge, attitude, and aptitude development; the obvious flow-on effects to organisation need not be stated. Appropriate education and training will also be an effective tool to cope with change (Rae, 2001).

What is clear is that the current range of business courses need enhancement beyond the traditional business strategy approach - towards a combined synthesis of analysis, behaviours, and response. This Paper has sought to show that the underlying issues are very complex. As to the appropriate actual subject makeup of business courses towards the

forthcoming multi-generational workplace, this is a matter for further research.

### **Conclusion**

In seeking to ascertain tomorrow's organisational landscape for which we might educate today, this Paper has sought to draw together various threads to weave them into an overall narrative that has meaning.

The forthcoming multi-generational workplace presents many challenges towards those seeking to educate in the business discipline. The literature shows that the behaviours of those within organisations are consequential; an individual's behaviour within an organisational setting can arise from a range of sources that have genesis in extremity, certainty, importance, knowledge, intensity, interest, direct experience, accessibility, and non-commitment. Although all of these might be seen to be conceptually and operationally distinct from each other, in an organisational setting they become part of a necessary structural construct that will have repercussion on the organisation's competency.

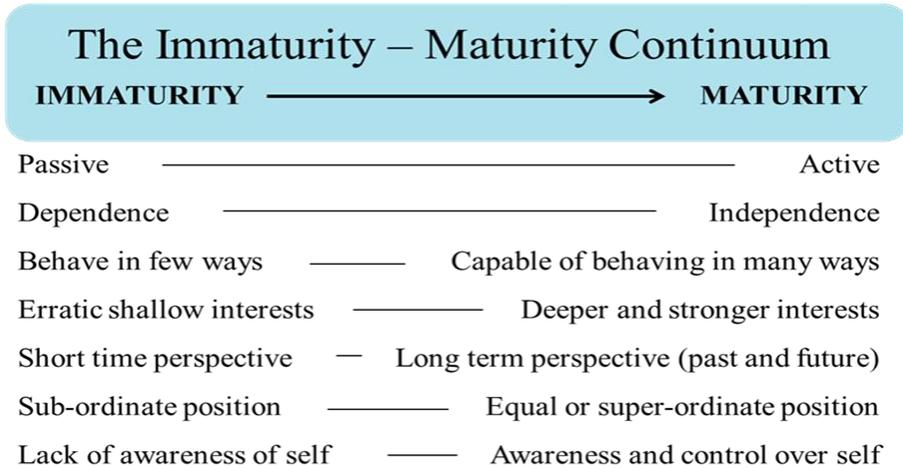
So, in preparing our graduates for the forthcoming workplace world, it is not only '*business intelligence*' that is a necessary guider, it would appear to be also a matter of including '*emotional intelligence*' as a strong and desirable graduate attribute.

Further, any consideration regarding amending the curricula will also require an analysis of a range of additional issues. These might include, but should not be limited to, appropriate texts to study, considerations regarding future appropriate graduate outcomes, disciplinary subject interlinking and a series of objective criteria for considering the future of an individual's contribution to groups as part of the future multi-generational workplace.

In light of the information presented in this Paper, it would seem a sensible approach to consider these varying dimensions as a set of underlying influences, and thus devise an appropriate educational response towards preparing for the inevitable.

Figure 1 insertion

The Immaturity – Maturity Continuum



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Professor Carter is passionate about all aspects of equality and has a particular interest in widening participation.

## **INNOVATION IS UNIVERSITY- BUSINESS RELATIONS**

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### **ABSTRACT**

A number of examples of innovative university business relations from the UK will be presented and discussed. The link with Student Recruitment and Government Policy will be explored and considered.

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## **WOMEN IN LEADERSHIP IN HIGHER EDUCATION**

*Author:*

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### **ABSTRACT**

The Vice-Chancellor of the University of Winchester in England, will share her personal leadership story including many challenges she has faced, some statistics on women in leadership roles in the UK and elsewhere will also be presented, along with her thoughts on future direction.

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## A CRITIQUE OF THE STANDARDS OF LEADERSHIP IN AN EDUCATIONAL ORGANIZATION

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*Tran Van Dat, Ph.D.*

### **ABSTRACT**

Leadership always plays an important role in the development and prosperity of the educational organization in the increasing process of globalization today. This paper explores and analyzes five necessary qualities and basic skills of a professional leader, with the aim of helping us to realize the importance of leadership in the educational organization today. First, the paper addresses the significant role of the ethical leader in the exercise of professional leadership in the educational organization. Second, it examines two types of leaders: autocratic and democratic types in the educational organization. Third, the paper argues that a professional leader must be a good listener, and all of his or her actions must combine three H's - Heart, Head and Hand. Fourth, it mentions the ability of a professional leader in managing and leading knowledge as well as understanding different kinds of cultures not only in the organization but also in society. Finally, the paper concludes with a highlight of the importance of leadership in the educational organizations and some recommendations relating to necessary skills for an effective leader in a changing world.

**Key words:** *educational organization, professional leader, basic skills, globalization*

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**IMPROVING MULTICULTURAL COMPETENCE THROUGH  
PROGRAMS FOR INTERNATIONAL STUDENTS AND EXCHANGES  
AT USSH, VNU-HCM**

*Author:*

*Nguyen Duy Mong Ha, MA.& MSc*

**ABSTRACT**

Since its establishment, the University of Social Sciences and Humanities, Vietnam National University of Ho Chi Minh City (USSH, VNU-HCM), has gradually enlarged international exchanges and cooperation with a variety of foreign higher education institutions (HEIs) and partners throughout the world as one of the strategies for enhancing its educational and research quality. This institution has the highest number of international students and greatest diversity of foreign scholars among the Vietnamese HEIs (both long-term and short-term). This is due to USSH's advantageous position in the system, location in HCMC and many programs in foreign languages and culture. Through these international programs and exchanges, USSH has created a lot of opportunities for its students and staff to improve not only their knowledge, but also multicultural competence.

The results from a study conducted at USSH, VNU-HCM recently on the interaction among the Vietnamese and international students as well as staff can help identify some best practices to help in improving multicultural education and staff development, including multicultural and global knowledge, communication skills, life-long learning skills, cultural tolerance and sensitivity, teaching and learning skills...both for the Vietnamese and for the foreign students/staff, there has been noticeable learning of one another's culture, perspectives, teaching and learning styles,...both groups have had to learn to adapt themselves to this international academic environment.

**Key words:** *multicultural competence, international exchanges, higher education, globalization era*

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Ms. Le Thi Bang Tam earned her masters degree in English Linguistics in 2006 from Danang University. She is Deputy Dean of Foreign Language Department of Phu Yen University where she has been teaching since her graduation from Hue Pedagogy in 1996. In parallel, she worked as a film translator for Phu Yen Television Station for four years. Now she is a senior lecturer of Phu Yen University and collaborates as an interpreter for Phu Yen Department of Justice. She completed The Primary English Teacher Trainer Training Course held by MOET and British Council in Quy Nhon in 2014. Her major interests are how to improve the way students in her province acquire English from the primary level.

**TEACHING ENGLISH TO ELEMENTARY STUDENTS  
IN THE RURAL PROVINCES OF VIETNAM:  
A CASE STUDY OF PHU YEN PROVINCE**

*Author:*

*Le Thi Bang Tam, M.A.*

**ABSTRACT**

Phu Yen province is a slowly developing province in Central Vietnam. A breakthrough in changing the teaching of English at primary level will only happen when administrators and educators take initiatives in changing language learning in the school system. Effective teaching of English starting at the primary level will require innovations in many areas: implementing a relevant curriculum, choosing appropriate textbooks, upgrading teachers' oral English competence, re-training teachers away from the traditional teaching methods, administering effectual testing and assessment, equipping schools with modern equipment for learning foreign languages and recruiting high quality teaching staff. Within the training and education system of the province, the Foreign Language Department of Phu Yen University plays an important role in training a diverse human resource pool to supply the province with primary English teachers. This article will present specific tasks and will suggest solutions for the Foreign Languages Department of Phu Yen University in improving the teaching and learning of English at primary level in Phu Yen Province.

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***Director of External Affairs and Linkages***  
***Capiz State University, the Philippines***

Dr. Amel Lavezares Magallanes is a graduate of Capiz State University with BS degree in Secondary Education Major in Science Education (2000), Master of Science in General Science (2008) and Doctor of Education in Educational Management. He passed the Licensure Board Examination for teachers in 2000. He earned the Doctor of Philosophy in Science Education at Centro Escolar University in 2015.

Dr. Magallanes is an academician par excellence. His years of teaching experience speak of the contribution he has shared of the academic world. He has taught Physics and Chemistry to students in the secondary level since 2001. He is also an esteemed college instructor at the Capiz State University – having taught Science, and Mathematics Subjects since 2000. He has also handled administrative posts as Coordinator of the Information and Communication Technology (ICT) and University Extension Program – COED of Capiz State University. He has been sharing his expertise as Adviser of several organizations namely, Future Farmers of the Philippines (FFPCC) and College of Education both in Capiz State University.

One of his professional advancements involves international engagement through active participation in international conferences as a paper presenter, session chair, paper reviewer and program committee member.

Dr. Magallanes published research paper in peer reviewed journal, both local and international publications. He also published Science books for local publication (Mutya Publishing House).

Dr. Magallanes is currently the Director of External Affairs and Linkages of Capiz State University. He is an active member of various professional and socio-civic organizations in Local, National and International Level.

## SCIENCE ATTITUDES OF CEU- MAKATI STUDENTS AFTER TAKING CHEMISTRY: BASIS FOR PROGRAM DEVELOPMENT

*Author:*

*Amel L. Magallanes, Ph.D.*

### ABSTRACT

This study was undertaken to determine students' attitudes and level of self-confidence after taking introductory chemistry subjects taught in tertiary level science courses at Centro Escolar University, Makati Branch.

Two hundred twenty-six sophomore students taking science-related courses enrolled in the first semester of the Academic Year 2011-2012 at Centro Escolar University Makati were involved in the study. The questionnaire used for this study was a modified standard questionnaire on the attitudes of students towards the study of chemistry and the instrument was divided into two sections. Data on the respondents' demographic profile and their attitudes and level of confidence after taking chemistry were collected and analyzed through the use of frequency distribution, percentages and means.

Findings from the study Show that the attitudes of the respondents towards chemistry, when they were grouped according to gender and the high school they graduated from, as a subject is positive and the students showed interest and motivation in their chemistry subject.

**Key words:** *Science Attitudes, Program Development, CEU*

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Prof. Rowena Cristina D. Dela Cruz was a graduate of Bachelor of Science in Commerce major in Accounting from Filamer Christian University. She finished her Master in Public Administration at Capiz State University Main Campus in 2004 and her Master in Business Administration at Colegio de la Purisima Concepcion in 2013. She presently pursues her Doctor in Public Administration degree at Capiz State University BuriásMambusao Campus.

Prof. Dela Cruz was an administrative personnel for 15 years before she transferred to the teaching profession. She had taught different business courses mostly in Finance and Management areas for six years. She had been designated Management Information System Coordinator for five years and as Technical Working Group member for four years to date. She is presently designated as Research Coordinator for the College of Business Administration of the main campus and as Gawad Kalinga Cap SU Focal Person for the GK – CapSU Partnership.

Prof. Dela Cruz had mentored and coached in different regional and national business course competitions and had attended several trainings, workshops and seminars in her field. She had also previously presented her study in an international research forum.

## **BUSINESS COURSE COMPETENCY TEST: AN EVALUATION TOOL**

*Author:*

*Rowena Cristina D. Dela Cruz*

### **ABSTRACT**

Competency and qualification of graduates must be improved to meet the developmental goals of a country. However, students are educated in many areas but it is seldom measured how much they have actually learned and retained.

This study prepared an evaluation tool that will assess business course students' cognitive ability among higher education institutions. A descriptive-developmental research method was utilized.

The Business Course Competency Test (BCCT) consisted of 60 test items in accounting, management, finance, mathematics, communication and research and classified as easy, moderately difficult and difficult with testing time of 1, 2, and 3 minutes each, respectively. A total of 90 minutes testing time with 5 minutes completion of the Student Profile Sheet. A Manual of Instruction was also developed for its administration. Furthermore, the BCCT conformed to the competency standards contained in the CHED Memorandum Order No. 39, series of 2006.

Interventions such as remedial classes, consultation and tutorial sessions, and seminars and workshops can be undertaken to improve the knowledge mastery of students with low BCCT results.

**Key words:** *Business Course, Competency Standard, Evaluation Tool, Intervention*

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Prof. Hazel D. Joaquin is a language teacher at Capiz State University Main Campus, Roxas City, Capiz, Philippines. At present, she is a candidate for Ph.D. in Applied Linguistics at Philippine Normal University Manila, Philippines. Her preceding professional experiences include school publication chairman, editor of the minutes of the CapSU Board of Regents Meeting, and editor of research journals.

She has been awarded as Best Performing School Paper Adviser in Region VI given by the Philippine Information Agency Region VI in 2011. Being a research enthusiast, she has been a presenter in International Research Conferences such as Asian Conference on Language Learning (ACLL 2014) held at Rihga Royal Hotel, Osaka Japan on April 17-20, 2014 organized by the International Academic Forum (IAFOR) and L3 (Language, Literature, and Linguistics) Conference 2014 held at Bangkok, Thailand June 9-10, 2014 organized by the GSTF.

## STUDENTS' AND TEACHERS' PREFERENCES FOR FEEDBACK IN SECOND LANGUAGE WRITING

*Author:*

*Hazel D. Joaquin*

### **ABSTRACT**

Feedback is an integral part of instructional design that provides corrective information used by learners to modify their performance. This study used a descriptive survey method in gathering data which ventured on investigating students' and teachers' preferences for feedback in second language writing.

The results of the study show that the students generally preferred to receive conversational type of comments from a teacher. Likewise, the data gathered affirm that students preferred to receive corrections in the area of grammar or language use, implying that their teacher's comments generally help them in improving their writing skills. It also reveals that praisal comments encourage students to improve their written works. The results further show ample evidences that most students religiously incorporate teacher's correction or comment in their revision paper as they believe that it enhances their written output.

Thus, this study asserts that giving positive written feedback on students' work can eventually improve their writing for the fact that it is taken positively by them.

**Key words:** *feedback; preferences; second language writing*

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Prof. Mark Glenn F. Villamor obtained his Bachelor of Science in Management major in Business Management from UP Visayas in 2002. For seven years, he worked in the Sales and Marketing Department of Wyeth Philippines, Inc. (2002 – 2006) and Schering-Plough Corporation (2006 – 2009). He finished his Master in Management at Capiz State University – Main Campus in 2011 and his Master in Business Administration at Filamer Christian University in 2014. Also, he has a Master Certificate in Entrepreneurial Management from Kauffman Fastrac obtained in November 2014.

Prof. Villamor joined Capiz State University in 2009 and has stayed since. He has focused his attention in augmenting classroom instruction by organizing co- and extra-curricular activities for students. As a result, he has been unanimously endorsed by students as Adviser of the Young Entrepreneurs' Society of the College of Business Administration (YES-CBA) since 2010. He is the first Program Coordinator of BS Entrepreneurship when it was offered in 2011. He is also designated as the Chairman for Planning and Development and MIS from 2012 to present.

He is an active member of various professional organizations in the local, national and international levels which include, among others, the ASEAN Entrepreneurship Consortium, Entrepreneurship Educators' Association of the Philippines, Inc. (ENEDA) and the Association of Marketing Educators (AME). He has been part of ENEDA's Board of Trustees since 2013.

**FACTORS FOSTERING STUDENTS' CREATIVITY  
AT CAPIZ STATE UNIVERSITY:  
INPUT TO TEACHING STRATEGIES**

*Author:*

*Mark Glenn F. Villamor*

**ABSTRACT**

The tide of technological and economic change is sweeping every corner of the world and is getting bigger and faster every day. If the Philippines aim to keep pace with these changes, it must be able to cultivate creativity among its would-be entrepreneurs and labor force. This difficult task falls on academic institutions since part of their mission is to inculcate creativity among students. As such, academic institutions must provide a climate which allows the students to take risks and experience committing mistakes and failing in the process. Instructional, research, and extension activities must be geared towards the development of the personality traits and attitude of creative individuals. The present study attempts to investigate the commonly cited factors that foster students' creativity in an academic organization. The respondents were 151 BS Entrepreneurship students enrolled in the academic year 2013-2014 at Capiz State University. A survey questionnaire was prepared for this study. The students' responses to the questionnaire were analyzed by the use of mean, standard deviation, t-test and ANOVA to determine the degree of contribution of the factors in fostering their creativity. The factors are: (1) self-confidence; (2) risk taking; (3) use of abstraction; (4) use of systematic analysis; (5) task achievement; and (6) physical environment. The results of this study suggest that the respondents perceive physical environment as the most influential factor that fosters their creativity. A significant difference was found in perceptions of the factors that foster creativity when respondents are grouped based on their current general weighted average.

**Key words:** *Physical environment, risk-taking, self-confidence, task achievement, use of the abstract, use of systematic analysis*

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Professor Ma. Dorothee J. Villarruz earned her Bachelor of Science in Management from the University of the Philippines in the Visayas (UPV), major in Business Management, with interdisciplinary study in Economics and cognate in Community Development. She finished Master in Public Administration (2012) and Master in Management (2015) from Capiz State University; and anticipating to graduate her degree in Doctor of Education in 2017.

Prof. Villarruz had extensive work experience in research. She was a student researcher, had work as research assistant to UPV professors which paved her way to work with the Danish International Development Agency and the National Economic and Development Authority joint projects. By mid 1990s, she joined a non-government institution where she first handled the MIS, then as Asst. Education and Training Director and later as the Administrator of a resource center until year 2000.

In 2007-2010 she was one of the Consultants in the office of an elected official, where she handled fiscal and administrative management. In June 2013, she separated from the local government to become a fulltime faculty of the Capiz State University. Presently, she is the chairman of the Campus Research and the Coordinator for the Master in Public Administration Program.

As a faculty, she had the opportunity to be a presenter of her research works in a number of local and international for a and be an affiliate member of various professional organizations.

Outside the academe, she is an entrepreneur and a Central Bank of the Philippines accredited independent member of the board of a rural bank.

## IMPLICATIONS OF EMOTIONAL INTELLIGENCE AND TEAM PERFORMANCE TO ORGANIZATIONAL DEVELOPMENT

*Author:*

*Ma. Dorothee J. Villarruz, MPA, Mm*

### ABSTRACT

The challenges of the 21<sup>st</sup> century have made public administration to forecast, participate in decision-making and formulating solutions to problems of societies, to re-think and adopt the new concepts: globalization, good governance and social responsibility, over skepticism of inefficient performance and corrupt system.

This study examined the emotional intelligence (EI) and team performance (TP) to determine the levels of the career employees' EI and TP and their relationships and differences and its implications to Organizational Development (Organizational Development). Data were statistically processed using the Special Package for Social Science.

Results revealed that the career employees had an average EI and a satisfactory TP. Study showed a non-significant relationship between EI and TP; civil status and monthly income showed significant difference in the EI levels while income and position on TP. The analysis of relationship between selected factors and TP and EI showed gender, civil status and income have significant influence on EI while position on TP.

The results implies the need to identify demand-driven training needs of employees and teams that will have impacts on OD. The study implied two theories: the Hierarchy of Emotional Intelligence Theory which posits that individual level of EI is attained in a hierarchy and the Theory of Total Team Performance (TTP), mathematically equated as:  $TTP = \sum (TP_1 + TP_2 + TP_3 + \dots + TP_n) + 1$ , where  $TP_1, TP_2, TP_3 \dots TP_n$  are the TP of individual units and 1 is constant for the concept of synergy.

**Key words:** *Team Performance, Emotional Intelligence, Organization Development, synergy, career employees and public administration*

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Prof. Elmer Mondala Albaladejo, Ed.D. earned his Bachelor of Secondary Education major in Values Education at Capiz State University Pontevedra Capiz in 2000 *Cum laude*; and finished his Master in Management(2003)and Doctor of Education major in Educational Management (2013)from the same University.

He tainted a wedge of his teaching principles as a professor of Capiz State University teaching Social Sciences and Professional Subjects both in the undergraduate and graduate programs. In pursuance of good educational management standing, he attended various academics trainings and conferences and earned membership to various professional organizations. As part of his formidable performance as a leader, Dr. Albaladejo was an Adviser of the Supreme Student Council and the Chairman of the National Service Training Program (NSTP). Presently, he is a dedicated and the active Chairperson of the Office of Student Affairs of Capiz State University Main Campus.

**IMPLEMENTATION OF GENDER AND DEVELOPMENT AMONG  
HIGHER EDUCATION INSTITUTIONS:  
INPUT TO GAD ENHANCEMENT PROGRAM**

*Author:*

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**ABSTRACT**

Gender and Development (GAD) is a plan for development perspective that recognizes the unequal status and situation of women and men in society. Women and men have different needs and interests as a result of said inequality, which is institutionalized and perpetuated by cultural, social, economic and political norms, systems and structures.

This descriptive research investigated facts related to GAD implementation in higher education institutions (HEIs), using a research-made questionnaire. Findings from the research reveal that educational managers were “very aware” of the Republic Act 7192, known as Women in Nation-building, implementation, while faculty members were only “moderately aware”. All HEIs agreed on having encountered problems in GAD implementation such as: inadequate trainings/seminars, lack of funding support, non-priority of GAD programs, limited collaboration of institutions on GAD-related activities and unsustainable implementation.

However, HEIs were generally aware that they had general and specific plans related to GAD implementation. Difference was found between educational managers and faculty members’ awareness level. Moreover, relationships were seen on the selected profile variables of HEIs and status of GAD implementation.

Results of the study implied an input to GAD enhancement program that will address the gaps for a sustainable level of implementation among HEIs.

**Key words:** *GAD, Gender, HEIs*

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Mr. Tran Cong Danh graduated at the Information Technology Faculty of University of Science Ho Chi Minh City (HCMUS), and completed his Master's Degree of Information Technology at the HCMUS. He currently serves as Vice Director of International Training and Education Center, HCMUS, responsible for organizing education and training programs in association with foreign universities. In addition, he is a lecturer in database, information system area and a member of the Service Science project of Department of Science and Technology HCM (2010 – present). In 2012, he was a member of FICAP-1 (First forum on International Collaboration Academic Programs) which held at HCMUS. His recent publication is "Intercultural Competence in Practice: Reflections in establishing cross cultural collaboration education programmes", ACM Inroad, 1(3), 85-93.

**VISION, MISSION AND GOAL OF UNIVERSITIES IN VIETNAM  
BASED ON EDUCATION ACCREDITATION STANDARD**

*Authors:*

*Tran Cong Danh, M.Sc.*

*Vu Hai Quan, Ph.D.*

**ABSTRACT**

One of the main objectives of higher education is to provide society high quality products, contributing to the growth and prosperity of the country. One of the problems which are greatly concerned by the society is higher education quality. The Ministry of Education and Training of Vietnam has issued 10 accreditation standards for evaluating the quality in education for universities' and community colleges' implementation.

In this paper, we conducted a survey to investigate the current situation and the level of response based on the first standard relating to the vision and mission development of Vietnamese universities, with a consideration of each university's regional development. Results obtained are from the websites of 200 universities in some key areas: Hanoi, Ho Chi Minh City, Northern Area (from Hue to North), and Southern Area (from Da Nang to South).

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Ruhanita Maelah (Dr) is an Associate Professor at School of Accounting, Faculty of Economics and Management, Universiti Kebangsaan Malaysia. She holds a BSc (Penn State), an MBA (California State University) and a PhD (Universiti Sains Malaysia). She has more than 18 years of teaching experience, specializing in Costing and Management Accounting. Her current research works include strategic management accounting, accounting outsourcing and comprehensive performance measurement. She also lends her expertise to various organizations including Graduate School of Business, Ministry of Education, Examination Council and National Institute of Entrepreneurship.

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Sharul Effendy Janudin is a lecturer in Department of Accounting and Finance, Sultan Idris University of Education, Malaysia. Sultan Idris University of Education (UPSI) is a Public Institution of Higher Education which contributes an important part in the history of Malaysian's education. Currently, he is a postgraduate student (PhD in Accounting) at Universiti Kebangsaan Malaysia (UKM). Sharul Effendy has started his career as lecturer in 2001, teaching accounting specifically on Management Accounting. Due to dynamic changes in education environment and his experience while holding management position in university level, he actively doing research on the application of management accounting tools in higher education institution which focusing on performance measurement system, balanced scorecard and cost management. He is also participating in consultation activities with co-operative movement in Malaysia to promote co-operative business model as major factor in realising economic and social development.

**PERFORMANCE MEASUREMENT SYSTEM MODEL FORMATION IN  
HIGHER EDUCATION AND LECTURERS' PERFORMANCE:  
THE CASE OF MALAYSIAN PUBLIC RESEARCH UNIVERSITY**

*Authors:*

*Sharul Effendy Janudin,  
Ruhanita Maelah, Ph.D., Amizawati Mohd Amir, and Nor Liza Abdullah*

**ABSTRACT**

Universities play crucial roles in developing differentiated and effective academic systems and making it possible for the country to join the global knowledge society and compete in sophisticated knowledge economies. Therefore, top management in Malaysian Public Research University is aggressively designing and executing their strategic plans through performance measurement system. This study examines whether contemporary performance measurement system affects university performance at lecturer level. Cross sectional data were obtained from academic staffs representing five universities (N = 368). Confirmatory factor analysis using structural equation modelling (SEM) demonstrated that strategic, comprehensive and dynamic exist in university performance measurement system. Moreover, findings from the study support a positive and significant effect of the contemporary performance measurement system on individual lecturers' performance. The findings provide university's management with valuable insights pertaining the role of contemporary performance measurement system which could assist them in aligning their performance measurement system.

**Key words:** *Performance Measurement System, Competency, Institute of Higher Learning*

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Ms. Ngo Ngoc Cuong graduated from Polytechnic University in 2003, then she was a master of business administration and graduated in 2007. She has experienced teaching college for 8 years. Currently, she is teaching at the University of Technology in Ho Chi Minh City and a Ph.D. student at this school.

## THE QUALITY OF HIGHER EDUCATION: THE CASE OF VIETNAM

*Author:*

*Ngo Ngoc Cuong, MSc.*

### **ABSTRACT**

Quality assurance of higher education system remains a priority towards the society for its roles and importance over the development of the country in term of internationalization and globalization. How to assure the quality of education has been a subject of concerned. However, the present task of assuring quality in higher education in specific training establishments and academies has not been considered appropriately. With the purpose of identifying main existing problems in the higher education quality assurance in Vietnam, this research begins with reviewing viewpoints about higher education quality assurance and the reality of education quality assurance of specific training establishments and academies. The research then proposes recommendations to improve the activity of higher education quality assurance in order to develop Vietnam's higher education quality assurance industry to a higher level in comparison with the quality assurance of academies from developed countries in the Asia and around the world.

**Key words:** *Quality, Quality in higher-education, quality management in university education, Quality assurance of higher-education, quality evaluation system in higher education.*

***Huynh Hong Mai, MA.***  
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After graduating the university in biochemistry, Ms. Huynh Hong Mai worked for 10 years in Enterprises as QC, R&D Officer. Then, she earned her Master of Economics, Finance and Banking and continued 20 years working for the provincial government in trade and investment. She had got TVET experiences by 8 years working as Vice Rector of Kien Giang Vocational College (KVC). So, now she is an Advisor of KVC in which my professional activities major as soft skills trainer, scientific researcher and international cooperation coordinator.

She learned how to do vocational training for disabilities in AFAH-Marseille, France in 2009. It is my pleasure to train skills for labours and youth, to work with Australian Volunteers who teach English for staff and to collaborate with GIZ project for 2 years environmental education in vocational training from 2013 to 2014. In 2014, she appreciated to coordinate successful British Council project “Skills for Employability International Partnership” with Westminster Kingways College from October 2013 to October 2014; to attend “Bringing the Learning Home 2014- International Skills partnership Seminar” by British Council. Now, KVC is cooperating with West College Scotland in Quality Assurance project.

In order to prepare for ASEAN Community, to improve the students' mobility and their capacities, she has had good chances to study skills relating to vocational training and human development in Malaysia and to attend SEAMEO SEAMOLEC vocational curriculum mapping workshop in Indonesia where KVC shared and made partners with universities of Myanmar, Laos, Indonesia, Cambodia and SEAMEO SEAMOLEC. She paid attention to participate forum “Innovations in Teaching Life-skills and 21<sup>st</sup> Century Skills at basic Education: best practices from different countries in the Southeast Asian region” by SEAMEO RETRAC, HCMC in September 2014.

**CONTENT AND METHOD FOR A FUTURE-FOCUSED VOCATIONAL  
EDUCATION: DEVELOPING SKILLS FOR EMPLOYABILITY-  
PRACTICAL EXPERIENCES OF KIEN GIANG VOCATIONAL COLLEGE**

*Author:*

*Huynh Hong Mai, MA.*

**ABSTRACT**

To prepare for an ASEAN Economic Community and to improve the quality of vocational training, during the past three years, we have been integrating much content and methodology that we have learned from international partnerships with Australian, British, Indonesian and Scottish educationalists. This article explores important innovations in vocational education that ensures up-to-date content and progressive teaching and learning methods to develop students' skills for employability and adaptability in the workplace.

Structurally, the college involves enterprises in improving curricula, dual training and recruitment. Student-centred approach is the focus in all teaching activities. Teachers apply professional and subject knowledge, enquiry based methodology, integrating theory and practice in classes and emphasizing environmental education. In addition, teachers are encouraged and assisted to conduct scientific research and use digital technology to connect with other countries.

In the learning process, teachers organize and manage their classes to provide training in self- control and self- evaluation, engaging and stimulating students in open communication.

Rather than focusing only on knowledge, our approach gives opportunity for students' practice of universal basic skills and develop their positive interpersonal characteristics.

Our vision is that teaching and learning will be connected, responsible, valuable and developmental.

**Key words:** *skills, vocational, learning and teaching innovation*