

THE DEVELOPMENT OF CORE COMPETENCIES AT HIGHER EDUCATION: A SUGGESTION MODEL FOR UNIVERSITIES IN INDONESIA

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ABSTRACT: *Developing graduate core competencies in higher education has been becoming an actual and trend issue due to the greatest concerns of students, governments, and employers about the quality of higher education outcomes. Higher education in Indonesia should turn the policies and the curriculum of university from conventional objective to recent contexts of global changes and employment settings. University must develop a curriculum which is not only aim to develop students' knowledge but also to develop students' core competencies, namely communication skill, IT (Information and Technology) skill, numeracy, learning how to learn, problem solving, working with others, and subject content competencies. The frameworks of core competencies development should be formulated and implemented and graduate "core competences" must become a measurement of quality to face the global competition. By this manner, intended outcomes of higher education namely employability, lifelong learning, and good citizenship will be attained. In other words, the universities in Indonesia should envisage that every single graduate of the university posses the seven attributes. The seven skills could be carried out in delivering course content. Finally, by equipping students with the core competencies they will succeed as professionals and responsible members of society.*

KEY WORDS: *Core competencies, higher education in Indonesia, policies and curriculum of the university, and global competition.*

INTRODUCTION

Current changes in the global economy and job market require that graduates have initiatives and high skills, be adaptable to rapidly changing situations, and work well in teams and in different cultural environments. This requires major changes in the way universities educate their undergraduates, and increases emphasis on graduate and continuing education. The major restructuring program at Higher Education level in Asia was conducted with emphasis on skills and technology. The aim is to enable graduates using global resources, global technology, and global talent to answer the future challenge (UNESCO, 2006:172). While in advance country, Higher Education had begins to promote and combine between knowledge and competencies or skills as a quality measurement of university outputs. Skills development is shifted into curriculum content and developed during teaching learning process at university (Dunne, Bennett & Carré, 2000).

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In Indonesia, the new paradigm of Higher Education placed quality and relevance of higher education as the main priority and core of national higher education development (UNESCO, 2006:37). It is expected that by 2010, Indonesia will have a competitive leverage due to the existence of highly reputable higher education institutions, and it is believed that a strong higher education program will lead to a nation's competitiveness (Directorate General of Higher Education of Indonesia, 2007).

In 2003, the National Education Ministry of Indonesia stated that higher education has a critical role of producing qualified graduates, if quality higher education is the target to achieve. Indonesia realizes that to improve the quality of its human resources both the problems of access and quality have to be taken into account in finding out their solution (Directorate General of Higher Education of Indonesia, 2007). In addition, the guidelines of Higher Education of Indonesia stated that Higher Education aims to prepare students with knowledge and life skills and become a good citizenship that is willing to contribute in society life. It is expected that the students has ability to apply and develop their knowledge after graduate in order to improve the quality of life of society as also to enrich national cultural heritage (National Ministry of Education of Indonesia, 2002). However, there is no a clear direction and guidelines how knowledge and life skills manifested in curriculum and teaching process.

This article explores the model of knowledge and skills development in some countries and contributes an appropriate model of skills development, namely core competencies for universities in Indonesia. The discussion commences with a review of core competencies development in others countries and then moving onto consideration of model of core competencies development in curriculum for Indonesia, supported by current and latest references all around the world.

THE DEVELOPING OF CORE COMPETENCIES IN HIGHER EDUCATION

There is growing trend for university in the world to align core competencies with the higher education curriculum. Each country has its own model of core competencies. However, all models in some countries are specifically employment related, while in others greater emphasis has been placed on their social relevance. Table 1 outlines the different labels being used for core competencies in various countries.

The most widely used definition of core competencies or popularly referred to as key skills is the definition given by Qualifications and Curriculum Authority (QCA, 2002). QCA believes that "key skills are the generic, transferable skills that the government and much of the industry consider to be essential for successful lifelong learning and a flexible workforce" (QCA, 2002). However, in this paper core competencies will be used due to in the conceptual frame works of Higher Education in Malaysia and Indonesia use the term "Competencies" to describe generic skills (Brodjonegoro, 2002; and Zalizan Mohammad Jelas *et al.*, 2006).

Core competencies are skills that students need in order to become successful learners and successful employees in the field of their study and work and in other aspects of their life, and therefore are an important outcome of university education

(CRSC, 2003:1-4). In relation to this, L. Hodginson, N. Jackson and H. Lund (2000:7) explain that key skills involve one's use of personal and cognitive skills and abilities with a purpose to carry out a variety of tasks and activities as well as in learning new things. Gonczi *et al.*, as also cited in M. Leggett, A. Kinnear and M. Boyce (2004:296), clarify that a competence as "a combination of attributes underlying some aspect of successful professional performance", for instances communication, critical thinking, problem solving, and computing.

Table 1
Relevance Term of Core Competencies Used by Some Countries

Country	Terms Used to Describe Core Competencies
United Kingdom	Core skills, key skills, common skills.
New Zealand	Essential skills.
Australia	Key competencies, employability skills, generic skills.
Canada	Employability skills, generic skills.
United States	Basic skills, necessary skills, workplace know-how.
Singapore	Critical enabling skills, competencies.
France	Transferable skills.
Germany	Key qualifications.
Switzerland	Trans-disciplinary goals.
Denmark	Process independent qualifications.

Source: NCVET (2003:6).

The definition given by Gonczi *et al.* seems to say that a competence is a blend or mixture of qualities which form the basis for successful performance in one's career. Hence, it is noted that one crucial fact is that core competencies indeed correlate with employability. Zalizan Mohammad Jelas *et al.* (2006:3) agree also to defined core competencies as sets of skills or abilities acquired and developed during one's course of study at higher education level and they are absolutely essential to meet three potential outcomes of higher education, namely the different needs and requirements of employers in the marketplace, lifelong learning, and good citizenship.

CORE COMPETENCIES IN UNIVERSITIES CURRICULUM: A SUGGESTION FOR INDONESIA

The policy of National Ministry of Education of the Republic of Indonesia Number 232/U/2000 about Regulation of Higher Education in Indonesia classify that universities are emphasizing students to acquire soft skills for instance ICT (Information and Communication Technology), social skills and interpersonal skills, and knowledge in their discipline. However, there is no a clear direction or model how the content of regulation interpret into curriculum and teaching practice. Here, the writer attempts to reinterpret the regulation of Indonesian Higher Education in more applicative manner by suggesting a model of core competencies development in curriculum of higher education in Indonesia.

The model of core competencies discussed in this paper was adapted from the model developed by Eric Mayer (1992), QCA (2002), and Zalizan Mohammad Jelas *et al.* (2006). The model than supported by literatures review related to core competencies development at university from E. Dunne, N. Bennett and C. Carre (2000), Debra Bath *et al.* (2004), and Winston Hodge (2007). The model of core competencies development will be discussed in three phases: curriculum of higher education, core competencies, and outcome of universities (see figure 1).

A. CURRICULUM OF HIGHER EDUCATION

The changes curriculum from conventional to the trend issue was reinforce by a number of studies in Europe (Dunne, Bennett & Carré, 2000; and QCA, 2001). They show that the employers were not satisfied in relation to the implementation graduate attributes, capabilities, competencies, and the like at universities. The employers consider core competencies are important for higher education because they reflect how well graduate skills meet the expectations of job market. In addition, G. Crebert *et al.* (2004:162), a survey was conducted which suggested that graduates in Australia were under-equipped for employment. And Core Renewal Steering Committee, Loyola University of Chicago (CRSC, 2004:16); and Cassandra Star and Sara Hammer (2007:245) suggested university to shift core competencies as a core curriculum. As a result, some advance and developing countries promote generic skills into core curriculum for personal and professional development due to the growing demand and the global workforce.

The core curriculum is at the heart of the institution's educational mission. It is critical for every university of excellence to periodically reexamine itself to ensure that curriculum goals and outcomes are meeting the needs of its students and society. Similarly, faculty have the responsibility to examine the foundations of the core curriculum and to build on its past when developing the structure, pedagogy, and content of the core that will provide students with the knowledge, skills, and habits of mind that are needed for the challenges of the 21st century (CRSC, 2004). The core curriculum will equip the undergraduate with some competencies and evident of real work (Candy, 1995:97).

For further discussion in this paper, core curriculum have seven competencies that students need to become successful higher education learners and successful employers in the fields of their study and work, and in other aspects of their life and therefore are an important outcome of university education

B. THE CORE COMPETENCIES

The core competencies or key skills have aroused consistently in the literature and central in discussion of generics skills both form academic and employers until today (Bath *et al.*, 2004:315; and Star & Hammer, 2007:240). In Australia, the attention focused on skills has increased significantly since Mayer committee 1992 proposed seven key competencies as a basis of employability skills that can be addressed by

formal education (SQA, 2003:6; and Leggett, Kinnear & Boyce, 2004:295). The seven key competencies proposed by Eric Mayer (1992) are collecting, analyzing and organizing information, communicating ideas and information, planning and organizing activities, working with organizing activities, using mathematical ideas and techniques, solving problems, and using technology (cited in SQA, 2003:6). While in UK, the Qualifications and Curriculum Authority (QCA, 2002) defined communication, IT (Information Technology), application of number, working with others, improving own learning and performance, and problem solving specifically as QCA skills (www.qca.org.uk, 21/1/2007).

Ministry of Higher Education of Malaysia (MoHEM) defines eighth specific competencies that students should demonstrate at the end of the program. The competencies are knowledge in specific fields, use of ICT (Information and Communication Technology), intellectual skills in critical thinking, knowledge seeking, problem solving and creative decision making, practical skills, and ability to communicate. Similarly, Winston Hodge (2007:1), Director Training and Development Division of Singaporean, MoE points out eight cores skills and values are: (1) Character Development, (2) Self Management Skills, (3) Social and Cooperative Skills, (4) Communication Skills, (5) Literacy and Numeracy, (6) Thinking Skills and Creativity, (7) Knowledge Application Skills, and (8) Information Skills.

However, core competencies discussed in this paper is more inspired by model developed by QCA (2002), Zalizan Mohammad Jelas *et al.* (2006), and Peter Washer (2007). Core competencies consist of: (1) communication skills, (2) numeracy, (3) Information Technology or IT skills, (4) learning how to learn, (5) problem solving, (6) working with others, and (7) subject specific competencies.

First, Communication Skills. The skill need to enable graduates delivering their idea as individual or as group member and comprising a diversity of backgrounds in order to come out with a good decision, solution, and negotiations (Morreale, Osborn & Pearson, 2000:1-3). Communication skills refers to one's ability to use active listening, writing skills, oral communication, presentation skills, questioning and feedback skills in order to establish successful communication (QCA, 2002; SQA, 2003; Washer, 2007; and Jones, 2009).

Second, Numeracy. Numeracy is defined as the aggregate of skills, knowledge, beliefs, pattern of thinking, and related communicative and problem solving processes individuals need to effectively interpret and handle real-world quantitative situations problems (Gal, 1997; Zalizan Mohammad Jelas *et al.*, 2006; and Washer, 2007).

Third, Information Technology. Technology skills refers to the ability of "individuals to apply technology such as computers, software applications, databases, and other technologies to achieve a wide variety of academic, work-related, and personal goals" (SQA, 2003; ACRL, 2004; and Washer, 2007). Ron Oliver, Jan Herrinton and Catherine McLoughlin (1999) stated that the use of technology in teaching and learning to provide many opportunities to teachers and learners develop their lifelong learning.

Fourth, Learning How to Learn. Learning how to learn is defined as acquiring sets of skills and knowledge for one to learn efficiently and effectively in any

learning situation that one encounters (QCA, 2002). Learning features processes, understandings and skills that can be learned and taught. When one has gained mastery in learning how to learn, one can learn effectively and efficiently at any age. Thus, this competence is thought to be of potential importance to the concept of lifelong learning and the self-managed learner (Smith, 1982; Zalizan Mohammad Jelas *et al.*, 2006; and Washer, 2007).

Fifth, Problem Solving. Problem solving skills is defined as the ability of the individual to tackle problems systematically for the purpose of working towards the solution and learning from this process (Dunne, Bennett & Carre, 2000; QCA, 2002; SQA, 2003; Zalizan Mohamad Jelas *et al.*, 2006; and Washer, 2007). The ability to solve problems will have a great impact on the success of the students' "real life" endeavors. According to QCA (2002), the purpose of this skills to enable the students tackle problems systematically at the working place towards the solution and learning from this process.

Sixth, Working with Others. Working with others is defined as the ability of the individual to meet own responsibilities and work cooperatively in pair or group of people for the purpose of achieving shared objectives (QCA, 2002; Zalizan Mohammad Jelas *et al.*, 2006; and Washer, 2007). Focusing on helping students to learn to become valued members of a team – which is one of the most vital skills that one should have for employability (QCA, 2002; and SQA, 2003). The ability to work as a team member will give a great impact to produce new ideas and to find the way out in every situation of real work life.

Seventh, Subject Specific Competencies. It is defined as one's possession of knowledge, capabilities, and dispositions to organize and provide instruction at the appropriate level of the study which inter-relate with subject content taught (Zalizan Mohammad Jelas *et al.*, 2006; and Washer, 2007). National Centre for Vocational Education Research (NCTE) states that every graduate must have a specific subject knowledge related with his/her selected discipline and understand to linked to others disciplines and it can be applied in the real world integrated setting (NCTE, 2003). According to Eric Mayer (1992), one should posses the subject content competency as his/her basic knowledge and capabilities.

Developing the seven core competencies in classroom and outside classroom will help promote students to become more effective and independent learners during their studies as well as enhancing their employment prospects on graduation. As a result, the graduate of university comes out with three major outcomes, namely *employability, life-long learning, and good citizenship* (QCA, 2002; Zalizan Mohammad Jelas *et al.*, 2006; Star & Hamer, 2007; and Washer, 2007).

C. OUTCOME OF UNIVERSITIES: EMPLOYABILITY, LIFE-LONG LEARNING, AND GOOD CITIZENSHIP

Employability is seen as one's possession of qualities and competences in order to meet the changing needs of employers and customers (QCA, 2001; and Washer, 2007). It is to do with "*the capacity to gain initial employment, maintain employment,*

and obtain new employment if required” (QCA, 2001). Catts Ralph (2004) views employability as a synergic blend of personal qualities, skills including key skills, and subject understanding. Peter Washer (2007) believes also that personal qualities has a direct link to employability as well as being an influential factor in acquiring skills and subject understanding. Meanwhile QCA (Qualifications and Curriculum Authority) highlights two important ways that individuals can realize their potentials in employment, namely their initial preparation for employment and their active management of their career development (QCA, 2001).

The role of Higher Education in life-long learning includes the development and maintenance of professional development of capacities for professional practice. Only by situating core competencies, within the context of a discipline or profession, can higher order skills be achieved. The objective of developing life-long learners is their learning “*becomes part of themselves*” (Ralph, 2004). Meanwhile, J. Stephenson and T. Challis (1998) suggested that we were now in a situation where everyone was in a state of continuous learning.

A review of literature affirms that good citizenship is given considerable attention as one of the desired outcomes of higher education. Cassandra Star and Sara Hammer (2007:9) identified “*transmitting a common culture and common standards of citizenship*” as one of the aims and objectives of higher education. Before, J. Stephenson and T. Challis (1998) and QCA (2002) had suggested several elements of citizenship in its aim to shape a democratic and civilized society through values such as “a commitment to the pursuit of truth, a responsibility to share knowledge, and the willingness to listen the alternative views and judge them on their merits”. Figure 1 illustrates the model of core competencies development in Curriculum of Higher Education.

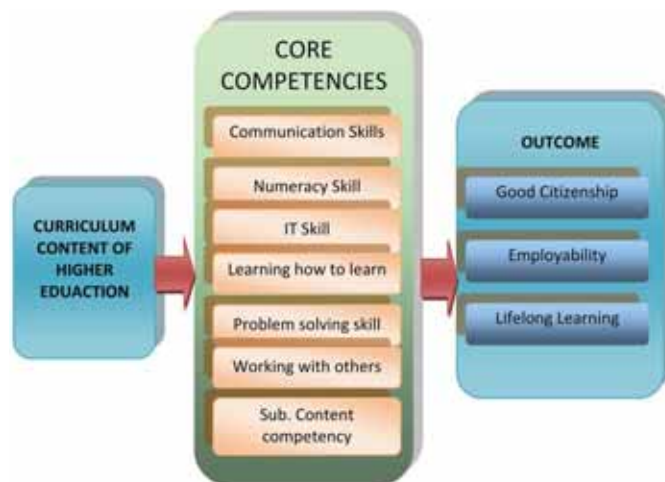


Figure 1

Theoretical Framework Adapted from E. Dunne, N. Bennet & C. Carre (2000); QCA (2002); Zalizan Mohammad Jelas *et al.* (2006); and Peter Washer (2007).

WHAT SHOULD HIGHER EDUCATION IN INDONESIA DO AND CURRENT STUDIES RELATED TO THE IMPORTANCE OF CORE COMPETENCIES DEVELOPMENT AT UNIVERSITIES

Refer to literature review (Mayer, 1992; QCA, 2002; CRSC, 2004; Star & Hammer, 2007; and Washer, 2007), all agree that core competencies pedagogy is about the curriculum, teaching process, and assessment system at universities. The curriculum of university should encourage personal development of individuals with core competencies who are not narrowly focused on a discipline of knowledge (Star & Harmer, 2007:245). Teaching process should demonstrated appropriate approach and method of teaching and learning, consistent with and support the attainment of core competencies as the learning outcomes. There must be a variety of teaching-learning methods that are enjoyable which will enable students to develop the range of intellectual and core competencies as well as positive attitudes. The teaching-learning methods must ensure that students take responsibility for their own learning and prepare them for lifelong learning. Total dependence on the lecture method is not encouraged (QCA, 2002; Star & Hammer, 2007; and Washer, 2007). And finally, assessment methods should not merely assess the student's discipline of knowledge but also assess core competencies and integrated between theory and practice (Robley, Whittle & Murdoch-Eaton, 2005:325).

Recent study in the practices of core competencies in Malaysian universities conducted by Zalizan Mohammad Jelas *et al.* (2006:2-11) reveals that lecturers emphasized highly on four core competencies, namely working with others, learning how to learn, discipline competency, and problem solving. However, moderate (average) emphasis was given for the communication skills, IT (Information Technology) skills and numeracy skills. On the whole, the development of core competencies as reported by lecturer is average.

Looking from the students' perspective on competency development reported that the overall core competencies reported by students to be at average level. Students also perceive that communication skills, IT skill, numeracy skills, learning how to learn skills, problem solving skills, working with others skills, disciplinary-based competency developed by university is at average level.

The summary of employers' interview in Malaysia shows that there is consistency and a common trust that the graduates should have the seven core skills identified in this study which are useful for development. Communication skills and working each others were put as strongly important in worker recruitment.

A research conducted by G. Crebert *et al.* (2004:154-155) on developing generic skills at university in Australia reveal that majority of their graduate reported that they had had sufficient opportunities to develop their generic skills while at university. Some of the graduate stated that communications skills, critical analysis, problem solving, and team works are more important for their career rather than to acquire content knowledge.

Meanwhile, M. Leggett, A. Kinnear and M. Boyce (2004:304) found that students rank critical thinking, communication and numeracy at high important

out of eight skills suggested by academic staff. In addition, findings in students' free responses reveal that critical thinking as the most important skills followed by finding information, time management, specific discipline skills (lab skills and techniques), writing skills, oral communication skills, and working effectively in a group.

David Billing (2003:346) conducted comparative study between UK (United Kingdom) and USA (United States of America) about skills sought by stakeholders reports that UK rank communication skill as the top rank of generics skills that student need possess, followed by problem solving, numeracy, self management, continued learning (learning how to learn) and creativity, imagination, and innovation. In quite the different way, USA ranks critical thinking skills at the top rank while communication is at the second rank followed by personal, social and interpersonal skills, information management, leadership skills, proactive and IT skills. Both countries reveal that work experience skills are not important. Curry *et al.* (2003:14) in Australia conducted a survey at modern language departments of Trinity College Dublin, Dublin City University, and Waterford of Technology, and indicate communication skills rated as the most importance skill with involve oral, written communication, and presentation skills. However, time management, managing one's own learning, IT Skills, and other skills also rated as important skills.

In Singapore, P.J. Forde (2000:86-87) found that the employers were concerned that some graduates displayed poor level of communication skills, working with others, critical thinking, problem solving skills, and discipline of knowledge. In conclusion, most employers in Singapore expected graduates to have sufficient communication skills, critical thinking skills, technological skills, and working each others at their time of study at university.

CONCLUSION

Indonesia is facing the global challenges where the all working fields need employee to possess the core competencies in order to be able to compete in global economic development. To meet the global challenge, universities are in charge of in developing students' core competencies: communication skills, IT (Information and Technology) skills and numeracy skills, learning how to learn skills, problem solving skills, working with others skills, and subject core competency during the study period.

The university in Indonesia should envisage that every single graduate of the university posses the seven attributes. The seven skills could be carried out in delivering course content. Finally, by equipping students with the core competencies they will succeed as professionals and responsible members of society. Employability, lifelong learning, and good citizenship as quality measurement of university outcome could be attained.

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