

**K-ECONOMY AND GLOBALISATION  
— ARE OUR STUDENTS READY?**

**Ramlee Mustapha  
Faridah Karim  
Ruhizan Mohd Yasin  
Norzaini Azman  
Hamidah Yamat  
Abdul Wahab Muhammad  
Sobri Takriff**

**Abstract**

A critical challenge that faces post-modern society is to attain full employment and sustain economic growth in the global economy. The future of Malaysia's competitiveness depends on the knowledge and skills of its workforce. With the advent of K-economy and globalisation, the need for a strong human capital has never been so critical. Literature has shown that several Asia Pacific countries, including Malaysia, have spent relatively low percentage of their GDP on ICT infrastructure and R&D. As a result, there is a low percentage of skilled and knowledge workers (K-workers) in the population such as the scientists, engineers and ICT specialists. In addition, the level of innovative R&D is also low among these countries which resulted in few numbers of technopreneurs and entrepreneurs. Further, the percentage of graduates who are unable to secure proper jobs posed a challenge to the nation. Thus, the education and training system has to gear itself to meet the demands of the new economy. The purpose of this study was to examine critically the educational experience of students in a higher learning institution in terms of their educational readiness to meet and adapt to the paradigm shift brought about by globalisation and the K-economy.

***Abstrak***

*Cabaran kritikal yang dihadapi oleh masyarakat pascamoden ialah untuk memenuhi permintaan pekerjaan dan mengekalkan pertumbuhan ekonomi dalam era globalisasi. Masa depan daya saing Malaysia bergantung kepada pengetahuan dan ketrampilan pekerjaannya. Dengan kemunculan ekonomi*

*berasaskan pengetahuan dan pengaruh globalisasi, keperluan kepada modal manusia dalam kalangan pekerja profesional seperti ahli sains, jurutera dan pakar ICT menjadi lebih kritikal. Tinjauan literatur menunjukkan bahawa kebanyakan negara di rantau Asia, termasuk Malaysia, telah melaburkan peratus yang agak rendah daripada Keluaran Dalam Negara Kasar (KDNK) dalam bidang ICT serta Penyelidikan dan Pembangunan (R&D). Pelaburan yang rendah ini menyebabkan kurangnya pekerja berpengetahuan dan pekerja mahir berbanding dengan negara maju. Tahap pelaburan penyelidikan dan pembangunan yang rendah menyebabkan kurangnya usahawan dalam bidang teknologi dan perindustrian. Peratus lepasan universiti yang tidak mendapat pekerjaan yang sesuai juga merupakan cabaran kepada negara. Justeru, sektor pendidikan dan latihan perlu “peka” dengan perubahan dan permintaan ekonomi yang baru. Tujuan kajian ini adalah untuk mengenalpasti persediaan pelajar universiti dalam menghadapi perubahan paradigma yang dibawa oleh arus globalisasi dan ekonomi berasaskan pengetahuan.*

## INTRODUCTION

In the wake of globalisation and with the country striving towards attaining industrial nation status, it is inevitable that Malaysia faces many challenges. The move to shift its economic activities, from production and exports of primary commodities to manufacturing, and currently on more capital-intensive, high-technology and knowledge-based industries, has resulted in a structural transformation of the Malaysian economy. The development of the Multimedia Super Corridor (MSC) has provided opportunities for increased application and integration of advanced information and communication technologies into economic operations. This is in line with the shift to the knowledge society in developed countries. In fact, knowledge is becoming an increasingly important factor of production, more important, some analysts would argue, than land, labour and capital (Drucker, 1990). What this implies is that the knowledge worker is very much in demand. In the Malaysian context, the restructuring of the economy has led to a change in the demand and supply of human resources and this has become a critical issue. As the demand for professional and skilled workers increases, there is a corresponding shortage in the supply of such workers. Through the education and training system, various policies and strategies have been implemented to ensure an increasing supply of educated, skilled and

innovative labour force in line with one of the key thrusts of the Ninth Malaysia Plan - development of Human Capital (Malaysia, 2006).

Malaysia with an estimated per capita GNP of USD 6,000 is a major socio-economic force in the Asia Pacific region. Traditionally, the economy of Malaysia was based on its natural resources. During the 1980s, however, the government recognised the need for a balance between resource-based and technology-based industries and started to focus on technology and industry. In 1991, the nation's Vision 2020 was launched (Mohamad, 1991). The Vision 2020 is a 30-year plan to "push" Malaysia to obtain developed nation status by the year 2020.

Education in Malaysia has developed along the British model (Musa, 2003). Bahasa Malaysia is the medium of instruction and English is taught as a second language. Students spend six years in primary school followed by six more years in secondary and high school. Tertiary education towards the first degree takes from three to six years depending on the discipline. Education is seen as the means by which national goals can be achieved. With the increasing emphasis on the importance of education, there is a growing awareness among government, non-government organisations and private sector of the importance of lifelong education.

As a developing country, Malaysia grapples with the task of building its economies to achieve sustainable development and to improve the quality of life of its people. There is a growing recognition that the education of the population is essential to sustain economic growth and development (Azman & Ahmad, 2006). As a country that has developed tremendously for the past two decades, Malaysia has become an example and is often cited by economic analysts and developmental planners as a model of a developing country. To become fully developed nation, Malaysia needs a labour force that is well educated, dynamic and skilled (Mustapha & Mohd Salleh, 2007).

Like any developing countries, the focus on education in Malaysia has shifted from policy concern to the economy and employment (Azman & Ahmad, 2006). Essentially, according to Tennant and Morris (2001), education in developing countries has evolved around two axes: emphasis on life-long learning and employability. Thus, the idea of enhancing human capital and the competitiveness by knowledge-skills acquisition has gained ground with legislators, business and educational leaders. In

Malaysia, the government, private and non-government organisations have taken note of the societal and technological changes and therefore have recognised the critical need for education and training (Malaysia, 2006). In addition, there has been a renewed interest in education as a vehicle for addressing national priorities as indicated in the Ninth Malaysia Plan (2006–2010) such as the formation of adaptable, flexible and multi-skilled workers, the creation of harmonious multicultural society and the promotion and awareness of civic education, health, indigenous rights and the environment (Malaysia, 2006).

Notwithstanding the measures to augment the availability of trained and skilled labour, it is important to assess the impact of globalisation and the K-economy on the education system. To what extent has the educational experience provided for in the university curriculum relevant to meet the demands of the labour market? Are the knowledge and skills sufficient to prepare the potential workers for the challenges and needs of globalisation and K-economy? For that matter, do the students understand the concept of globalisation and K-economy and feel confident in facing the entailed needs and challenges? This article is an initial attempt to assess the educational readiness of final year university students to meet the needs and challenges of globalisation and K-economy.

## **GLOBALISATION AND K-ECONOMY**

The term “globalisation” has many definitions. In fact, there is no precise definition and its usage depends on the context it is used (Khonder, 1997). For instance, Albrow (1990) refers globalisation as “to all those processes by which peoples of the world are incorporated into a single world society, global society”. Robertson (1992) refers globalization as “the compression of the world” as well as “the intensification of consciousness of the world as a whole”. In another context, globalization is “about the monumental structural changes occurring in the processes of production and distribution in the global economy” (<http://www.unesco.org/webworld/infoethics>). From these definitions have emerged popular terms like “the global village”, “borderless world”, “shrinking world” and “the invisible continent” (Ohmae, 2000).

Globalisation can be defined in many ways and one simple definition is the expansion of economic activities across political boundaries of nation states. It is a process of deepening economic integration, increasing economic openness and growing economic interdependence between countries in the world economy (Govindan 2000). It is not only openness in terms of trade, financial and investment flows but also flow of ideas, technology, services, information and people across national boundaries. All these undoubtedly bring about wider opportunities for developing countries. The concern is that Malaysia and other developing countries are being forced too quickly into the open and integrated world when they are still trying to stabilise internally. Developing countries will only benefit from globalisation when their economy is stable that is in terms of its rate of inflation, debt ratios, rate of interests and financial deficits. Other aspects such as rate of unemployment, income distribution, poverty and social stability that are still widespread in developing countries are not taken into account. While developing countries are striving to solve these problems, developed nations are dictating the globalisation process. Globalisation seeks to achieve economic growth, not to solve outstanding social problems such as unemployment, poverty and income distribution (Govindan 2000).

The advent of globalisation together with the increasing applications of information and communications technology (ICT) have profound impact on the emergence of the K-economy, an economy where productivity gains is achieved through knowledge-driven industries. In this respect, it is thus vital that our graduates are prepared with the necessary knowledge, skills and training as well as the “mental readiness” in terms of proper attitudes and behaviours to ascertain the survival and continuance of the country’s standing in global economy.

### **STATEMENT OF THE PROBLEM**

Today’s advancement in technology and communication has taken away the geographical boundaries separating all nations in the world. In fact, every nation is dependent on one another, as indicated by the economic recession in 1997 and 1998. Globalisation has resulted in

internal changes and in the production of goods and services. Apart from that, the global distribution of work, power, market, currency, and information has changed (Othman 2000). Although this is considered progress or development, it is only putting the dominant nations or the developed nations at an advantage. For instance, in theory, globalisation offers wide opportunities for trade and investment for developing nations like Malaysia. However, given the uneven playing field, globalisation appears to benefit a few at the expense of many. Unfettered competition may marginalise local firms, banks and other enterprises. Pressure to compete requires developing countries like Malaysia to raise their productivity and efficiency (Govindan 2000). As a result, continuous effort need be taken by developing countries to ensure that they are producing a generation that can survive in a competitive world.

To survive, the present workforce has to have an added-value apart from the knowledge, skill or expertise they have gathered through education. The future workers need to be efficient, productive, and innovative to cater for the demands of the competitive, globalised world. They too must be able to keep up with the rapid expansion of knowledge. Another important aspect that can add value to our graduates is the mastery of foreign language. Since all knowledge including new knowledge is gathered, developed and disseminated through language, both linguists and economists believe that language competency and communicative skills are important particularly in the education and training of human resource. In fact, language competency is an added value for the workforce in the era of industrialisation and globalisation (Rashid 1993).

Literature has shown that several Asia Pacific countries have spent relatively low percentage of their GDP on ICT infrastructure and R&D (World Competitive Yearbook, 2001). As a result, there is a low percentage of skilled and knowledge-workers (K-workers) in the population such as the scientists, engineers and ICT specialists. In addition, the level of innovative R&D is also low among these countries which resulted in few numbers of technopreneurs and entrepreneurs (Reynolds et al., 2002).

## HOLISTIC DEVELOPMENT

Students come in multifaceted intelligence. While Sternberg (1985, 1988, 1997) suggests three broad categories; namely analytical, practical and creative, Gardner (1991, 1993, 1997 – cited in Tomlinson 1999) proposes eight intelligences: verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinesthetic, musical-rhythmic, interpersonal, intrapersonal and naturalistic. All these indicate that students differ in terms of their thinking, learning and creativity although they are of the same age. The second reason for differentiating teaching is students' need for learning which is very much related to their background knowledge. The learning must be meaningful to the learners according to the constructivist theory. Brain research has shown that the brains respond by connecting parts to whole, by relating new information to the existing framework. In fact, it responds more effectively and efficiently to something that carries deep and personal meaning, something that is life-shaping, relevant, important, or taps into emotions (Tomlinson 1999). For instance, students' culture, background knowledge, and experience will determine whether or not what is learnt is meaningful or necessary for them. Hence, teachers should understand these differences to enhance learning. The third reason for differentiating is based on the findings that individuals learn best when they are in a context that provides a moderate challenge (Csikszentmihalyi, Rathunde, & Whalen 1993; Howard 1994; Jensen 1998). When a task is too difficult, students may feel apprehension to try it and thus be discouraged. When it is too simple, students will not feel challenged to attempt it. Teachers have to set tasks that are neither too difficult nor too simple.

Malaysian National Philosophy of Education stresses on holistic development including physical, mental, spiritual and emotional domains. Regarding the relationship between cognition and emotion, there is a growing understanding based on the neuroscience research that cognition and emotions are interwoven in mental life especially in complex decision-making, self-awareness, self-regulation, motivation, empathy and social interaction (Davidson 2001; Goleman 1995). Studies abound that show individuals with high emotional intelligence make use of their emotions to guide them in their thinking and behaviors (Bar-On 1988; Cherniss 2000; Weisinger 1998). They are able to relate to others

with compassion and empathy, and have well-developed social skills. Rosenthal and his colleagues at Harvard discovered over three decades ago that people who were better at identifying and accommodating others' emotions were more successful in their work as well as in their social lives (Rosenthal, 1977).

## CONCEPTUAL FRAMEWORK

The theoretical framework for this study was based on the theory of Human Capital (Schultz, 1961, 1963). Education and training have been the subject of considerable research and analysis from many interdisciplinary perspectives (Giroux, 1991). Historians and sociologists have studied the evolution of the traditional education and training since the Middle Ages when apprenticeship was the primary method of education, through the growth of merchant and craft guilds, to the present career education and school-to-work systems (Barlow, 1967, 1976; Bowman, 1990; Grubb & Lazerson, 1974; Pautler, 1994; Roberts, 1957). Economists have studied the costs and benefits of various kinds of education and training systems, such as pre-employment training and on-the-job training (Blaug, 1972; Carnoy, 1995; Metcalf, 1985; Tsang, 1997).

Other studies have focused on the effects of technological changes on employment (Adler, 1992; Cyert & Mowery, 1988; Flynn, 1988; Hirschhorn, 1984; Rumberger, 1984, 1995; Spenner, 1988, 1995). Industrial psychologists have investigated the processes of learning on employment, job satisfaction, and work behaviors (Furnham, 1997; Landy, 1989; Lundberg & Brownell, 1993; Muchinsky, 1997). Further, educators and policy analysts have been involved in developmental work and conducted needs analysis and evaluation studies on issues associated with the effectiveness and efficiency of education and training (Barnow, 1986; Cantor, 1984; Greenan, 1991; Jacobs & Bragg, 1994; Wentling & Roegge, 1989). The focus in this study, however, is on human capital development and its relationship to economic development (globalization).

According to Schultz (1963), human capital theory views the role of education as an investment in human capital for achieving social and economic progress. He wrote:



“... the proposition that people enhance their capabilities as producers and as consumers by investing in themselves and that schooling is the largest investment in human capital. This proposition implies that most of the economic capabilities of people are not given at birth or at the time when children enter upon their schooling. These acquired capabilities are anything but trivial. They are of a magnitude to alter radically the usual measures of the amount of savings and of capital formation that is taking place. They also alter the structure of wages and salaries and the amount of earnings from work relative to the amount of income from property. There are long-standing puzzles about economic growth, changes in the structure of wages and salaries, and changes in the personal distribution of income that can be substantially resolved by taking account of investment in human capital.” (Schultz, 1963, pp. x - xi).

Schultz (1963) argues that since schooling increases the future earning of a student and the productive capacity of labour, it should be considered as an investment in human capital. He presents three reasons why economic growth can best be explained by enlarging the concept of capital formation to include human rather than mere physical factors. First, the United States is a nation whose economic growth is the result of investment not only in physical capital, but equally in education, which has contributed to human capital formation. Secondly, the wage structures and salaries operating in many countries can be explained by the educational requirements for the occupation. Thirdly, the decline in wage gap is not only the result of curtailing private ownership, but it is related to the attainment of education.

Becker (1964) asserts that the theory of human capital provides a basis for understanding the choices of skills acquisition and the consequences for the choices made by workers and training providers. The application of human capital theory in cost-benefit analyses of investments in human resources provides a basis for determining a worker's wage and a firm's productivity. Harbison (1973) highlights the importance of human capital development in which the individual's knowledge and skills are applied to the production of goods or rendering

of services in an economy. The human capital approach also ascribes priority to maximising skills and knowledge through education and training followed by the effective utilisation of the investment through the creation of jobs. The results may lead to an increase in economic growth, enhanced living standards, and more equitable distribution of income.

According to La Belle (1986), the human capital model views an economic role of education in which individuals pursue the necessary knowledge and skills in order to manage the various aspects of economy and to facilitate its growth through the use of modern technology. In both industrial and developing countries, higher levels of education increase the chances that an individual will be employed and will receive additional training. Further, firms seem to provide more training to employees with a higher educational level (Benson, 1966; Bishop, 1982; Oi, 1983). Therefore, educational level appears to influence employees development within the firm (Hill, 1989).

The public views the relationship between schooling and employment as important. The Gallup poll (1984) of the public's attitude toward the public school system in the United States found that 54 percent of the respondents viewed education primarily as a means to economic success. Economic success for most people depends on securing and maintaining gainful employment. Education and training, whether formal or non-formal, is viewed as an investment that can yield social and private returns through increased skills and knowledge for economic development and social progress. According to Hicks (1995), social returns to education differ from private returns. The social gains are usually measured as pretax income, while the private gains are net income. In summary, education and training appear to be the most important investments in human capital.

## **PURPOSE AND RESEARCH QUESTIONS**

The purpose of the study was to identify the educational readiness of final year university students to meet the needs and challenges of globalisation and K-economy. Specifically, the research questions include:

1. What is the respondent's definition of globalisation?
2. What is the respondent's definition of K-economy?
3. What are the attributes of K-workers?
4. What are the respondents' preparation for K-economy?
5. To what extent has the university prepared the respondents for globalisation and K-economy?
6. Do the respondents feel confident in facing the entailed needs and challenges of globalisation and K-economy?

## **METHODOLOGY**

Research, in its most basic form, involves the description of certain phenomena. This study utilised a survey research. Survey research is designed to examine characteristics of a sample or population on prescribed variables and is dependent on instrumentation for observation and measurement (Gall, Borg, & Gall, 1996). However, survey research cannot infer cause and effect relationship. The focus of this study was to determine the educational readiness of final year university students to meet the needs and challenges of globalisation and K-economy. The population included final year undergraduate students at one of the public universities in Malaysia. A random sample of 58 students from two faculties was selected, i.e., 24 students from Business Administration Faculty and 34 students from Engineering Faculty. Since this was a preliminary study, a smaller number of sample was selected. These two faculties were purposely selected because both fields (Business and Engineering) are important in the era of globalisation and K-economy.

## **INSTRUMENTATION**

*The K-Economy Survey* was constructed to measure the knowledge, perceptions and attitudes of final year undergraduate students regarding globalisation and K-economy. The instrument's items, format and procedure were derived and constructed based on the study's research questions and also the existing research studies and literature related to globalisation and K-economy. The first section of the survey contained a

purpose statement, directions, and was designed to collect demographic information which included gender, ethnicity, language competency, and CGPA. The second section consisted of direction and open-ended items to obtain information regarding respondent's knowledge, perceptions, and attitudes towards globalisation and K-economy.

Survey construction techniques and guidelines as described by Gall, Borg, and Gall (1996) were followed in the development of the instrument. The items were generated based on the research questions posited for this study. The instrument items, format, and procedures were constructed based on existing research studies and literature related to globalisation and K-economy, education and training, employability, and current trends in education.

Several drafts of the instrument were reviewed by a panel of experts in the field. Revisions were made based on their comments and recommendations. The instrument was also pilot-tested on a small group of the target respondents. The validated instrument was administered to the respondents. A total of 58 usable questionnaires were returned which constituted 97% response rate. The data were coded and analyzed using descriptive statistics. The open-ended items were qualitatively analyzed and grouped into emerging categories.

## RESULTS

The purpose of the study was to identify the educational readiness of final year university students to meet the needs and challenges of globalisation and K-economy. The data were organised and analysed around the study's research questions. Table 1 shows the demographic, language, and academic information of the respondents. The respondents were 38% males and 62% females. About two-third (65%) of the respondents were Malay and the rest were Non-Malay. Over half (59%) from Engineering and 41% from Business faculty. About one-third of the respondents (36%) said that they are very good in Malay Language but only 7% said that they are very good in English. Very few (2%) of the respondents have acquired a foreign language (e.g., Arabic or Japanese) besides the mother tongue. Most of the respondents (48%) were average in their CGPA (2.51 – 3.00).

**TABLE 1. Demographic, Language and Academic Information of the Respondents**

| Items                        |                         | Frequency<br>(n=58) | Percentage<br>(%) |
|------------------------------|-------------------------|---------------------|-------------------|
| Gender                       | Male                    | 22                  | 38                |
|                              | Female                  | 36                  | 62                |
| Ethnicity                    | Malay                   | 38                  | 65                |
|                              | Non-Malay               | 20                  | 35                |
| Faculty                      | Engineering             | 34                  | 59                |
|                              | Business                | 24                  | 41                |
| <i>Language Proficiency:</i> |                         |                     |                   |
| Malay                        | Very good               | 21                  | 36                |
|                              | Good                    | 32                  | 55                |
|                              | Average                 | 5                   | 9                 |
| English                      | Very Good               | 4                   | 7                 |
|                              | Good                    | 28                  | 48                |
|                              | Average                 | 24                  | 44                |
|                              | Poor                    | 2                   | 4                 |
| Foreign Languages            |                         |                     |                   |
| Arabic                       | Average                 | 1                   | 2                 |
| Japanese                     | Poor                    | 1                   | 2                 |
| CGPA                         | Excellent (3.50 – 4.00) | 2                   | 4                 |
|                              | Good (3.01 – 3.50)      | 20                  | 34                |
|                              | Average (2.51 – 3.00)   | 28                  | 48                |
|                              | Poor (2.00 – 2.50)      | 8                   | 14                |

1. What is the respondent’s definition of globalisation?

Majority of respondents defined globalisation as a borderless world followed by less restriction in world trade and widespread use of IT. Business students seem to apply their economic knowledge by defining globalisation with economic term such as “less restriction in the world trade”. They may have learnt about WTO and other “open-market” trade agreements. Some respondents have given quite interesting responses such as dominance of rich countries over the poor ones, interdependence of economies, and high mobility of workers. All these responses are somewhat related to the concept of globalisation as given by the experts in the literature. This means that most of the respondents have some ideas about globalisation even though not comprehensive. But still, a number of respondents could not define the term. Table 2 illustrates the respondents’ understanding of globalisation.

**TABLE 2. The respondents’ definitions of globalisation**

|        | What is globalisation?                        | FREQUENCY   |          |       |
|--------|-----------------------------------------------|-------------|----------|-------|
|        |                                               | Engineering | Business | Total |
| (i)    | Borderless world/shrinking world              | 17          | 17       | 34    |
| (ii)   | Less restriction in world trade (open market) | 7           | 15       | 22    |
| (iii)  | Widespread use of IT                          | 6           | 3        | 9     |
| (iv)   | Dominance of advanced countries               | 2           | 2        | 4     |
| (v)    | Emergence of world global culture             | 1           | 2        | 3     |
| (vi)   | Interdependence of economies                  | 2           | 0        | 2     |
| (vii)  | High mobility of workers                      | 1           | 0        | 1     |
| (viii) | Don’t know                                    | 3           | 2        | 5     |

2. What is the respondent’s definition of K-economy?

Table 3 shows the students’ knowledge about “K-economy”. Majority of the respondents provides rather simplistic definitions such as knowledge-based economy followed by knowledge in IT. Only a

small number of respondents provides more elaborate definitions such as investment in human capital and innovation and creativity. This implies that the students are more familiar with the term “globalisation” than the concept of “K-economy”. Some respondents, especially from the Faculty of Engineering, perceive both globalisation and K-economy relate strongly with IT. The data also show that a number of Engineering students who do not know the meaning of K-economy.

**TABLE 3. The respondents’ definitions of K-economy**

| Definition of K-economy                            | FREQUENCY   |          |       |
|----------------------------------------------------|-------------|----------|-------|
|                                                    | Engineering | Business | Total |
| (i) Knowledge-based economy                        | 17          | 17       | 34    |
| (ii) Knowledge in IT                               | 7           | 4        | 11    |
| (iii) Knowledge to improve economy                 | 3           | 2        | 5     |
| (iv) Investment in human capital                   | 1           | 3        | 4     |
| (v) Knowledge is more important than other factors | 1           | 1        | 2     |
| (vi) Innovation and creativity                     | 1           | 0        | 1     |
| (vii) Don’t know                                   | 5           | 0        | 5     |

### 3. What are the attributes of K-workers?

When asked about the attributes of K-workers, the respondents gave varied responses that could be categorised into 13 categories from knowledgeable in IT, hardworking, good communication skills, risk-taking to strong religious belief. Table 4 illustrates the attributes of K-workers as perceived by undergraduate students in Engineering and Business Faculties. Most senior students agree that knowledge in IT is vital for K-workers. From literature, a common characterisation of K-worker is someone with tertiary education. The data show that respondents also cited highly educated and trained as one of the attributes of K-workers.

**TABLE 4. Attributes of K-workers**

| Attributes of K-workers                                                    | FREQUENCY   |          |       |
|----------------------------------------------------------------------------|-------------|----------|-------|
|                                                                            | Engineering | Business | Total |
| (i) Knowledgeable in IT                                                    | 20          | 15       | 35    |
| (ii) Knowledgeable in current issues                                       | 20          | 15       | 35    |
| (iii) Dynamic personal attributes:<br>Hardworking, discipline, competitive | 14          | 12       | 26    |
| (iv) Highly educated and trained                                           | 7           | 10       | 17    |
| (v) Good communication skills<br>(proficiency in English)                  | 7           | 2        | 9     |
| (vi) Open-minded and wide world view                                       | 8           | 1        | 9     |
| (vii) Proactive in self development and<br>acquisition of knowledge        | 5           | 4        | 9     |
| (viii) Risk taking                                                         | 5           | 2        | 7     |
| (ix) Decisive                                                              | 5           | 2        | 7     |
| (x) Ready to accept changes and<br>challenges                              | 4           | 2        | 6     |
| (xi) Independent                                                           | 2           | 2        | 4     |
| (xii) Apply theory into practice                                           | 2           | 2        | 4     |
| (xiii) Strong religious belief                                             | 1           | 0        | 1     |

#### 4. What are their preparation for K-economy?

Table 5 illustrates the students' preparation for K-economy. Respondents perceived that one should keep abreast on current issues, possess IT knowledge, have mental readiness and communication skills in order to compete in K-economy environment. This implies that future university graduates should not only good in their technical specialty but must also be *connoisseur* in generic issues such as world economics and international relations. IT literacy is a must for university graduates. The respondents even suggest a specific strategy - take IT courses before graduation. Mental readiness is mentioned by the respondents as a critical factor. Therefore, preparatory courses or programmes for graduating seniors should be developed as part of the university



curriculum. Communication skills are also perceived essential by the senior students - those who are proficient in several languages have an edge over monolingual speakers in terms of employment and career prospects. Other factors such as open-minded, proactive, risk-taking, dynamics and independent are also mentioned by the respondents.

**TABLE 5. Preparation for K-economy**

| Preparation for K-economy                          | FREQUENCY   |          |       |
|----------------------------------------------------|-------------|----------|-------|
|                                                    | Engineering | Business | Total |
| (i) Read widely on current issues                  | 18          | 17       | 35    |
| (ii) To be concerned with current issues           | 13          | 17       | 30    |
| (iii) Familiarize use of computer and IT           | 8           | 13       | 21    |
| (iv) Take courses in IT                            | 8           | 13       | 21    |
| (v) To have mental readiness to accept challenges  | 13          | 6        | 19    |
| (vi) Must be competitive and creative              | 8           | 4        | 12    |
| (vii) Positive attitude toward learning new things | 8           | 2        | 10    |
| (viii) Good communication skills                   | 6           | 3        | 9     |
| (ix) Academic excellence                           | 4           | 1        | 5     |
| (x) Efficient and discipline                       | 2           | 0        | 2     |

5. To what extent has the university prepared the respondents for globalisation and K-economy?

Majority of the respondents (58%) claims that the university provides the students with insufficient or limited preparation to face globalisation and K-economy (Table 6). No specific course is taught on how to face the challenges of the new era. Thus, there is a need to evaluate the university curriculum so that it gears towards managing globalisation and K-economy. Curriculum and quality instructors are two most important elements of an effective human resource development programme. Curriculum needs to be reviewed (and revise if necessary) regularly especially the ICT syllabus due to the rapid changing of technology. Various measures should be taken to improve the quality

of instructors. Further training for the instructors is needed so that they are exposed to the latest teaching and assessment techniques. The implementation of the student-centred teaching and learning approach is deemed appropriate in order to produce high quality human resources.

**TABLE 6. The extent to which university prepares the students for globalisation and K-economy**

| To what extent has the university prepared you for globalisation and K-economy? | Total (%) |
|---------------------------------------------------------------------------------|-----------|
| Yes/Enough                                                                      | 13 (27%)  |
| Limited/insufficient                                                            | 28 (58%)  |
| None                                                                            | 7(15%)    |

6. Do the respondents feel confident in facing the entailed needs and challenges of globalisation and K-economy?

Table 7 shows the confidence levels of the respondents. The respondents (n=18) perceived that they do not have the confidence to face globalisation and K-economy especially in terms of lacking of related experience and relatively weak in IT. A similar number of respondents (n=18) assert that they have a moderate level of confidence and only a few claims that have confidence to face challenges of globalisation and K-economy.

**TABLE 7. Respondents' confidence to face globalisation and K-economy**

| Do you feel the university education gives you confidence to face globalisation and K-economy? | Total |
|------------------------------------------------------------------------------------------------|-------|
| Not at all                                                                                     |       |
| Not enough practical/work related experience                                                   | 16    |
| Weak in IT and software development                                                            | 2     |
| <u>Moderate</u> (eg., Depend on oneself)                                                       | 18    |

|                                 |    |
|---------------------------------|----|
| Yes                             |    |
| Social aspect only              | 10 |
| Technology and computer related | 1  |
| Basic confident                 | 1  |

---

## IMPLICATIONS AND RECOMMENDATIONS

The purpose of the study was to investigate the educational readiness of final year university students to meet the needs and challenges of globalisation and K-economy. The data revealed that most respondents were average in their proficiency of English language and very few of the respondents have acquired a foreign language besides their mother tongue. Because of the borderless nature of globalisation and a high mobility of workers across national boundaries, graduates who are proficient in many languages will have an advantage in the era of globalisation and K-economy.

Majority of respondents have a rather “simplistic and superficial” ideas of globalisation and K-economy. Most respondents defined globalisation as borderless world, less restriction in world trade, and widespread use of IT. Similarly, a majority of the respondents provides rather simplistic definitions of K-economy such as knowledge-based economy and knowledge in IT. Still, quite a number of respondents who could not define the terms. Only a small number of respondents provides more elaborate definitions such as investment in human capital and innovation and creativity.

Data revealed that the respondents provided better answers when asked about the attributes of K-workers rather than the specific definitions of globalisation and K-economy. The respondents gave varied responses that could be categorised into several categories from knowledgable in IT, hardworking, good communication skills, risk-taking to strong religious belief. Respondents claim that to be a successful K-workers, one should keep abreast on current issues, possess knowledge in IT, have mental readiness and communication skills in order to compete in K-economy, globalised environment.

Mental readiness is cited by the respondents as one of the essential factors in order to compete in globalised K-economy. This implies that

special “finishing” courses or programmes should be made for graduating senior before they go out to the world of work. Some universities such as Universiti Kebangsaan Malaysia has special programmes called “Finishing School Programme” organised under Student Development Centre in order to prepare graduating students in terms of grooming, communication and interview skills.

The study also found that a number of respondents claim that the university did not provide the senior students with adequate and necessary preparation to face globalisation and K-economy. For example, no specific course is taught on K-economy and globalisation. Therefore, several respondents stated that they do not have the confidence to face globalisation and K-economy especially in terms of lacking of related experience and relatively weak in IT. So the students need further relevant education and training. According to Sarkees-Wircenski and Scott (1995), all students must receive further education as well as affective and work-related skills needed to succeed in the world of work. Without relevant skills, youth will continue to have difficulty finding and keeping full-time employment with adequate salaries to support themselves. Thus, based on the limitations and results of this study, several recommendations are offered:

1. Invest in human capital – Intellectual capital is the critical factor that will determine the competitiveness of nations in the era of globalisation and K-economy.
2. Equip all higher learning institutions with high-speed Internet connections, and multimedia PCs in sufficient numbers.
3. Make it compulsory for students to learn and be proficient in at least one foreign language.
4. K-economy and globalisation courses should be introduced.
5. Besides the specific skills, generic and transferable skills such as interpersonal, communication, thinking, problem-solving, and research skills should be incorporated in university education to enable graduates become effective workers in global economy.
6. Introduce a more rigorous “Finishing School Programme” to final year students.
7. Integrate life-long learning concept across disciplines.

## CONCLUSION

The purpose of this study was to examine critically the educational experience of students in a higher learning institution in terms of their educational readiness to meet and adapt to the paradigm shift brought about by globalisation and the K-economy. The future of Malaysia's competitiveness depends on the knowledge and skills of its workforce. With K-economy and globalisation, the need for a strong human capital has never been so critical. The advent of globalisation together with the increasing applications of information and communications technology (ICT) have profound impact on the emergence of the K-economy, an economy where productivity gains is achieved through knowledge-driven industries. In this respect, it is thus vital that our graduates are prepared with the necessary knowledge, skills and training as well as the "mental readiness" in terms of proper attitudes and behaviours to ascertain the survival and continuance of the country's standing in global economy. Conceptual framework of this study is based on human the capital theory which states that investment in human capital is critical to achieve social and economic progress. The study found that our final year university students are minimally prepared for the challenges posed by globalisation and K-economy. Exposure to the concepts of globalisation and K-economy among university students are limited. Thus, this study suggests several recommendations include continuing investment in human capital and ICT, imposing multilingual requirements, and enhancing communication and employability skills of our graduates.

## REFERENCES

- Adler, P.S. 1992. *Technology and the future of work*. Oxford: Oxford University Press.
- Albrow, M. 1990. *Introduction: Globalization, knowledge, and society*. London: Sage.
- Azman, N. & Ahmad, A.R. 2006. History, trends and significant development of adult education in Malaysia. *Journal of Historical Studies*, Vol. VII/2, 66-82.

- Barlow, M.L. 1967. *History of industrial education in the United States*. Washington, D.C.: American Vocational Association.
- Barlow, M.L. 1976. 200 years of vocational education. *American Vocational Journal*, 51(5), 21-88.
- Barnow, B.S. 1986. Evaluating employment and training programs. *Evaluation and Program Planning*, 9(1), 63-72.
- Becker, G.S. 1964. Human capital: A theoretical and empirical analysis with special reference to education. New York: Columbia University Press.
- Benson, C.S. 1966. *The school and the economic system*. Chicago, IL: Science Research Association Inc.
- Bishop, J. 1982. *The social payoff for occupationally specific training: The employer's point of view*. Columbus, OH: The National Center for Research in Vocational Education.
- Blaug, M. 1972. The correlation between education and earnings. What does it signify? *Higher Education*, 1(1), 53-76.
- Bowman, M.J. 1990. Overview essay: Views from the past and the future. *Economics of Education Review*, 9(4), 283-307.
- Cantor, J.A. 1984. An effective methodology for evaluation of change in vocational education. *Journal of Vocational Education Research*, 9(3), 1-13.
- Carnoy, M. 1995. Education and productivity. In M. Carnoy (Eds.), *International encyclopedia of economics of education*. Oxford: Pergamon.
- Csikszentmihalyi, M., Rathunde, K., & Whalen, S. 1993. *Talented teenagers – The roots of success and failure*. Cambridge: Cambridge University Press.
- Cyert, R.M. & Mowery, D.C. 1988. *The impact of technological change on employment and economic growth*. New York: Harper Business.
- Drucker, P. 1990. *The new realities*. London: Mandarin.
- Flynn, P.M. 1988. *Facilitating technological change: The human resource challenge*. Cambridge, MA: Ballinger.
- Furnham, A. 1997. The relationship between work and economic values. *Journal of Economic Psychology*, 18(1), 1-14.
- Gall, M.D., Borg, W.R., & Gall, J.P. 1996. *Educational research: An introduction*. New York: Longman.

- Gallup, G.H. 1984. The 16th annual Gallup poll of the public's attitudes toward the public schools. *Phi Delta Kappan*, 66, 23-38.
- Giroux, H. 1991. Series introduction: Reading work education as the practice theory. In R.I. Simon, D. Dippo, & A. Schenke (Eds.), *Learning work: A critical pedagogy of work education*. New York: Bergin & Garvey.
- Govindan, K. 2000. *Globalization, K-economy and the virtual state*. Paper presented at the 12th National Real Estate Conference. Kuala Lumpur 31st October – 1st November 2000.
- Greenan, J.P. 1991. *Review and assessment of secondary trade and industrial education curriculum: Final report*. Indianapolis, IN: Indiana State Department of Education.
- Grubb, W.N. & Lazerson, M. 1974. Vocational education in American schooling: Historical perspective. *Inequality in Education*, 16, 5-18.
- Harbison, F. 1973. *Human resources as the wealth of nations*. New York: Oxford University Press.
- Hicks, N.L. (1995). Education and economic growth. In M. Carnoy (Eds.), *International encyclopedia of economics of education*. Oxford: Pergamon.
- Hill, E.T. 1989. Postsecondary technical education, performance and employee development: A survey of employers. *Economics of Education Review*, 8(4), 323-333.
- Hirschhorn, L. 1984. *Beyond mechanization: Work and technology in a postindustrial age*. Cambridge, MA: MIT Press.
- Howard, G. 1994. *Developmental psychology – an introduction*. Boston: Little Brown & Co.
- <http://www.unesco.org/webworld/infoethics>. Globalization, education and training.
- Jacobs, J. & Bragg, D. 1994. The evaluation of customized training. *New Directions for Community Colleges*, 22(1), 13 - 24.
- Jensen, A. 1998. *Educability and group differences*. London: Methuen.
- Khonder, H. 1997. Globalization theory: A critical appraisal. In H. M. Dahlan et. al (eds). *ASEAN in the global system*. Bangi, Malaysia: Penerbit Universiti Kebangsaan Malaysia.
- La Belle, T. 1986. *Non formal education in Latin America and the Caribbean*. New York: Praeger.

- Landy, F.J. 1989. *Psychology of work behavior*. Pacific Grove, CA: Brooks/Cole Publishing Co.
- Lundberg, C.C. & Brownell, J. 1993. The implications of organizational learning for organizational communication: A review and reformulation. *The International Journal of Organizational Analysis*, 1(1), 29-53.
- Malaysia 2006. *The Ninth Malaysia Plan (2006 - 2010)*. Kuala Lumpur: Economic Planning Unit.
- Metcalf, D.H. 1985. *The economics of vocational training: Past evidence and future considerations*. Washington, D.C.: The World Bank.
- Mohamad, M. 1991. *Malaysia: The Way Forward*. Kuala Lumpur: Prime Minister Department.
- Muchinsky, P.M. 1997. *Psychology applied to work: An introduction to industrial and organizational psychology*. Pacific Grove, CA: Brooks/Cole Publishing Co.
- Musa, M.B. 2003. *An Education System Worthy of Malaysia*. Writers Club Press.
- Mustapha, R. & Mohd Salleh, 2007. Self-fulfilling prophecy and digital divide revisited: Vocational and IT Competencies of special needs population in Malaysia. *Malaysian Journal of Social Work*, 6(1), 33-65.
- Ohmae, K. 2000. *The invisible continent*. London: Nicholas Brealey.
- Oi, W.Y. 1983. *The fixed employment costs of specialized labor*. University of Rochester and the Hoover Institution.
- Othman, N. 2000. *Malaysia dan cabaran globalisasi: Malaysia menangani globalisasi*. Selangor: Swan Printing Bhd.
- Pautler, A.J. 1994. *High school to employment transition: Contemporary issues*. Ann Arbor, MI: Prakken.
- Roberts, R.W. 1957. *Vocational and practical arts education*. New York: Harper & Row.
- Rumberger, R.W. 1984. High technology and job loss. *Technology in Society*, 6, 263-284.
- \_\_\_\_\_. 1995. Technology change and the demand for educated labor. In M. Carnoy (Eds.), *International encyclopedia of*



- economics of education*. Oxford: Pergamon.
- Schultz, T.W. 1961. Investment in human capital. *American Economic Review*, 51, 1-16.
- \_\_\_\_\_. 1963. *The economic value of education*. New York: Columbia University Press.
- Spenner, K.I. 1988. Technological change, skills requirements and education: The case for uncertainty. In R. Cyert & D. Mowery (Eds.), *The impact of technological change on employment and economic growth*. New York: Harper Business.
- \_\_\_\_\_. 1995. Technological change and deskilling. In M. Carnoy (Eds.), *International encyclopedia of economics of education*. Oxford: Pergamon.
- Sternberg, R. 1985. *Cognitive psychology*. Fort Worth: Harcourt Brace College Pub.
- \_\_\_\_\_. 1988. *The nature of creativity – Contemporary psychological perspective*. Cambridge: Cambridge University Press.
- \_\_\_\_\_. 1997. *Successful intelligence: How practical and creative intelligence determine success in life*. Kuala Lumpur: First Agency.
- Tennant, M. & Morris, R. 2001. Adult education in Australia: Shifting identities 1980-2000. *International Journal of Lifelong Learning*, Vol.20/2, 44-54.
- Tomlinson, C.A. 1999. *The differentiated classroom: Responding to the needs of all learners*. Unpublished paper. Association for Supervision and Curriculum Development. Available at <File:///D:/tomlinson99book.html>.
- Tsang, M. 1997. The cost of vocational training. *International Journal of Manpower*, 18(1-2), 63-89.
- Rashid, Z.A. 1993. Public sector's role and policy in human resource development: Meeting the challenges of the 21st century. In Nordin & Agus 1993. *Challenges of industrialization and globalization of business towards the 21st century*. Collection of papers 24. Universiti Kebangsaan Malaysia, pp. 27-45.
- Reynolds P., Bygrave, W., Autio, E., Cox, L., & Hay, M. 2002. *Global entrepreneurship monitor*. London: Ewing Marion Kauffman

Foundation.

Robertson, R. 1992. *Globalization: Social theory and global culture*.  
London: Sage.

Wentling, T.L. & Roegge, C.A. 1989. Development of a computer-  
aided evaluation system for vocational education programs.  
*Journal of Vocational Education Research*, 14(4), 1-14.

World Competitive Yearbook. 2001. Lausanne, Switzerland: IMD  
International.