An assessment of 21st century adult learners’ needs: issues and challenges for institutions of higher education

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Introduction
For the past five decades adult higher education has been substantially addressed in government policies, business corporations, and higher education (HE) worldwide. According to Kasworm et.al (2000) there has been dramatic growth of adult learners who are above twenty-five years in age across the world. Kasworm (2007, 1993 & 1994) highlights the fact that between 1987-1990, adult learners’ participation in HE encompasses over one-third of select nation’s university enrollments: Australia (40%), Canada (37%), Finland (47%), Norway, (45%), Sweden (65%), United Kingdom (33%), and United States (41%). In third world countries like Africa, Malaysia and India to mention a few, the dynamics of adult higher education is also encapsulated in policies, programs, and practices which affect continuous growth in adult learners participation through higher education. Across the globe, providers of adult education are driven by the need to provide access and equity to learners and embark on innovative models of learning based in knowledge competence aided by technologies. Some of the manifestations of these efforts include RPL (Recognition of Prior Learning), the Open University model, distance education, blended learning programs and the dramatic growth of postgraduate programs on part-time mode.

What all these suggest is that landscape of adult education has evolved from provision of literacy programs (third world countries), and specialized programs for special adult learner groups through community colleges, evening classes, weekend programs, correspondence and extension courses, to widening access to fulltime/part-time enrollment in undergraduate and postgraduate programs. Additionally, professional bodies of practitioners such as engineers, architects accountants (especially in Malaysia) now require their practitioners to undergo CPD or Continuous Professional Development as an endorsement of their license to practice. What is interesting is that in this age of development, the role of adult higher education and workplace has been expanded to embrace lifelong learning. Echoing Kasworm (2007, Dr Carol Kasworm website http://www4.ncsu.edu/~cekaswor/): “As of 2007, adult higher education has continued the tradition of outreach and expanded governmental interests in adult learning efforts and has also identified adult participation in higher education as a growing necessity for the collective societal enterprise and for a competitive knowledge.”

The purpose of this chapter
What are the forces behind this surge of interest of adult learners to participate in higher education? How should HE respond to their presence? Hence, in this chapter, we explore what Kasworm et.al (2000) term as ‘the changing landscape of higher education’ and addresses the influence of this changing landscape of education on adult learners’ needs of the 21st century. Our discussion is pitched against the background of technologies, globalization, fluctuating
world economy and educational transformation. Our understanding of ‘needs’ recognizes the fact that we have to transcend educational preferences of adult learners in terms of objectives, expectations and orientation to learning even though these are important subsets of needs that have predominated much discussion on adult learning, and which have been translated into the principles of andragogy (Knowles, 1990, Rogers 2002). In our discussion, we take a wider perspective by focusing primarily on the knowledge and skills needed by adult learners to thrive in the 21st century. We are interested to understand how those factors affect their needs, and how they could be met in order to fulfill the imperatives of a learning society. Specifically, we focus on issues and challenges for adult higher education in Malaysia as the development of quality human capital becomes the focal point of a nation bent on achieving a fully developed status by 2020. We examine their initiatives in widening access to adult learners and what adjustments that need to be made in order to cater to the diverse needs of their adult learners.

What has changed in the landscape of Adult Higher Education?
In the last sixty years adult learners have become very visible in higher education across the globe as expanding advance learning programs and credentials by governments, professional bodies, business entities provide equity and access to working adults. What motivates these working adults to return to formal education? A ten year research (1986-2006) conducted in the United States on American adults returning to school identifies several reasons, the primary being to equip themselves with knowledge and skills needed for their careers and better prospects (Aslanian, 2007). In a developing country like Malaysia, the prime reason adult learners are making a comeback to school is similar. To clarify, in 1991, the then Prime Minister of Malaysia announced “Vision 2020”. It is a blueprint which serves to direct the country to the aspired status of a fully developed nature by the year 2020. Envisaged in the blueprint is what was coined as k-economy, an economy which is based on knowledge. K-workers and of late, ‘Human Capital’ were identified as the greatest asset which could easily elevate the k-economy. This in turn, has brought back many adults to continuing their education (Mazanah, 2001).

This seems to concur with adult learners’ general motivation for meeting the skills for 21st century in order to remain current and relevant, professionally. We see this phenomenon of going back to school as part of a general societal realignment to the world’s shifting economy which has moved from one founded on industrialization to an economy that is knowledge based; one that rests heavily on the transactions of information, knowledge and innovation for wealth creation. As Kasworm (2007,ibid.,) puts it, “...From this perspective, adult higher education is now positioned within the perspective of a knowledge economy”. In recent years, the social-cognitive approach has been the major focus in research on motivation (Alderman, 2008). Under the social-cognitive approach, beliefs and cognitive, and emotional variables as well as environmental factors are the key influence of involvement and achievement (Bandura, 1997; Graham & Weiner, 1996; Stipek, 1996; Weiner, 1990). At this juncture, the environmental factors are once again the changes due to the local and global needs of the 21st century which in turn highlights the essence of k-economy.

This being the case then, the traditional role of higher education which is defined by pedagogical practices, residency, and full campus involvements of traditional students (Kasworm et.al 2000, Hazadiah & Jamiah, 2006) has been seriously challenged. The influx of adult learners presents increased diversity and change within the student population of an institution. For instance
Aslanian (2007) records that the majority of adult students in the United States are working females, over thirty years of age and who earn a yearly income of approximately $50,000. They already possess a basic diploma and college degree; and as we noted at the outset of this paper, the growth is also phenomenal, worldwide. However, the dichotomy of traditional /non-traditional students is often blurred when institutions of higher education seldom differentiate between the two groups. Many institutions support a culture that facilitates a successful learning environment for traditional students, leaving the adult learners (the non-traditional students) on the periphery. According to Kasworm et.al (2000) the latter group is often marginalized because of their part-time participation, their commitment to their work, and life commitments. Hazadiah & Jamiah (2006) make a similar observation: adult learners are unable to participate in campus activities as they constantly have to negotiate between their competing priorities which constitute their studies, work, families and other personal commitments. Hence their lives are in constant flux.

In aligning itself to the framework of a knowledge economy, the challenge that higher education faces lies in the reframing of its mission, which supports a more inclusive culture in providing training and knowledge premised on research innovations, collaborations with companies as well as global partners to produce knowledgeable and skilled adults. This points out to the fact that “adult learning has taken on a much higher profile in the last decade, as OECD economies and ageing societies are increasingly knowledge-based” (Office of Economic Cooperation and Development, 2005, n.p as cited in Kasworm, 2007).

Advanced economies compete by producing “innovative products and services at the global technology frontier using the most advanced methods” (Porter, Ketels & Delgado, 2007 as cited “21st Century Skills, Education & Competitiveness,” 2008). Fully developed countries such as America, Japan to mention a few have a high capacity for innovation and adopt global strategies in international markets. Hence they require a workforce equipped with multiple intelligences to translate their business models and offerings to international marketplaces. These include verbal intelligence, problem solving skills and ability to offer “cross-border perspectives and solutions’, cross-cultural intelligence and environmental intelligence which would enable the workforce to adapt to change. A similar observation is made by Ewing Marion Kauffman Foundation, (2007 as cited in “21st Century Skills, Education & Competitiveness,” 2008) when they claim that “fueling creativity, innovation and adaptability that are the hallmarks of competitive, high-growth and emerging industries requires a highly skilled, creative and nimble workforce” cited from http: www.21stcenturyskills.org/documents/21st_century_skills_education_and_competitiveness_guide.pdf. A commonly held belief is that creative, innovative, educated adults are required to fuel the global economy.

Higher education is no longer a platform for the dissemination of knowledge and skills but has become institutions that instantiate lifelong learning. As generally accepted, lifelong learning covers the whole range of learning which includes formal and informal learning and workplace learning. More importantly, it also includes the skills, knowledge, attitudes and behaviours that people acquire in their day-to-day experiences (The Scottish Executive, 2000 cited from http://www.qualityresearchinternational.com/glossary/lifelonglearning.htm). The idea of lifelong learning is emphasized by the Malaysian government as reflected in the Ninth Malaysia Plan. It
is paramount for higher education institutions to produce holistic, “knowledgeable and highly skilled, flexible and creative as well as imbued with positive work ethics and spiritual values” human capital (Ninth Malaysia Plan 2006 – 2010, 2005, p. 248). The inclusive culture in providing training and knowledge premised on research innovations, collaborations with companies as well as global partners is seen as a platform to realize the concept of lifelong learning which could meet the needs of the 21st century such as creativity and innovation both at work and at home.

The challenges for adult higher education
According to Silva, Cahalan and Lacierno-Paquet (1998), “factors that inhibit or prevent people from participating in activities such as AE [adult education] are sometimes referred to as barriers, constraints, deterrents, impediments, or obstacles” (p.2). In this paper, we prefer to use the term challenges instead of barriers to suggest that although barriers exist, they do not stop adults from participating and progressing in their learning.

There are three main challenges faced by the adult learners. First is the physical and material or situational challenge. According to Cross (cited in Silva, Cahalan & Lacierno-Paquet 1998), situational challenges are those related to one’s situation at the time. Hillage and Aston (2001) claims situational challenge includes “barriers which prevent from taking up learning opportunities even if they wanted to” and referred them as physical and material challenges. Finance and time constraints such as transportation, childcare, books and difficulties in getting time off work are some of the situational challenge. According to MacKeracher, Stuart and Potter (2006), situational barriers include but are not limited to the,

…multiple and often conflicting roles and responsibilities of adults in relation to their work, family and community; the amount of discretionary resources which includes - time, energy and finances - the adult learner can or is willing to expend in pursuing learning activities; the level of support the adult learner receives from significant others in his or her life; the distance the adult learner must travel to reach the learning opportunity (p.4).

MacKeracher et al. (2006) posit that “…Role conflict and role strain can be viewed as major factors contributing to the learner’s level of stress” which could “keep potential participants from enrolling, or once enrolled, from successfully completing a learning program” (p.14). They suggested that situational barriers are “any set of circumstance that causes distress for the individual.” The inclusion of situational barriers within physical and material barriers results in a substantially wide range of challenges within a category. It could be deduced that this type of challenge includes financial constraints or direct and indirect costs (fees, transportation, books and childcare), time constraints (being too busy with work and too busy with family and children), the lack of good childcare, the lack of information, geographical isolation, disabilities and ill health, multiple-conflicting responsibilities, job commitments, poor mental or physical health or limited energy, the lack of support from family, friends and lacking of interest.

The second category is the structural challenge that relates to both the learners and the service providers. Cross (cited in Silva, Cahalan & Lacierno-Paquet. 1998) refers them as “institutional” challenges or “those practices and procedures that exclude or discourage working adults from participating in educational activities” (p.36). It is concerned with how learning opportunities
such as the form of education and training, and the availability of appropriate facilities are being provided (Hillage & Aston, 2001). MacKeracher, Stuart and Potter (2006) explain that institutional or structural barriers are found wherever learning takes place and it includes learning institutions and the workplace. “These barriers are created by policies and practices of educational providers as well as government policies…” (p.15). Thus institutional challenges include the lack of transport, limited local learning opportunities, the lack of facilities and equipment and the lack of knowledge about local learning opportunities and learning advice sources.

The attitudinal type is the third challenge and is referred to as dispositional challenges by Cross (cited in Silva, Cahalan & Lacierno-Paquet, 1998). Both Cross (cited in Silva et al. 1998), and Hillage and Aston (2001) agree that this challenge manifests itself through the perceptions or the attitude of the learners about themselves and their education or learning opportunities that includes face-saving reasons and the lack of motivation. Similarly, MacKeracher, Stuart and Potter (2006) describe attitudinal or dispositional challenges as those relating to “learners’ perceptions of their ability to seek out, register in, attend and successfully complete learning activities” (p.16). Some of the challenges affected by perceptions are, the lack of confidence, the fear of failure, the lack of confidence in their learning abilities, the lack of motivation, preference to do other things, peer group culture, being surrounded by people who are anti-learning, low aspirations and lack of role models, perceptions of irrelevance, possession of sufficient qualifications, feelings of inadequacy, the lack of trust in ‘officialdom’ and formal institutions or organizations and the perception of being too old to learn. MacKeracher et al. (2006)

**Issues on the challenges**

Several researches on Malaysian adult learners (Habibah, 2002, Azelin, 2006, Faizah, 2005) have revealed that the lack of support, health and the multiple-conflicting responsibilities are the main sources of the physical and material or situational challenges. Education providers, employers and the family of the adult learners could be more tolerant, considerate and understanding towards the needs of the adult learners. Employers should not retract privileges earned by their employee nor should they practice transferring employees while they are studying. Employees must have obtained approval from their employers before continuing their education. Consequently, employers do not have a cause to make their employees’ continuing education experience an unpleasant one. This call was made by the Prime Minister in 2001 and it is a strategy in the Education Development Plan (2001-2010).

Studies by Shireen (2006) and Azelin (2006) have indicated obvious structural challenges. While Shireen discovered the lack of academic and administrative support for the selected distance learners in her studies, Azelin found that certain institutional policies are not adult learner-friendly as perceived by her respondents. Both of them argued that classes should be held on days and time when everyone can attend. Initiative from education providers and coordination are required to alleviate this challenge. Support such as counselling for motivation, study skill workshop, time management workshop, and academic advice is important for developing their learning confidence level. In supporting distance learners, Shireen claims that a good library, adequate references, adequate model questions and answers, and a good self-instructional module are vital for the self-learning and understanding of the subject.
Adult learners of the 21st century are most likely those with multi-tasks. Hence, it is acceptable that maintaining concentration is the main form of attitudinal challenge faced by adult learners as discovered by Habibah (2002) and Faizah (2005). The reason behind this problem is the various responsibilities they have to assume. For example, they have to work at the office and at the same time thoughts of their assignments due for submission and the children at home would sneak in. It is difficult to solve this problem as the solution lies within the postgraduate students. Therefore, adult learners need to learn strategies to manage and balance their responsibilities. If they do not, then they need to seek assistance.

In providing the assistance required by the adult learners, Aslanian (2007) claims that “institutions need to study their “regional market” so as to provide effective adult education” (p.15). Likewise, Tracey (2004, p.49) suggests adult education programmes to be evaluated from four holistic key aspects: “curriculum planning, delivery, pricing and outreach”. Malaysia can be assured of the possibility of such implementation since the higher institutions in Malaysia are given self-governance privileges under the Universities and University Colleges Act 1996 (Khairuddin, 2002).

Additionally, Tracey (2004) suggests efficient communication system could provide the academic and administrative support needed by the adult learners. Aslanian (2007) concurs with this when he claims that the internet plays a prominent role in providing the adult learners with the information they need regarding the institution or their studies. It is also interesting to note that to compensate the social responsibilities of adult learners, American Association of State Colleges and Universities (2006) suggests developing support facilities such child care centres and networking sessions among the learners. This call is most welcomed by working parents who are continuing their studies.

The transformation of Malaysian higher education

Datuk Dr. Zulkefli A. Hassan, the Secretary General of the Ministry of Higher Education states that in fulfilling the needs of the workforce and preparing Malaysian to meet the global challenges in the 21st century, quality, competitiveness, creativity, and innovation must be emphasized. In response to the urgency, five key institutional pillars have been identified to bring Malaysian higher education to the next level namely; governance, leadership, academia, teaching and learning, and research and development.

As mentioned, the 21st century global market demands highly skilled workforce who are intellectually active, creative, innovative, articulate, adaptable, and capable of critical thinking. In producing competitive graduates who will meet the 21st century market, Malaysian higher education undergoes a transformation agenda which aims at producing human capital (modal insan). Seven strategic thrusts have been outlined by the Higher Education Ministry to materialize the transformation in the higher education system required (National Higher Education Action Plan, 2007-2010). They are;

1) Widening access and enhancing equity
2) Improving the quality of teaching and learning
3) Enhancing research and innovation
4) Strengthening institutions of higher education
5) Intensifying internationalization
6) Enculturation of lifelong learning
Prior to the outlining of the strategic thrusts, there are two cues from two major national development plans that led to the need for the transformation. The first is Vision 2020 which has altogether nine challenges. In particular, the sixth challenge – to establish a scientific and progressive society, a society that is forward-looking, one that not only is a consumer of technology but also a contributor to the future scientific and technological progress, sets the background to the need of the transformation in the Malaysian higher education system. Second, the 9th Malaysian Plan which places great emphasis on the role of human capital has also set out five critical areas to promote national progress and prosperity. Together with Vision 2020, the 9th MP becomes the nation’s call for the much needed transformation. The five critical areas of the 9th MP are:

1) Moving the economy up the value chain
2) Raising the capacity for knowledge and innovation to nurture first-class mentality
3) Addressing persistent socioeconomic inequalities constructively and productively
4) Improving Malaysians’ quality of life and ensuring its sustainability
5) Strengthening institutional and implementation capacities

The then Prime Minister, Tun Abdullah Ahmad Badawi did remind his rakyat (people) of the need to have first-class mentality in order to have a country which is intellectually self-sufficient and able to engage as equals with the world.

At this juncture, the Malaysian higher education institutions are seen as the platform for educating rakyat with first-class mentality. Institutions of higher learning are instantly required to play important roles in ensuring opportunities for holistic development of character and capabilities. The higher learning institutions are also the ground where the acquisition of specific skills, realization of intellectual, physical and spiritual potential and the training of human capital take place (Ministry of Higher Education Strategic Plan Report, 2007).

The dominance of research and innovation in the education transformation
A study on the Innovation Ability Index 2001 shows that Malaysia is ranked 60th and is among the medium category. Other Asian countries such as Japan is ranked (11), South Korea (20), Singapore (30) and Thailand (54). The following table depicts the ranking information.

<table>
<thead>
<tr>
<th>Innovation Ability Index</th>
<th>Rank</th>
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<tbody>
<tr>
<td>Japan</td>
<td>0.885</td>
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<tr>
<td>Taiwan</td>
<td>0.865</td>
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<tr>
<td>Korea</td>
<td>0.839</td>
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<tr>
<td>Singapore</td>
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<td>Thailand</td>
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<tr>
<td>Malaysia</td>
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<td>China</td>
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<td>India</td>
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<td>Indonesia</td>
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According to the Ministry of Higher Education Strategic Plan Report (2007), Malaysian industrial sector is still dominated by low skilled workers. In addition, the industrial sector lacks research and development intensity. Although there have been numerous efforts taken and initiatives given by the government, the number of multinationals which network with local firms is still quite limited. World economy crisis and the fluctuation of the petrol price are some of the common factors behind this scenario. Local firms on the other hand, lack the expertise in international research and innovation competitiveness. This is one of the factors that delay the innovation development.

Consequently, having such a scenario to set the background of the Malaysian economy, Malaysia needs to improve the effectiveness and efficiency of the national innovation system in order to progress into knowledge- and innovation-based economy. The improvement includes cooperation amongst universities, industries, research institutes, consultant firms, and organisations with access to global knowledge which is adaptable to the local needs (Ministry of Higher Education Strategic Plan Report, 2007). Higher Education Institutes (HEI) are seen as the main tool in the national innovation system since they could encourage research and produce more human capital with scientific and technical knowledge through the teaching and learning process. This can be done through the network with various parties that could encourage and initiate holistic innovation development. However, the challenge here is that Malaysia is still in dire need of researchers. In the year 2002, there were 294 researchers per one million Malaysian citizens. This number is small in comparison to countries such as Korea (2,979), Singapore (4,352), Japan (5,085) and China (633) (source: WDI online). Hence, in response to the challenge that the transformation of higher education brings, institutions of higher education need to multiple their effort in producing more researchers.

Consequently, the Malaysian government in the 9th Malaysian Plan has identified four universities as research universities which will lead research activities. The universities are Universiti Malaya, Universiti Putra Malaysia, Universiti Kebangsaan Malaysia and Universiti Sains Malaysia. The choice of the universities were based on the criteria benchmarked with international research universities and audited by Research University Audit Committee. It is expected that by the year 2020, at least six (6) universities have achieved Research University Key Performance Indicator. In order to improve the Innovation Ability Index, it is also targeted that Malaysia needs 5,000 researchers per one million citizens. The higher education institutions of the 21st century will have the responsibilities to ensure the targets are achieved (Ministry of Higher Education Strategic Plan Report, 2007).

Some of the strategies suggested by the Ministry of Higher Education to achieve the targets of meeting the 21st century challenge in producing researchers who are creative and innovative include:

i. Doubling the efforts towards global and top notch research universities.

ii. Strengthening research centres of excellence at public universities in prioritised and important areas.

iii. Developing researchers’ critical mass through postgraduate research programmes at public universities.
iv. Increasing the number of collaboration between public universities and industries/other stake-holders.

v. Increasing the involvement of public universities in research activities and innovation based on the aim of the national innovation.

vi. Ensuring public universities’ constant effort to receive research funding from local and overseas.

vii. Increasing the integration between public universities’ research and global research society.

viii. Upgrading the research and publication quality.

ix. Developing the management system of the Intellectual Property at public universities.

x. Disseminating research findings and technology transfer.

xi. Increasing the commercial activities of the R & D products.

Indirectly, this places emphasis on the role of not only the adult learners, but also the lecturers who need to tune their approach to doing research and innovating. As stated in the National Higher Education Action Plan, 2007-2010,

“…These academics are the moulds that will shape our students. To produce first class human capital out of our graduates will require us to first re-shape some of the moulds.”

(p. 20).

We believe, this transformation is possible to manage but should be introduced gradually in ensuring its success. The higher learning institutions will need to create a culture of excellence amongst the academic staff as well as their students through topnotch facilities and other support systems.

**How would the changing landscape of world economy affect adult higher education?**

The figure below depicts what is happening to the world economy, in particular the ASEAN countries. As can be seen, what was first initiated by the labour force has developed to a more knowledge-based economy. This signifies the importance of a knowledge society for any country to become competitive and coherent with the world over. Malaysia, being one of the ASEAN countries has long strived for a knowledge-based working society. This is reflected in Vision 2020 and the Ninth Malaysian Plan as discussed earlier.
The United States leads in several high growth, ICT intensive industries, media and telecommunications. Additionally, the continent can potentially lead in new industries related to advanced manufacturing, phototonics, biotechnology digital media and the like. As advanced economies compete for the cutting edge amidst growing technologies, government policies business enterprises, non government agencies, providers of education embark on missions of transformation placing the human capital as a focal point, forcing economies of less developed countries to move in tandem with these initiatives.

The implications these have for adult higher education are many and varied and each brings a set of challenges. We envisage the following:

- greater mobility of international adult students seeking knowledge and skills that would enable them to typify the creative and nimble workforce; the question that we ask is while fully established institutions are adept at providing for international students, how best should newly established institutions respond to this phenomenon?.

- greater participation from working adults in higher education exerting different sets of expectations and demands that need to be met. These include curricular considerations, new modes of delivery, new ways of assessing learning, financial support, and availability of a supportive learning environment.(Hazadiah & Jamiah 2006)

- migration of institutions from teaching intensive to research intensive culture to foster new knowledge as in the case of Malaysian higher education. This involves availability of grants, huge endowments, expansion of postgraduate research student population and postgraduate programs; dedicated and creative researchers.

- educators who are skilled in educating adults and who themselves are adult learners open to the creation of new knowledge as proponents of lifelong learning.

As Kasworm (2007) succinctly puts it,” this challenge is also to innovate new learning designs, to craft new understandings, and to enhance instructional access, delivery, and assessment for development of continuously evolving advanced knowledge” (ibid.)
**Needs of adult learners identified**

In our discussion of the changing landscape of higher education brought about by the changing landscape of world economy that impacts the workforce, so far, we have mentioned the much needed skills the workforce should have; and hence higher education is viewed not only as a place for acquiring lifelong learning skills but also as a platform for building capacity. In what follows we outline some of the salient needs, their barriers and how they should be accommodated. Adult needs are plenty but for our purpose we confine our discussion to three: Accessibility in terms of support, entry point; modes of delivery and curriculum.

Despite their growing presence in higher education, access of adults to higher education is limited to those who enjoy higher socio economic status or have families that are well educated. This group is more likely to do well in their studies since they are well supported emotionally and financially. On the other hand, lack of financial support prevents the working class from participating in higher education. According to the American Association of State Colleges and Universities (2006) a number of adult learners particularly those with low economic background tend to fail their adult education programmes or drop out of their studies due to financial constraints. The discriminatory practices of many financial aid programs which are designed to support traditional students financially leave adult learners bereft of financial support. A case in point is the Malaysian government education loan programme by *Perbadanan Pendidikan Tinggi Nasional* (PTPTN) designed primarily to finance traditional students through undergraduate programs forces adult learners to seek financial help from institutions which levy high interest rates. This “challenges the basic assumptions of governmental funding and advocates for funding that should serve all across the lifespan “(Kasworm, 2007). Adult learners need financial aid packages that do not drain their resource. As it is, the types of funding vary across countries; some provide support and access to selected adults in the forms of grants and scholarships; some admit learners into higher education through self funding, or partial funding by governments or other agencies. Flint’s (2001) proposal that learning institutions provide more friendly payment modes to suit to various adults is a move towards easing the financial burden of these adults. Lamb and Brady (2005) concur with this when they claim that adult learners are more comfortable to participate in any higher institutions which provide convenience such as flexibility in payment method.

A more pertinent point is made by Kasworm “If lifelong learning is integral to the future knowledge economy, there will be need for partnerships across governments, business and industry, and communities to provide funding access. The future viability of adult higher education will rest with financial support system initiatives” (ibid.). In addition, the Malaysian government has outlined several strategies to encourage the partnerships across governments, business and industry. The following are some of the strategies.

1) Providing incentives to foreign experts to conduct research in Malaysia.
2) Encouraging the use of local technology products through the public universities/industries/stakeholders cooperation.
3) Developing the commercialization infrastructure at each public institutes of higher education.
4) Increasing the mobility of experts between public institutes of higher education and industries.
Likewise, in encouraging the provision of funding, the government has decided to emphasize on:

1) continuous sufficient research funding which reaches two (2) % of the GDP is provided.
2) participation and cooperation from the industries and interested parties.

(Ministry of Higher Education Strategic Plan Report, 2007).

Access to higher education is still an uphill battle for most adult learners as entry into higher education is still through the traditional assessment process based on paper qualifications and grades obtained in major public examinations (Asian countries). This has given rise to the issue of eclecticism (Kasworm, 2007). This is counter-productive to initiatives of lifelong learning and to the philosophy that education is for all. Most of these adults have gained expansive experience in their job related area. What they need is a widening access based on RPL (Recognition of Prior Learning) taking into account the experienced they have amassed. In the United States, the United Kingdom for instance, Prior Learning Assessment (PLA) has been practised as the mode of pre-requisite assessment which integrates previous working experience to enable students without paper qualifications to participate in higher education (Flint, 2001). Hence, flexibility in entry qualification is crucially needed.

In the age of globalization and technologies, adults constantly live in an accelerated and multi-tasking mode and thus, prefer learning programs that cater to their hectic lifestyle (Aslanian, 2007). This preference is revealed in Aslanian (2000 as cited in Aslanian 2007). So accelerated programmes learning modes offering, shorter semesters, part-time mode, lesser contact hours, flexible time tables, morning classes, and close to home venues are very much favoured. Tailoring adult learners’ preferences to their needs does not only support their lifelong learning process but also please their employers. According to Klein (2004, p.14), these employers believe that only “efficient and dedicated” students are likely to succeed in such fast-track programmes.

The surge of new technologies often makes us take computer literacy for granted. But the reality is there is still the digital divide amongst adult learners in terms of computer competency. They need their ICT skills to be enhanced. The mushrooming of distance learning seems to be the biggest change in adult learning reflecting Friedman’s flattening of the world notion (Peters, 2006). The internet has also become the most preferred mode of instruction since studying can be accomplished at the workplace and home. Some adult learners are receptive to hybrid programmes where accelerated programmes and distance learning merge in an eclectic mode. Eclectic programmes tend to cater to more different individual needs (Tracey, 2004). Hence offerings of adult education must recognize the necessity to accommodate to adult learners’ needs. Universities and colleges are expensive to build and maintain, therefore the introduction of online learning would be the best way to help this effort. Professor Dr. Anuwar Ali, president and vice chancellor Open University, in his speech at the SEAAIR 2004 Conference, Wenzhou, China, 21-23 September 2004, stated that higher education in the 21st century are mass-orientated activities, culturally homogenous supported by a wide array of public and private sources. Through online teaching and learning lifelong learning could be carried out effectively. Continuing education is the key to higher employee productivity, satisfaction and development. Most of time, these students are working adults in search of career training and job advancement.
This is the foundation of a knowledge society where information and resources will easily be available through the web and to the masses.

The demand for higher institutions to change from traditional to flexible learning by incorporating technology has been influenced by several factors. Fisser (2000 in Faizah et al, 2007) identified six categories of factors that encourage higher institution to use technology for flexible learning. The highest number of institutions she surveyed reported a factor to be most important for each category respectively: flexibility (environmental pressures), new technology (technology developments), broad participation (institutional conditions), new teaching models (educational developments), cost effectiveness (cost), and availability of technology (support facilities). The motivation for higher education to use computer technology in their educational systems was referred to as push factors by Collis (1996). One push factor was the increase public access to the Internet and WWW. Next is the perception that everybody must not only has a computer, but also be able to get on the Internet, either at homes or in schools. The social vision that information highway will revolutionize society and create powerful new opportunities made many countries felt they cannot not do it. Universities also feel the demand to use technology in education so that they are not left behind – all students must make use of the Internet. Every course must also make use of the WWW, thus the proper funding, initiatives, policy and strategy are all geared up to ensure that the institutions are update with the current trend.

As the system strive to provide the latest technology facilities in their setting in order to attract more clients (students), the question is to what extend students efficiently use the tools in their learning process. Four major factors that improve the likelihood of students using technology have been identified (Collis and Pals, 1999). The first factor is how students perceive the educational effectiveness that they can gain from using the technology such as valuable learning experiences, improved communication, and efficient task completion. The second factor is expressed in terms of personal ease of use, which basically refers the skills of using computer and Internet. Accessibility to computer and printer is also a key sub factor to students’ willingness to use the technology. Another factor identified by Collis and Pals is personal engagement about technology use including being self-confident about and interested in using the technology. The fourth factor is the institutional environment factors in terms of the vision, support and actual use of technology for learning purposes. In meeting the needs of distance learners for example, Keegan (1999) discussed four criteria which could influence the success of distance systems. The four criteria include good learning materials, rapid and useful feedback to students on their work, slick logistics and the intellectual vitality of a profound commitment to scholarship (Shirleen et al, 2006). These criteria could serve as the guidelines in providing the right distance learning support for the adult learners of the 21st century.

Traditional offerings of programs are usually crafted along what instructors think the learners need to know. Friedman’s flattening of the world, brings forth a ‘flat world’ which is a jungle pitting ‘lions’ and ‘gazelles,’ where ‘economic instability is the norm feature’ and where ‘the weak will fall farther behind.’ In this flat world it is the ‘rugged’, adaptable entrepreneurs who will be empowered. According to Friedman, a great deal of outsourcing of services to the English-spoken abroad will take place, and that American workers should be preparing to ‘create value through leadership’ and ‘sell personality.’ This suggests that supporting a competitive economy requires a curriculum geared towards this cause. Curriculum developers need to study their
“regional market” (Aslanian, 2007) to affect a negotiated curriculum based on actual needs. Tracey (2004) suggests demographic studies to undertaken in order to identify the relevant courses to be offered to adult learners. Klein (2004) suggests that education providers collaborate with policy makers and economic giants for advice on job market trends in the society. In this way the curriculum does not only focus on enhancing advanced literacy and skill development, it also prepares adult learners for advanced knowledge creation and new career options that the flattening of the world offers. Many job opportunities beyond the shores of the country of domicile lead to the migration of working adults who need specialised skills to survive. These have been identified as skills of the 21st century. We view them as intelligences that can be nurtured through the curriculum such as the ability to think critically, to solve complex, multidisciplinary problems, verbal intelligence, social and cultural intelligences, environmental intelligence, entrepreneurial intelligence and ICT intelligence.

References


