TRENDS IN ADULT HIGHER EDUCATION: NEW POSSIBILITIES FOR PREPARING THE INFORMATION WORKFORCE

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Abstract

The future of adult higher education (AHE) is focused upon three important trends in relation to preparing an information economy workforce. While there is a significant growth of educational providers who offer updated information, adult higher education is providing leadership for knowledge engagement beyond information dissemination. The first key trend is its leadership in creating contextual authentic learning designs for workforce enhancement. Secondly, as AHE gains competence to be digital providers of education, it will continue to face the paradox of creating accessible and universal opportunities for adult learner participation. AHE is creating meaningful learning programs which draw upon information technology, while also innovating best practices for valid adult learning. Because knowledge is ephemeral and quickly dated, the last trend for AHE programs and related research in adult learning is focused towards developing critically reflective adult learners who can create and adapt knowledge for new understandings and practices in the knowledge economy.

Keywords: adult workers, adult higher education, advanced knowledge education, critically reflective practice, digital providers

Challenges to Adult Higher Education

Current understandings of the knowledge economy have emerging from two defining forces: the rise in quality and intensity of *knowledge as a key commodity* for economic development, and the increasing *globalization through information technology* of both knowledge exchange and economic activities. The future of adult higher education is focused upon this knowledge-based economic growth and specifically of our role in the development and diffusion of new knowledge under the broad framework of lifelong learning. As suggested by the World Bank, "lifelong learning is education for the knowledge economy [The World Bank, 2003, p. xiii].

Through our work in developing lifelong learning systems, policies, and opportunities, we have become pivotal contributors to this new global environment. This new era of global economies in the information society has refocused and expanded our leadership role beyond our traditional understandings of ourselves as leaders of adult learning. Our task has now expanded to both prepare adults to be knowledge workers focused upon applying and synthesizing current knowledge, but to also become skilled creators and innovators of knowledge and products for our society. In

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essence, we are representatives of Janus, the Greek god with two faces – one facing the past and one facing the future. We continue to provide significant energy towards serving the basic adult learning needs of society – our traditional societal role. But, our new role is to be innovators to new futures focused upon advanced knowledge programming and instruction, of providing new tools and technologies for adult learners to become more of the creators and innovators in our global society.

In this paper, I will highlight three key trends in global adult higher education (AHE) in this new environment. Because of my USA context, some of the leading efforts, research, and understandings may be more reflective of the United States. Thus, I look forward to further discussions from your perspectives. These three key trends include: 1) Creative contextual authentic learning for initial and continuing workforce enhancement, 2) Digital support for access and universal participation of adult learners, and 3) Knowledge creation through critically reflective engagement – learning for continuous change. Because of cultural differences, I am defining adult higher education as formal and nonformal education offerings beyond traditional secondary education targeted to adult learners. These offerings often represent organizational and programmatic offerings with creative and innovative responses to the new knowledge economy, as well as responsive designs for the rapid evolution and diffusion of advanced knowledge. Key forms include short-cycle vocational/technical education; credit and noncredit tertiary certificates, college/university degrees, as well as programmatic offerings and partnerships with business and industry; and the growing focused upon post-college professional continuing education programs. Often these efforts are closely linked to information technology as a tool for access and sometimes as a tool for creative innovation. These forms are supported by adult educators in both private and public organizations, who are engaged in developing innovative workers and supporting families and communities who desire to maintain and sustain a viable quality of life and work contributions to the betterment of society.

Creative Contextual learning for Initial and continuing Workforce Enhancement

Historically, adult education has been the key provider for workforce education to adults, with particular emphasis on the support of the undereducated, the disenfranchised, and often the dislocated worker. These needs continue and are significant to all of our countries. However, there has been a growing concern for provision of advanced knowledge development and the pivotal role of educating this adult workforce for continuing knowledge advancement and innovative development and application. Because of the turbulent economic restructuring of work, of significant

changes in individual work trajectories, as well as the rapid innovation and subsequent obsolescence of knowledge and skills, adults face ongoing demands to develop new and different knowledge and skill sets on a continuous basis. Many adults face angst from this turbulence and the harsh realities of an unstable and dynamic work economy. Many face difficulties in maintaining a job or in seeking new career opportunities. Nevertheless, the issues aren't just about access to jobs, it is about the changing work economy based upon required new knowledge and skills – unknown or expected a few years earlier. In these days of rapidly changing global knowledge, our role has become more then offering of initial and continuing workforce education. We also face adults who need to develop resilience and skills in support of their own self-development and sense of viability in this environment. Each of the trends in adult higher education represents this focus upon providing initial and continuing workforce enhancement, as well as supporting adult learners a co-partners in our work in adult higher education.

As we consider this new era, we note that the trend of providing advanced knowledge preparation has two perspectives. The first perspective of this challenge here has been the significant expansion of credit and noncredit tertiary providers and delivery formats in the last decade. For example, there are growing numbers of private tertiary institution education providers and related increasing enrollments in varied countries. For example, the World Bank reports the specific growth in Brazil (70% growth over a five year period), Côte d'Ivoire in West Africa (670% growth over a seven year period), as well as growth in private business schools and colleges in such countries as Poland, Czech Republic, and China (2003). It is not only the dramatic expansion of new tertiary providers; it is also the combination of new providers utilizing information technology, as well as other formats for access to learning programs by the adult workforce. An increasing number of tertiary institutions are offering part-time, evening, weekend, summer, and internet programs targeted to working adults. There are similar trends in tertiary providers in the USA. There has been significant growth in for-profit USA private providers, accounting for one-third of all US postsecondary institutions; these providers specifically target adult workers who desire easy access and rapid completion of credentials (often through internet offerings) [Kinser, 2009]. In the public sector, 2 year community colleges current serve 3 million adults in credit programs, with an additional 4 million adults in continuing education (noncredit) workforce development offerings across a variety of alternative program and access options [Macomb Community College et al, 2009]. For some, it is surprising that continuing education has such high enrollments. Yet as noted by the World Bank, "in Finland the number of adults enrolled in continuing education programs at the tertiary level exceeds the number of young people enrolled in traditional degree courses" [2003, p. xxi]. This same noncredit

explosion is occurring throughout many other USA adult higher education providers.

This expansion of providers, alternative formats, and course designs represents a blurring of credit and noncredit workforce offerings across the tertiary landscape and is more often based within countries who have or who are committed to future high engagement in the information economy [Kasworm, 2007]. Further, these significant information engagements are represented by countries with higher levels of education and who support and attract greater involvement of adults in postsecondary and continuing education activities. For example, Australia, Canada, United Kingdom, United States, Norway, Sweden, and Israel – each have 30% or more of adult students as part of their total tertiary enrollments [Kasworm, 1993]. Of equal importance is adult participation in job-related continuing education and training. "In the OECD, four countries – Denmark, Finland, Sweden and the United States – take the lead, with more than 35% of the population between 25 and 64 years of age having participated in some type of non-formal job-related continuing education and training over the previous 12 months" [Organization for Economic Co-operation and Development, 2007, p. 348]. A more unique statistic is the broader realm of adult learner participation. In 2004-2005, 52% of US adults participated in formal courses and training programs offered by a private business, company, hospital, or tertiary institution [O'Donnell, 2006]. Beyond these dramatic statistics on adult learner participation is the significant but often undocumented involvement of educated professionals who participate in additional education through many providers, including professional organizations, tertiary continuing education providers, private providers, and a number of self-managed learning groups. These adults who participate in professional continuing education represent varied professional qualifications and preparations and include such areas as medicine, engineering, education, business, technologies, as well as many other professional groups. From varied sources, it is speculated that between 70-80% of these professionals are engaged in continuing education each year, with many professional groups in the US and Canada mandating involvement in continuing education to maintain best practice.

However, this expansion of providers and delivery formats for supporting the adult workforce is only part of this new era facing the knowledge economy. Adult higher education is part of a key trend in offering innovative learning designs and programs focused upon contextual, authentic learning – learning that provides adult connection and relevant action within the work context. Many leaders in adult higher education views their role as reframing instructional understandings towards contextual learning of adult workers, and not just a focus upon disseminating the changing knowledge base within their worksite. This understanding is also gaining prominence among many executive business leaders, as well as key researchers in adult learning

[Webster-Wright, 2009]. For example, one recent CEO reported that over 80% of his current workforce is currently engaged in some form of retraining or new education effort [Bill Amelio, CEO of Lenovo, personal communication, February 5, 2007]. However, his dominant concern is that the future success of his company was based upon his workers' engagement in contextual, authentic learning; course offerings that were not just didactic instruction in the classroom, but rather focused upon learning how to learn skills and learning through groups of learners in collaborative learning communities or knowing communities. He suggested that the most effective ongoing learning engagements for his workers were through learning in communities of practice, as suggested through the pioneering work of Lave and Wenger [Cohender, 2006; Wenger, 1998; Wenger, McDermontt, & Snyder, 2002].

There are a number of current innovative practices and research supports to create dynamic adult learning environments for "new knowledge in action contexts." These dynamic contextual learning settings feature a variety of new designs focused upon interactive learning within the worksite, of utilizing varied experiential learning understandings for learner engagement, and of understanding learning as both an individual and a group endeavor [Jarvis, 2008; Kasworm, Rose, & Ross-Gordon, 2010]. In particular, these contextual authentic learning environments create learner understandings that incorporate engagement and learner adaptability to this rapidly changing knowledge environment. These designs focus not just upon the knowledge and skills integrated into a work setting, but they also focus upon creative knowledge problem-solving and upon engagement with the work and the knowledge through alternative and non-routine understandings. They are about creating knowledge through "communities of practice," of action learning, and of creating networks and self-directed learning skills to build and adapt new knowledge on a continuous basis [Cranton, 1996; Fenwick, 2001; Hoare, 2006; Merriam, Caffarella, & Baumgartner, 2007; Webster-Wright, 2009; Wenger, et al., 2002].

Creative contextual learning is represented by a wide variety of adult education providers who offer a rich portfolio of educational resources of innovative instructional designs based in authentic learning experiences. These providers offer ease of access and delivery strategies that support contextual learning opportunities, as well as alternative forms of assessment [Maehl, 2000]. At the heart of these designs is the focus on skills and action applications within their work context, of problem-based learning, of knowledge innovation. As a key example, many world-wide corporate training efforts now are refocusing upon knowledge management accountability, upon contextual learning (often in simulations, case studies, and other experiential engagements) and upon utilization of information technology for networking knowledge. These corporations not only provide training for their employees, but are often engaged in research and

development to craft contextual learning designs to improve their company employee's innovation. It has been reported that global training efforts had expenditures of $28 billion in 2002 [The World Bank, 2003] with current estimated expenditures reflecting over $50 billion in 2009. These training expenditures often represent focused efforts in contextual learning, learning in action, and group or organizational joint learning efforts. In particular, business and industry adult education providers no longer believe it is sufficient to have a didactic classroom experience as the base for updating workers' abilities. Thus, experiential, active learning experiences and the use of information technology as an information supplement and social networked learning experiences provides important value that impacts one's work, one's sense of self efficacy, and one's key contributions to community and society.

Digital Age Providers: Paradox of Access and Universal Participation

The second trend in adult higher education is new understandings for the management and for the design of programs as part of the digital age economy. As suggested by the World Bank, in 1990, it took six years to go from concept to production in the automobile industry. In today's environment, that process takes two years (The World Bank, 2003, p. 2). With this rapid innovation and change, what does it suggest for the education and continuing development of adult learners? Consider your current use of information technology as a support of your work, of your programs, of your instruction, and of your connections to adult learners. For example, I am astonished at the rapid use and innovation of social networking with Facebook, Twitter and others technology supports for learners, with over 60 million adults, or approximately 1/3rd of the population – in the US visit social networks in less than four years of availability [Ostrow, 2009, p. n.p.]. For example, in 1999, 92 percent of the larger US corporations were piloting Web-based training programs; today most of these US corporations are now engaged in both online and computer-based adult training and continuing education [Moore, 2010, January 10; The World Bank, 2003]. In 2004-2005, approximately one-third (32 percent) of USA adults reported participation in adult educational activities with some form of distance education [O'Donnell, 2006]. A number of sources suggest that formal and informal online adult learning programs now includes 60% of US adults. Many of our communications regarding our educational offerings, as well as our involvements with adult learners, are now accessed predominantly through information technology, rather than personal interactions via phone or visits. For example, my North Carolina State University faculty is now experiencing more interaction with their prospective and current graduate students through e-mail, Facebook, and e-learning options, than through traditional office visits or phone calls. But, with this shift of interactions, our

faculty has also developed understandings of the levels of communication and interaction in this process. We now speak to the quality of our interactions, how we present our work, our relationships, our "social presence" through these digital communications relationships. We are now more focused on the quality of personal interactions, rather than just dissemination of information. A key trend of becoming digital age provider represents many challenges at both a personal level of leadership and instruction, as well as our representation of programs, activities, and institutions. This digital age has offered new possibilities in the changing context, while challenging us to maintain our values and relational commitments to our work and to our learners. How can we make sense of our future through "24/7" (referring to 24 hours a day and 7 days a week) opportunities for connection and learning, for supporting our values of access and participation, while also providing quality learning and research supports to adult learners?

In considering the role of adult higher education as a digital provider, it is helpful to divide our adult workforce learners into two broad categories. On group of adult learners are those who lack technology skills and potentially other foundational knowledge and skills for the workforce. These individuals provide an important challenge for adult higher education to provide access and participation in relevant and meaningful learning for the work and for technology as a tool for communications and actions within the work context. These adult learners require a unique set of programs and learning opportunities that invite and support adults as they gain skills and confidence in technology, as well as in foundational knowledge and skills of the work economy. A number of innovative workforce programs are using on-site instruction, with supplemental information technology, which support new understandings for these learners and their confidence in seeking and using knowledge through digital media. Most of these programs have found the need to conduct initial assessment of knowledge and skills, because of the increasing diversity of learners in these programs. In one entry job training program in our city, the workers represented a range of ages, differing language capabilities, and differing school backgrounds. Most of these individuals had experienced limited access to computers and the use of technology in their own personal lives. These individuals were often fearful of technology for their own work [Kasworm, et al., 2010]. These individuals often lack funding support and lack knowledge to access and participation in many of the workforce programs. Our role was vital for the development of these individuals in a knowledge economy. But, for these individuals and our work, their involvements in information technology has secondary focus to the important work of providing these individuals with basic foundational knowledge and skills to contribute to society.

Within adult higher education, we more often serve the second group of adult learners who are currently engaged in technology and view it as their

primary access to both information and learning. These individuals often view themselves as "continuous learners," seeking to upgrade their knowledge and skills for current job tasks or for new career options. They recognize that their currency in the job market requires continuous updating of knowledge and skills. For this second group, adult higher education faces a different challenge of access. With this group, AHE experiences the paradox of becoming more entrepreneurial, market-oriented, and revenue-focused. As suggested by Jarvis, "lifelong learning has become a process of consumption in the learning market we have to recognize the power of the consumers" [2007, p. 125]. Many of these individuals value education focused upon success in the marketplace and its direct application. Because information technology is part of their world, they also expect rapid response and rapid learning that fits within their needs and interests. For some, they also look to adult higher education as key societal advocates for this rapid learning approach. As noted by Jarvis, the learner as consumer has pushed many programs towards "just-in-time education" and a quick receipt of a credential. Thus, a number of these adult learners don't understand our standards for participation and access. For many of us working with e-learning programs, naïve adults often require additional discussion about the differences of quality learning indicators in internet programs, of the needed learner commitment to spend individual time in study and engagement. Often these individuals lack self-management of time and effort when they are outside of a classroom setting and beyond an instructor's voice and engagement. Thus, part of this trend for adult higher education is to become the expert in presenting understandings of quality learning outcomes in relation to access and participation in the digital learning environment. This expertise is important for communications with these adult learners regarding key expectations of learner responsibility, independent of the provider and instructor.

Beyond concerns for learner understandings of engagement in digital environments, the global market of tertiary education also has presented new dimensions of ethical understandings and standards, beyond learner desires and expectations. Within the USA, there has been an ongoing battle with "diploma mills" (unaccredited tertiary institutions) targeted to adult learners. Some of these providers suggest relatively quick access to information and a subsequent credential, with limited quality learning experiences. More often, these unethical providers utilize internet programs and suggest quick time completion for a degree. However, many of these providers present inadequate learning designs and instructional engagement, with impoverished learning outcomes. They often use instructors who have limited understandings of adult learning theory, of active learning designs, and of valid assessments for learning outcomes. Thus, as AHE continues to support access and participation as digital providers, one of the greatest

challenges is to design and advocate for quality learning environments to both learners and the community of tertiary providers.

Demonstrated quality learning outcomes, efficiency of access, and offering supports and social presence for digital adult learner has become a key landmark for success. AHE is creating new understandings of this culture of the digital education provider, of a culture of quality learning engagement through technology. This second trend represents innovative development of key standards for the provider and the learner, as well as interactive learning designs that make best use of technology as a tool for instruction and learning. Adult higher education has become a key advocate for quality digital learning in the adult workforce.

Knowledge Creation through Critically Reflective Engagement

The third trend is embedded within the other previous discussions and represents a key understanding of our unique contribution to adult learners in this knowledge economy. The rhetoric of this knowledge economy historically was focused upon an educated workforce. However, now there is a changing focus towards research and development – of creating new knowledge that can generate new opportunities, new option, and greater efficiencies and effectiveness in the workforce. Underlying this focus is the unique contribution of adult higher education, which integrates contextual work knowledge with the development of critically reflective learners. This focus on critically reflective engagement is based in current theory and literature of adult learning theory, as well as new understandings of competencies for a global economy. As suggested by a number of current discussions on global workforce competencies, society requires adult workers who can act autonomously with a critically reflective stance, can use societal tools interactively in creative possibilities, and can participate in socially heterogeneous, multicultural groups [Brookfield, 2000; Rychen & Salgarnik, 2001; Wilson & Hayes, 2000].

Although our adult clientele in adult higher education often seek specific expertise knowledge, the work of adult higher education is to provide adult learners with a richer and more in depth learning experiences based in the development of critically reflective understandings. We are responsible for updating the knowledge base of adult learners and their development of expertise, but we now face the more significant challenge of engaging their "influential tacit knowledge" towards new frames of understanding, of transforming their understandings of this new knowledge and its relevance to their actions in the world. These frames of new understanding are embedded in current adult learning models, representing critically reflective assessment and often reinvention of understandings and actions in the world [Brookfield, 2000].

If the future power of our global society is in knowledge creation, adult higher education is now challenged to create within adult learners knowledge and skills sets based in invention, critical thinking, and non-routine decision-making. Because past agrarian and manufacturing economies have relied on static knowledge models, adult higher education historically reflected that stable knowledge understandings and provided access for learners to the experts for that historic knowledge and understanding. But, this new era is not just about sharing expertise, it is about reinventing the learner's understandings and frames of examination and action in society. It is now focused upon the learner as innovative expert, rather than just the recipient of expert sharing knowledge. Thus, adult higher education is now developing challenging educational venues that support learners who can view the world from new and different ways and who become partners in the creation and innovation of knowledge in the workplace.

Adult higher education is now pivotal to the knowledge economy, by developing adult learners with strong self-directed learning, with creativity and openness to change, and with critical reflective problem-solving. As suggested by the CEO of Lenovo, adult workers can no longer be adequate workers if they are only recipients of new knowledge. These workers need to be part of the creative force in developing new knowledge understandings and innovative applications and insights in their work and community. This new era suggests that the viability of work is based upon critically reflective application of knowledge and skill. Adult higher education has become pivotal to this new ways of viewing knowledge creation, knowledge management, and knowledge applications. Our work has become one of the key drivers to a healthy and vital economy and workforce.

In the last decade, there has been a growing interest in the USA, regarding individual and business trend setters who are creating new business and new economic possibilities. Many communities in the USA are looking to this new phenomenon as an economic opportunity. They are closely considering how to attract and support "the creative class" of adults [Florida, 2002]. Communities are considering how they can create infrastructure that both attracts and retains individuals who are high profile creative learners and businesses based upon this creative synergy. Why be concerned about this new social phenomenon? These individuals and related companies are believed to provide over 30% of the new economic opportunities and to also attract related business and industry into regions of their operations. Not surprising to us, tertiary education and a rich portfolio of adult higher education providers has become important component in attracting their creative business entrepreneurs to a region. As noted by Florida, quality and diverse tertiary learning opportunities are significant for these individuals. Thus, adult higher education has become a key component of both attracting and creating knowledge environments that support creative

individuals and their work. These individuals no longer are looking for banking education, of just the dissemination of information. These individuals are seeking regions with tertiary learning environments that are contextual and authentic, are supported with digital media, and have critically reflective, self-directed engagement.

As noted by Wurzburg of OECD, the growth of new knowledge and of lifelong learning is important, "because human capital matters for the economic and social fate of individual, enterprises, and countries" [Wurzburg, 2003]. Because foundational knowledge and skills have become a basic requirement of all citizens, adult higher education now is a significant force in creating advanced knowledge workers who are a fundamental asset to the growth of the knowledge economy. The focus of our future in adult higher education is upon learning in action and invention, of aiding learners to be self-directed and critically reflective workers in this new knowledge economy.

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