論文 (*Article*)

Differential Socio-Cultural Dynamics of Mobile E-Learning in a Globalizing World: Exploring the Forgotten Dimension of Nomadic Knowledge Hunting

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We are in a new epoch of learning and intellectual communication, mostly engaging in, with and by new media. This paper explores the e-learning dynamics with high mobility and flexibility in new knowledge economies. After an introduction on ICT mediated communication and the globalization processes, Section 2 critically examines the ways / modes of the (non-)application of new media technology in the classroom either as a substitute for face to face or as a flexible mode of delivery, beyond university settings. Social consequences of new media technology will be questioned and debated in Section 3, focusing on the impacts on the knowledge agencies (teachers and educational institutions), the end users (students assuming more education role), the pedagogical outcome of teaching and learning, as well as social consequences of the new knowledge revolution. The paper ends with critical remarks on the prospect of intellectual – knowledge communications in the mobile age in a globalizing world.

Key Words : e-Learning, Information Society, Knowledge Economy, New Media, Social Dynamics

Introduction

Now, a new chapter for the history of learning begins! Information and communication technologies (ICT) significantly change the way, the time and place learning is conducted: the technology-supported learning models are eroding the dominance of traditional classroom (physical presence of educators and learners) mode of learning. The availability of ICT provides opportunities as well as threats and dangers to teachers and learners. Considering the impacts of globalization, this paper explores the comparative advantages of the ICT-mediated communication for e-learning, focusing on the human communication in the mobile age, the role of educational agencies and learners, as well as their strategic, innovative engagements with the new forms of learning media across territorial and temporal constraints.

The advanced educational technology application in learning milieu redefines not just the learning process and experience beyond the traditionally fixity of the specific role for teachers and students, and face-to-face communication, but more importantly, the new e-learning mode(s) indeed opens a broad

spectrum of, and a combination of multi-media, options for promoting learning in the knowledge universe, and the individual learners are wandering in/beyond the cyberspace. For learners at large, the new learning experience mediated by ICT, in mobile (anywhere), real time with round-the-clock (anytime) form, can be characterized by the 'nomadic' logic of knowledge acquisitions and transfers; by which learners follow the offerings of knowledge and know-how available in and beyond the cyberspace. We can say that e-learner is in fact the knowledge nomad, or treasure hunter, mediated by super-modern ICT.

Against the context that more policy initiatives towards e-government, e-commerce and e-learning, this paper critically examines the important role of learners and the socio-economic cultural milieu they anchor upon, as well as the social learning processes interfacing learners and educational institutions. It articulates that as social agencies and socio-economic system are undergoing changes driven by the globalization processes, learners' idiosyncrasies to respond and to pursue their strategic learning venture (why, where, when, what and how to learn) are nomadic yet innovative in many ways. For the learners' idiosyncrasies in terms of strong initiatives, critical engagements, and their creativity, they are instrumental for the success of the life-long learning project, taking into accounts of the economies of educational scale (local, regional and global) and the functional differentiation towards inter-disciplinary and-multi professional knowledge building, transfer and synthesis.

Maximal utilization of ICT in real world and cyberspace has been transforming some integral parts of educational institutions, ranging from the regulatory framework on quality assurance and credential accreditation to the actual delivery of educational products and services for a diversifying global population of learners. In the e-learning driven transformation, the role of knowledge agencies and the context they situate are important. This paper highlights the importance of: peer group formation and identity building for e-learning, the idiosyncrasy of the localized e-learners in the global educational network, and the nomadic (beyond spatial and temporal limits) e-learning experience.

1. E-Learning as Nomadic (ICT-)Mediated Communication in the Universe?

Socio-economic changes in the last two decades under the forces of economic liberalization have been much in line with rapid application of information and communication technologies (ICT) in production, exchange and consumption domains. The rapid spread of mobile communication among developed economies has been reinforcing the trend towards high-growth economic development, with the boom and partial bust of the dot.com global economy. In reality we are moving into a new phase of modernization (modernity) with excellent communication networking, in the information age!

1.1 Positioning E-Learning in Hyper-Modernization

The rate and scope of modernization in Asia is exceptional! Thanks to ICT applications, economic liberalization becomes the powerful force for social changes in the last three decades. Facing the rapid socio-economic development in Asian societies, particularly the NIEs of South Korea, Taiwan, Hong Kong and Singapore, and the high growth China, and exposed to the globalizing 'external' forces, capitals, goods, labor (and jobs) are more mobile than before. All these reinforcing hyper-modernization development in Asia, exemplifying by the Asian Miracle, the rapid recovery of Asian NIEs after 1997 Asian Financial Crisis, as well as the two decades continuing rapid economic development in China - with average annual GDP of above 7.9%.[2]

Hyper-modernization is also characterized by global competition towards increasingly use of ICT. Gifted by an increasing bandwidth utilization, faster downloads and improved processing power in handsets, juxtaposing the increasingly miniaturization of mobile digital phones and gadgets, 3G allows both producers and consumers to use extensive and intensive mobile exchanges and the data in/beyond cyberspace as they never could before in mobile phone environments, for work, e-learning, and entertainments.[3] A recent study reconfirms the hyper-modernization process, particularly the growth and application of mobile technologies, with

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2 Asian Development Bank (ADB), *Asian Development Outlook 2005*. Manila: ADB; On-Kwok Lai and Alvin Y. So, Hong Kong and the Newly Industrializing Economies: From Americanization to Asianization. In: Gerald A. Postiglione & James Tang (Eds.). *Hong Kong in the World System: Internationalization at Risk?* New York: ME Sharpe, 1997.

3 Patricia Thornton and Chris Houser (2005). Using Mobile Phones in English Education in Japan. Journal of Computer Assisted Learning 21(3):217-228; Jing Wang (2005), Youth Culture, Music, and Cell Phone B Branding in China. *Global Media and Communication* 1(2):185-201.

a shift of broad-brand beyond the 3-Generation (3G) technical environment.[4]

Thanks to the advanced applications of ICT, mobile technologies and Wi-Fi in particular (Fig. 1), teaching and learning can be free from territorial and temporal boundaries, and the limited knowledge base. The enabling function of e-learning is derived from the flexibility and mobility of ICT, in different temporal and spatial arena. With the proliferation of Wi-Fi technology, commonly known as 'Hotspot' for users, and the coming of WiMax (a long range version of the popular Wi-Fi technology allowing Notebook and PDA to surf the Internet, making the expensive 3G mobile network redundant), people using mobile devices like cell phones, PDA and Notebook can check e-mail, surfing the Web, as well as down-and-up-loading messages and multimedia files, anywhere and anytime in our world, even when cruising at 10,000metres altitude above the ground.[5]

The advanced application of educational technologies in learning milieu at this historical conjuncture redefines not just the learning process and experience beyond the traditionally fixity of the specific role for teachers and students in terms of face-to-face communication, but more importantly, the e-learning offerings indeed open a broad

spectrum of options for promoting learning in the knowledge universe, and the individual learners are wandering in the space. Now, a new chapter for the history of learning begins. For learners at large, the new learning experience mediated by ICT, in mobile (anywhere), real time with round-the-clock (anytime) form, can be characterized by the 'nomadic' logic of knowledge acquisition and transfer; by which learners follow the offerings of knowledge and know-how available in and beyond the cyberspace. We can say that e-learner is in fact the knowledge nomad, or treasure hunter, mediated by hyper- or super-modern ICT.

1.2 Selling E-Learning in Digital Capitalism

The role of ICT in global capitalism (what Dan Schiller refers to as *digital capitalism* — the condition in which ICT networks directly generalize the social and cultural range of the capitalist economy) is greater than ever before. Although the idea of digital capitalism is predominantly for the developed world, the assertion that the corporate-led market system has been somewhat globally transcended is very important:

What is historically new is a change in the sweep of corporate rule. For the first time since its emergence in the early twentieth century, the

Fig. 1: Worldwide Wi-Fi Statistics
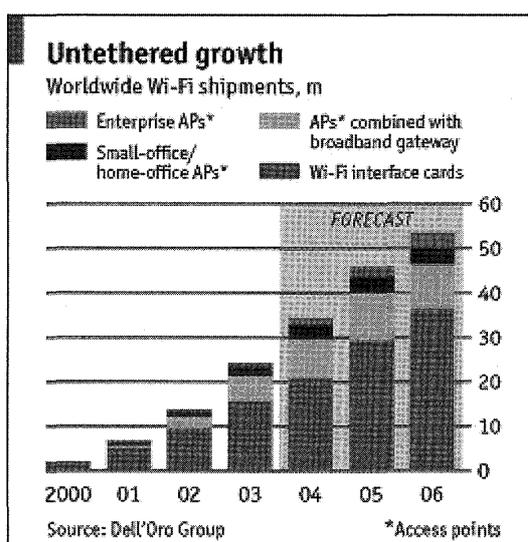
(Source: *The Economist*, 10. June 2004, online edition)

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4 Brian Wieser, Gadget-Generated Growth: An Overview of 3G for Marketers. Retrieved on 14.October 2005 <http://www.interpublic.com/read_file.php?did=302>

5 Wi-Fi is a wireless technology that allows broadband internet communication over a range of about 50 metres. "Wireless Internet", *The Economist*, 27. January 2005, online edition. For instance, the Lufthansa (German airline) now offers the FlyNet, a unique on-board portal for Internet broadband on its long-haul routes.

corporate-led market system no longer confronts a significant socialist adversary anywhere on the planet. Digital capitalism also is free to physically transcend territorial boundaries and, more important, to take economic advantage of the sudden absence of geopolitical constraints on its development. Not coincidentally, the corporate political economy is also diffusing more generally across the social field.[6]

Commercialization of education beyond normal schooling is nothing new, but what is new about the present mode of off-campus and off-schooling of continuing and professional education is a new regime of lifelong education, which in reality, brings into all possibility of educational initiative, within and beyond the traditional non-profit making educational institutions. This new form of online education therefore has to derive its revenue, mostly based upon the business model of self-financing, either through the combination of the followings sourcing with subscription, fee charging, web-advertisement and/or sponsorship, though there is still initiative for non-profit informative / knowledge websites which are not intended to generate revenue from their own right. Yet, economic conditions exercise a considerable constraint on the offerings (both in product and service terms) of online e-learning available to users.

But overall speaking, the commercialization dynamics is much shaped by government policy and regulations for promoting online e-learning. In other words, it is rightly pointed out that

the situation is rather more complex than this. The pace of technological change, increasing competitiveness within the industry, and the consequences of globalization have created a more unstable and unpredictable commercial environment. Government policy on education has – at least in the short term – offered a

degree of security; and, in combination with the operation of the market, this has led to a narrowing in the range of material available and in the kinds of learning that are emphasized and valued. Yet, while some sectors of the market are clearly booming, others are looking decidedly unsteady; and in the case of the Internet, there is still considerable uncertainty about the most effective means of generating income.[7]

2. From Pedagogic Transitions to Paradigmatic Shift?

Times change, technology changes, and we move inexorably into the twenty-first century. We live in a new economy of global capitalism that is both informational and networked. Juxtaposed the rise and fall of the dot.com economy, the new, ICT-based governance structure of the so-called information society is emerging.[8] At the global level, the WTO endorses the pro-market initiatives for educational services as tradable, within the framework of the intellectual property rights and the General Agreement on Tradable Service (GATS), all these enable the further commercialization, portability and mobility of educational services, resulting that universities and professional training become global business, mostly for profit making.[9]

ICT offer a wide range of new opportunities for various forms of education and more importantly, the use of ICT for learning purpose – the very essence of E-learning, provides comparative advantages not just for the delivery of education, learning agencies and institutions per se, but more importantly, for learners at large, e-learning enable the advantages for their independence against the constraints of time and space, as well as the individualization (specific for tailor-made) of learning experience.[10]

For learner, the individual is always situated in a

6 Dan Schiller, *Digital Capitalism: Networking the Global Market System.* Cambridge, MA: MIT Press, 1999, p.205.

7 David Buckingham and Margaret Scanlon. "Selling Learning: Towards a Political Economy of Edutainment Media." *Media, Culture & Society* 27(1):41-58, 2005.

8 On-Kwok Lai, Differential E-Mobilization and Cyberspace in East Asian Economies: Contours of the Emerging Cyber-Activism and (Anti-)Democratic Regimes in the Informational Society. In: Jason Abbott (Ed., 2004) *The Political Economy of the Internet in Asia and Pacific.* Westport, CT: Praeger, 2004; On-Kwok Lai, Cultural Imperialism, State's Power and Civic Activism in and beyond Cyberspace: Asia's Newly Industrializing Economies (NIEs) in Comparative Perspective. In: Russell Smandych & Bernd Hamm (Eds.) *Cultural Imperialism: Essays in the Political Economy of Cultural Domination.* Peterborough: Broadview Press, 2005.

9 Christopher Scherrer, "The Role of GATS in the Commodification of Education", in Bernd Hamm and Russell Smandych (eds.) Cultural Imperialism: Essays on the Political Economy of Cultural Domination, Peterborough: Broadview Press, 2005; Dan Schiller, *Digital Capitalism: Networking for Global Market System,* Cambridge, MA: MIT Press. 1999; "Universities as Global Business", *The Economist,* 26.Feburary 2005, pp.63-65.

10 Christian Dalsgaard, Pedagogical Quality in E-Learning: Designing E-learning from a Learning Theoretical Approach. E-Learning and Education (eleed). February 2005. <http://eleed.campussource.de/archiv/78/>

socio-cultural context of (face-to-face) learning, in terms of linguistic, phonetic and semantic exchanges, as well as body language reciprocity during learning exchanges with his/her counterparts of co-learners and/or teacher, whereby the exchanges and collective activity of the others in presence are important in shaping the construction of knowledge. Yet, e-learning has replaced the face-to-face domain with the mediated communications of texts, symbols and multimedia. Here, the media, content and process of exchanges and interactions in the ICT mediated milieu of e-learning, without face-to-face encounters, in the cyberspace, are important in shaping the processes, experience and outcomes of learning.

E-learning reshapes not just the spatial and temporal dimension of where and when the learning can be taking place, but more importantly, reformats the tradition mode of teacher-learner role and relationship. Now, a learner is no longer just learnt from teacher, but she/he learns within a network of learners who can and will assume differential role, ranging from passive learner to active knowledge provider, as the developmental stages and tasks for learning evolve – all carrying out a multiplicity of information and knowledge exchanges within the peer group and sometimes beyond that. The synergy, though with occasional chaos, can be developed if the learning process can be continuously enhanced, with mutual adjustment and socio-informational exchanges.

Here, the most important part of e-learning is the (assumed and implicit tendency for) collaboration with other participants (students and teachers) in the non-face-to-face domain of learning, but sometimes the design of e-learning (sometimes) with standardization and linear-sequencing of contents (with the expected outcome) straitjackets the learning process and limited the discovery of new knowledge by learners themselves. It means that technology can unintentionally put restriction on active discovery learning, but reinforcing the disadvantages of the traditional, dependent and passive mode of learning.[11]

In other words, the old learning environment with teacher's leading discourse in the traditional classroom, followed by the literary practices of, say, writing a term paper, or presenting / debating a written argument, are no longer the norm. In the e-learning mode, web-surfing, up and download of file in both text and multimedia formats are becoming the dominant way of communication. Less voices being heard but more diversity and experimental! This change is juxtaposing the complexity in the mobile age that as ICT mediated communication becomes more and more network alike: decentralized with sometimes chaos, and rooted in multimedia; the distinction between discourse and literacy becomes less relevant, resulting in redefining intellectual communication and knowledge transfer.

Obviously, the pedagogic transitions take place in a negotiated (between teachers and learners in and out of cyberspace), zig-zag and up-and-down mode, and hence it is a non-linear one. Yet, we can still identify the extent of the control and degree of freedom for individual e-learner, in terms of his/her degree of the (non-)activeness, supportive-dependence, partial-independence and total-independence in mastering the mediated communication behavioral repertoire.[12]

The pedagogic transitions are obvious that traditional teaching milieu, the territorial boundaries of classroom and campus are less relevant for teaching and learning, instead, the hyper-mobility of learning is enabled by ICT and operates within and beyond the unlimited cyberspace; it seems that all these initiatives for e-learning for lifelong will eventually making a paradigm shift (the very essence of learning) move into a non-achievement base process, moving beyond the instrumental value of learning for something....

Paralleling, and contributing, to the transitional processes is the accessibility of, and affordability for, the technological set-up and know-how. The consequence is that people can easily adopt new mobile communication technology into their work and personal life, not only for functional tasks but also the attractive status/identity symbols for their social life. For this trend, pedagogic transitions become an integral part of the momentum towards a ubiquitous information society. Yet, before e-learning can be fully incorporated into our social life (as a habit of reflective learning), it is not yet to signify the move towards a new learning

11 Dalsgaard, 2005, op.cit.

12 Miri Barak, "Transition from Traditional to ICT-enhanced Learning Environments in Undergraduate Chemistry Courses", *Computer & Education*, (2005, in press).

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paradigmatic shift – but obviously, the critical question is not if and how, but when(?).

3. The Remaking of E-Learning-Driven Transformation

子曰：「學而不思則罔，思而不學則殆。」
（論語）

"Learning without thinking is labor lost; thinking without learning is perilous"

(Confucius, *The Analects*, II:15)

Different aspects of flexible education are put into experimentation in both real and virtual environments. The question is how critical and reflexive (e-)learning can new ways of experimentation go. Learning with and through the mediated space will likely shape a more flexible and mobile modal of knowledge acquisition and the co-evolution of knowledge building – they will generate differential outcomes of learning, as well as the pedagogical consequences which are redefining the contours of learning.

Maximal utilization of ICT in real world and cyberspace will like transform some integral parts of educational institutions, ranging from the regulatory framework on quality assurance and credential accreditation to the actual delivery of educational products and services for a diversifying global population of learners. In the e-learning driven transformation, the role of knowledge agencies and the context they situate are important.

3.1 E-Learning as a New Praxis?

E-Learning opens up new dimension of communication and praxis, as cyberspace is almost unlimited, all projects and comments can be made visible for the whole group, such that everyone can learn from more than their own project or example. Comparing, copying, discussing, and most of all cooperating and revising are encouraged rather than controlled. In a facilitative climate, experiences of the positive and negative, are shared, aiming for improvement, rather than mistakes, are sought.[13]

The logic of e-learning, sharing much of other forms of the Internet enhanced / mediated communication, is that it is an open access and less hierarchical one: participants and the virtual communities extend their knowledge horizon by communicating round-the-clock, with the unlimited supply of information and knowledge from the web and cyberspaces. But the extent of e-learning participation is much shaped by some pre-requisites and pre-conditions, like the computer literacy and knowledge on ICT application, on the one hand, and the share meaning and understanding among participants in the mediated communication.

For the computer literacy, it is not just the operational-administrative skills to managing ICT devise for e-learning, but also the critical thinking about the cognitive and social dimensions of learning – targeting the integration of technology skills, computer-based cognitive tools and literacy practices to enhance the learners' thinking in the critical and reflective dimension.[14]

For the mutual understanding or the share meaning among the e-learners, there are two important aspects of structural constraints. Firstly, there is higher chance for mediated communication in a chaotic flow of conversation and discussion with texting and/or multi-media bombardment when no pre-training is given for e-learning. Secondly and more importantly, the mediated communication can be more effective for idea generation and problem-solving tasks and making options available, but less effective (if no pre-training is given) for decision making and other judgmental tasks which require higher coordination efforts of both communication contents and protocols.[15]

In short, we need to enable the learners' deliberative skills (informational personality in terms of ICT literacy and critical reflection) people may possess, and look into what actually happens in cyber and public spaces where the debates are mediated and articulated.

13 Renate Motschnig-Pitrik, 2005, "Person-Centered E-Learning in Action: Can Technology Help to Manifest Person-Centered Values in Academic Environments?" *Journal of Humanistic Psychology* 45(4):503-530.

14 Kay Kimber, Hitendra Pillay and Cameron Richards, "Technoliteracy and Learning: An Analysis of the Quality of Knowledge in Electronic Representations of Understanding", *Computer & Education*, (2005, in press).

15 Caroline Cornelius and Margaret Boos, "Enhancing Mutual Understanding in Synchronous Computer-Mediated Communication by Training", *Communication Research*, 30 (2, April, 2003): 147-177.

3.2 Idiosyncrasy of E-Learners

E-learners at the initial stage of encountering cyber-communication are not used to taking full responsibility for their own learning, due to socio-techo inter-facing problems, juxtaposing the motivational one. Some are even really confused. More than obvious, we need to give them more guidance such that they do not feel lost, alongside with enhancing learning motivation.

Flexibility of e-learning as independence of time and space requires a good design of curriculum and delivery of education as if do-it-yourself (DIY) and self-learning, with the assistance of online and offline supports ranging from search engines, reference library and dial-up call centre or network for further enquiry. Here, the individual's own motivation and cognitive skills are put to test. Perhaps, the former one is more critical for the success of independent e-learning. It has been noted that, based on differential motivational-affective factors and the cognitive-instrumental values-driven strategies, there is wide range of learning approaches. For example, if the goal is to pass the examination, learn key facts – a surface approach is involved. If there is more interest on the subject matter (as hobby and interest), a strong motivation to comprehend the subject matter, a deep approach is involved. If the goal is to maximize grades and making best use of time; an achieving approach is involved.[16] Hence, one's own motivation and perception on the expected (vis-à-vis the actual) gratifications derived from e-learning will shape the differential participation mode (Fig. 2).[17]

To further enhance the e-learning performance, the Personal-Centred e-Learning (PCeL) approach is recently mooted.[18] Appropriate utilization of the Internet, as knowledge source and teaching material sources, and maximal opportunities for communication and participation, on and offline, the PCeL approach emphasizes the followings:

> focusing on the needs of the individual or small team as well as on the group as a whole and, at the same time, sharing the responsibility of meeting the requirements preset by the curriculum requires not only inner flexibility but also a considerable amount of time. This means time to think, to communicate, to structure and organize contributions, to make them effective for the whole group, to provide special material, and, initially, time to acquire the skills necessary to shift from being a good instructor to becoming a good facilitator of learning.[19]

Fig. 2: Motive and Strategy in Approaches to Learning

Approach	Motive	Strategy
SA: Surface	Surface Motivation (SM) is instrumental: to meet requirements minimally; a balance between working too hard and failing.	Surface Strategy (SS) is reproductive: to limit target to bare essentials and reproduce through rote learning.
DA: Deep	Deep Motivation (DM) is intrinsic: study to actualise interest in what is being learned; to develop competence in academic subjects.	Deep Strategy (DS) is meaningful: read widely, inter-relating with previous relevant knowledge.
AA: Achieving	Achieving Motivation (AM) is based on competition and ego-enhancement: to obtain highest grades, whether or not material is interesting.	Achieving Strategy (AS) is based on organising time and working space; to follow up suggestions; behave as a 'model' student.

(Source: Bobbie Matthews 2001)

16 Bobbie Matthews, "The Relationship between Values and Learning", *International Education Journal*, 2 (4, 2001): http://ehlt.flinders.edu.au/education/iej/articles/v2n4/MATTHEWS/PAPER.PDF

17 Zippy Erlich, Iris Erlich-Philip and Judith Gal-Ezer, "Skills required for Participation in CMC Courses: An Empirical Study", *Computers & Education*, 44(005): 477-487; Oscar Peters and Somaya ben Allouch, "Always Connected: A Longitudinal Field Study of Mobile Communication", *Telematics and Informatics*, 22 (2005): 239-256.

18 Renate Motschnig-pitrik, 2005. "Person-Centered E-Learning in Action: Can Technology Help to Manifest Person-Centered Values in Academic Environments?" *Journal of Humanistic Psychology* 45(4):503-530.

19 Motschnig-pitrik, Renate. 2005. p.512.

3.3 Peer Group Formation and E-Learning Dynamics

The offering of new ICT for learning purpose is no longer just one-directional teaching (and in response, passive learning) but a wide range of possibility to be involving with others, and be active participatory. The cyberspace hence is the embryo for active involving and engaging communicative actions with various forms of multimedia, online and offline, real time and the delayed one (in the knowledge archive), hence the learning processes are co-developing, co-evolving with students' participation of information exchange and sharing.

More specifically, both learner and knowledge agent are shaping each other's action and reciprocity – this is in terms of both motivational dynamics and the Internet skills. Each will reinforce the other.

E-learners are no exception, if compared with other mobile communicators, they tend to form group and peer either as structured by teaching program or sharing similar learning objectives, within the same learning media. For this, they share their interest (for different reasons) of learning, to communicate peer-to-peer, rather than broadcasting question beyond their defined cyberspace. For this idiosyncrasy of mobile communication actors, internet service providers as well as software vendors are more than willing to support the formation of cyber-communities, in which with niche marketing strategy can be employable and hence profitable. For instance, there is an increasingly use and application of mobile buddy-finding, represented by virtual games and virtual dating services available in and beyond cyberspace.[20]

The cyberspace is more mobile and omnipotence than the computer (fixed line) one and is instrumental in various stages of e-learning. More often than not, individual chat rooms and discussion lists are a main vehicle that enables people to communicate and e-learn from each other. Obviously, this can facilitate the discovery of new knowledge on most aspects of life, say, the debatable socio-environmental issues, and the capacity building process for social agencies concerned; all these processes of e-learning can be contributory to the formation of the group shared meaning and hence identity building.

3.4 Pedagogical Outcome of E-Learning

Recently, e-learning becomes an integral part of knowledge acquisition and transfer in educational and training institutes. The pedagogical outcomes are mostly satisfactory that students can approach the subject matter in novice ways, as well as the enhancement of teacher's productivity. More specifically, thanks to its participatory mode and the built-in networking effect, e-learning contributes to several important aspects of education. Firstly, it facilitates new and exploratory ways for the investigation, particularly when e-learners engage in inter-disciplinary and multi-disciplinary studies. This advantage of e-learning has been well articulated in the Problem-Based-Learning. Secondly, as the sources of information and knowledge are almost unlimited in the cyberspace, this enables learner's accessibility to and visibility (extending his/her knowledge horizon) on the knowledge. Thirdly, the interactive communication of the e-learning process facilitates the feedback and reflections upon individuals and sub-group, and if this reflective aspect of e-learning can be further reinforced by the mentor's positive reward mechanism, e-learners can usually treasure the learning experience and will have positive effects on the development of their self and critical learning ability.[21] Last but not least, e-learning is a process by itself which is never ending (chaotic?), as more and more new knowledge and communication exchanges taking place.

4. Knowledge Communications, Transfers and Praxis in the Mobile Age

子曰：「學而時習之，不亦説乎。」（論語）

"Isn't it a pleasure to study and practice what you have learned?"

(Confucius, *The Analects*, I:1)

Confucius, in the pre-modern era, acknowledged the fact that good learning experience, emotional attachment and happiness go hand-in-hand – this is also confirmed by recent studies on various aspects of mobile communications; more even so if we examine the socio-technological interaction between people and mobile communication devise - the extent of the personalization of mobile devise reinforces not

20 Xiaoqing Li, "Buddy-Finding in the Mobile Environment", *Technovation*, 25 (2005): 1017-1023.

21 Gerard van den Boom, Fred Paas, Jeroen J.G. van Merrienboer and Tamara van Gog, "Reflection Propmpts and Tutors Feedback in a Web-base Learning Environment: Effects on Students' Self-Regulated Learning Competence", *Computers in Human Behavior*, 20 (2004): 551-567.

the just the maximal usage of mobile ICT, but also developing a sense of belong and assurance with the mobile devise and its networks.[22]

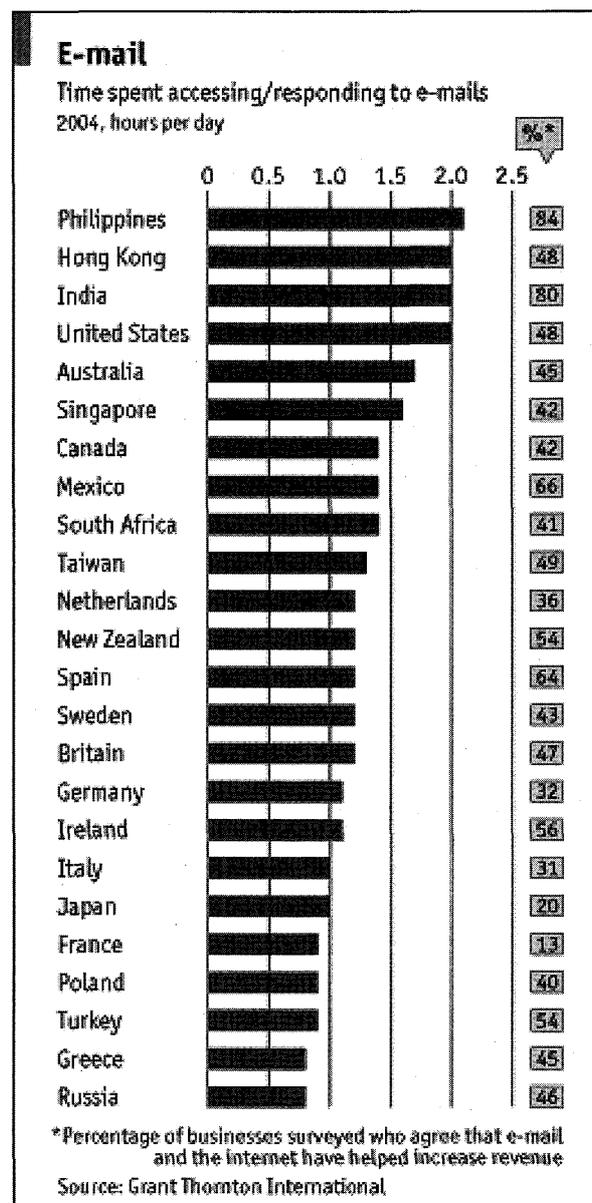### 4.1 The Entangled E-Learning: Prisoner of Knowledge?

At this historical conjuncture, distance and open learning is enabled by, and embedded with, new forms of e-learning. The rate at which a variety of institutions is entering the distance / open learning arena is increasing rapidly. But the increased popularity and presence of online learning opportunities go global are not compatible with the quality assurance, and in many cases, learners are skirtjacked or imprisoned by the informational web available on and offline. This condition has been also reinforcing by the increasing commercialization of educational and learning activities. In other words, the real interest and motivation for learning, from learner's perspective, are forgotten in the process for further digitization of e-learning experience.

The further digitization of communication in general and learning in particular can be witnessed by the trendy up-taking of wireless and mobile communication networking. Gifted by ICT, the further intensification and extension of teaching and learning activities, in both real and cyber worlds, are the consequences of, as well as the forces of reinforcing, the globalization project. This can be seen by the exponential take-up rate of Wireless LAN: in spite of strong competition in terms of lowering pricing and the demand for better quality in ICT market, the total Wireless LAN (WLAN) market revenue grew 26%; and the shipments of WLAN SOHO equipment also increased year-over-year by 22%,[23] this is in line with the exponential growth of the internet utilization at global level that, e-mail is almost universally used by businesses around the world (Fig. 3).[24]

More specifically, the availability of e-books and online libraries is shaping the contours of learning. It is rightly pointed out that
> Though the prospects for this latest incarnation of the e-book are unclear, Google, Amazon and the others may see it as a useful weapon in the

Fig. 3: E-mail Usage for Business

E-mail
Time spent accessing/responding to e-mails
2004, hours per day

	%*
Philippines	84
Hong Kong	48
India	80
United States	48
Australia	45
Singapore	42
Canada	42
Mexico	66
South Africa	41
Taiwan	49
Netherlands	36
New Zealand	54
Spain	64
Sweden	43
Britain	47
Germany	32
Ireland	56
Italy	31
Japan	20
France	13
Poland	40
Turkey	54
Greece	45
Russia	46

*Percentage of businesses surveyed who agree that e-mail and the internet have helped increase revenue
Source: Grant Thornton International

(Source: *The Economist*, 5. March 2005, p.102)

wider war to dominate the internet. In the quest for visitors, and the advertising revenues they bring, the big portals have rolled out inducement after inducement, from instant messaging, e-mail and web telephony to picture-sharing, games and a host of other new services. By adding yet another feature, they hope to win business from

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22 James E. Katz and M.A. Aakhus (eds.), *Perpetual Contact: Mobile Communication, Private Talk, Public Performance*. Cambridge: Cambridge University Press, 2002; Kristof Nyiri (ed.) *A Sense of Place: The Global and the Local in Mobile Communication*, Wien: Passagen Verlag, 2005.

23 Dell'Oro Group, "Worldwide Wireless LAN Market Exceeds 26 Percent Revenue Growth in 2004", http://www.delloro.com/news/2005/WL030105.shtml, retrieved on 7.March 2005.

24 "Email", *The Economist*, 5.March 2005, p.102.

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each other—or at least ensure they don't lose it.[25]

Given a highly developed mobile communication regime for learning in the coming decade, e-learning will be undoubtedly an integral part of the knowledge acquisition and skills upgrading, for individuals as well as for society at large. This is particularly the case when facing the permanence of labor market restructuring under globalizing forces (of corporate downsizing, offshoring and outsourcing of jobs), it is a norm that lifelong learning for individuals to cope with the new (knowledge and skills) requirements for survival in global capitalism is a default. But the globalization driven demand for lifelong (e-)learning will likely reinforcing more intellectual and knowledge slavery – making everyone become the prisoner of knowledge.

4.2 Global (e-)Learning Praxis for Humanization

Educational projects in general, higher education expansion in particular, are strategic for national development, and more even so for developing countries which e-learning initiatives at all level of education become an iconography for socio-economic development. Governments are rapidly expanding their higher-education systems, with China and India probably witnessing the biggest expansion of student numbers in history. They are trying to create centres of excellence and throwing open the sector to private entrepreneurs.[26] But most of the attempts are reinforcing the developmental needs for flexible mode of knowledge re-production in a globalizing world.

Here, the ICT enhanced flexible production regime is generating more wealth and global economic activity. Yet, far from developing an equitable and better society, our ICT driven post-material society has produced more social calamity than ever: the digital divide and the formation of an almost permanent under-class, multiple unemployment, job insecurity etc.,

within the realm of the advanced high tech and knowledge based new managerialism. The present form of the informatization of people's work and societal (-virtual) encounters has reinforced a divided-cum-dual society: the informational-based formal economy is juxtaposed against a down-sized labor-based informal economy resulting in a spatial structure: a city that combines segregation, diversity, and hierarchy.[27] Obviously, there is an urgent need to call for a normative development agenda, for the humanization of the ICT in general and e-learning in particular.[28]

Hence, the project for e-learning is not accomplished without the following two aspects of social development. Firstly, at the global level, it is the meeting the needs of underserved populations and mobilizing resources for e-learning towards better social (human) development locally and globally. For instance, access to education and learning is crucial for the project.[29] For this challenge, given the digital divides and socio-economic fault-lines in many parts of the world, the problematic global poverty and the social impact of globalization, it will like take more than decades to accomplish.

Secondly, for the individuals, as learning (the act of acquiring new knowledge) has both intrinsic value and instrumental meaning, the move towards an electronic enhanced mode of learning is undoubtedly fast and speedy, though sometimes the process is experimental, chaotic and zig-zag. More importantly, the dynamics for attempting to personalization of the mobile technology as a new form of communication (when people use, attempting to maximize the gain from, ICT) will reinforce the momentum for e-learning in future.[30]

Yet, the challenge for this new regime of (e-)learning is not just the technological design nor the instrumental value for learning (say, status and skills upgrading, or for profit making) per se, but the importance of personal involvement into the cyber-learning – being fun and much

25 "A Library at your Fingertips", *The Economist*, 4.November 2005, online edition.

26 "A World of Opportunity" *The Economist*, 8.September 2005, online edition.

27 On-Kwok Lai, "Differential E-Mobilization and Cyberspace in East Asian Economies: Contours of the Emerging Cyber-Activism and (Anti-)Democratic Regimes in the Informational Society", in: Jason Abbott (ed.) *The Political Economy of the Internet in Asia and Pacific*, Westport, CT: Praeger, 2004.

28 World Commission on the Social Dimension of Globalization (WCSDG), *Report: A Fair Globalization: Creating Opportunities for All*, Geneva: International Labor Office, February 2004.

29 Michael Osborne, Jim Gallacher, and Beth Crossan (Eds., 2004). *Researching Widening Access to Lifelong Learning: Issues and Approaches in International Research*, New Year: Routledge.

30 James E. Katz and Mark A. Aakhus, "Conclusion: Making Meaning of Mobiles – A Theory of Apparatgeist", in James E. Katz & M.A. Aakhus (eds.), *Perpetual Contact: Mobile Communication, Private Talk, Public Performance*. Cambridge: Cambridge University Press, 2002.

socio-emotional gratifications derived from the learning process; very much like the mobile phone's offering that it is a personalized techno-social set-up for communicative actions.

To put this in history terms: a thousand years ago, Confucius was right when he pointed out that "So diligent and occupied am I in learning as to forget meals, and so great a rejoicing have I attained in it as to forget all worries and sorrows. In such a mood, I even forget I am getting old". Though web or Internet – addiction is problematic nowadays, how to make learning a wonderful and happy experience is still a challenge for all of us. For future prospect, the interfacing between the individuals – their motivation, perception and feeling and the context (of, say global competition) towards the lifelong e-learning is critical for its processes and consequences. To put it shortly: whether e-learning is fun and gratifying (or not) will shape the prospect of the global e-learning project.