

# Chapter 10

## Innovation in Learning and Rise of the Internet: Grassroots Human Development

**Hakikur Rahman**  
*University of Minho, Portugal*

### ABSTRACT

*Innovation includes almost all spheres of human life and society with the upsurge of technology. Ranging from basic human needs, societal requirements, capacity development, and knowledge management to advanced researches, all are dependent on technologies and invariably driven by innovation. Learning is an essential element of human development. From the very beginning of capacity development, learning has become an important aspect in terms of individual or collective knowledge acquisition. This chapter broadly focuses on human development through utilization of innovative approaches of Information and Communication Technologies (ICTs), especially the Internet. The specific research focus is to find out the trend of the Internet usage with respect to gender, age, and region, and deduct a relationship of the growth of the Internet user in adopting strategies like open innovation on introducing tools like interactive learning for the overall human development.*

### INTRODUCTION

The main context of this study is to hypothesize an innovative way to improve the grass roots human development through innovative learning techniques, interactive learning, and by using

another innovative means, the Internet. Majority of the world population lives in Asia and Africa, but without sufficient information infrastructures. Among the challenges in reaching out to these populations with knowledge content are social, cultural, geographical and economical. There, poverty prevails over any development task. Even education campaign, which is the most basic need

DOI: 10.4018/978-1-4666-4769-5.ch010

of a knowledge society, cannot be run as the forerunner, as food security or shelter or employment take over that place. However, in recent years, the Internet came to the rescue to raise the knowledge of each and every user from all corners of the world in various forms and nature. Collectively and effectively, with the emergence of mobile devices and WiFi technologies, reaching out to the Internet is not difficult any more. Anyone can reach to the World Wide Web (WWW), anytime from anywhere. That could be for checking the weather, or time of a popular movie, or checking of the email, or chatting with friends, or connecting to a social network, or connecting to the university library, or finding a location, or time of arrival/ departure of bus/train/airplane, or glimpsing to a news paper, or running a content search on individual needs. To this study, all of them are adding some sort of knowledge to the user and making them advanced towards the next future approach to tackle similar situations.

This form of learning and adding knowledge content is informal and demand dependent. In this aspect the study foresee that, learning could be either formal or informal, but need to be demand oriented, so that the learner can add his/her presence in the environment to increase the knowledge content. Furthermore, this form of learning is interactive, updated instantly and adaptable to ambiances. Henceforth, the study is discussing on a few perspectives on interactive learning for raising the knowledge content for human capacity development. Evidently, majority of the content on the Internet are open sourced, open ended, open timed, open gendered and open platform. If not, thrust should be given to make them so, that each and every user of the Internet has the access to the content they seek for raising their knowledge content. This research, certainly respects any check and balance situations for preserving privacy, security and ethics.

Interactive learning is an innovative approach for delivering electronically mediated and well-designed learner-centred learning environments

to anyone, anyplace, and anytime by utilizing the Internet and emerging digital technologies in respect to instructional design principles. It involves learning through the use of ICT infrastructures. Nowadays, learning through the use of computer is simply online way of acquiring knowledge through the Internet. The online learning involves the use of Internet Browser or Navigator. It may be in form of Audio, Visual, and or Audio-Visual. The convergence of the Internet and learning, or Internet-enabled learning is called E-learning/M-learning/U-learning (Zhan & Jin, 2005; Ebner et al., 2009; Rahman, 2006a; 2008; Awodele et al., 2011). Whatever the term or form or format takes, the study emphasizes on value addition to the knowledge content of the learner.

Apart from the infrastructure and topologies, physical devices are other factor which control access to the Internet. In recent years, Laptops have taken a lead. However, robust, but cheap netbooks (for example, the Classmate netbook) could be the candidates for formal and informal learning settings. Nowadays, android-based tablets can support interactive, collaborative learning effectively but may be technically they need further update, and more importantly, economically they have to be reachable to common people (Haßler et al., 2011). ICT has become an increasingly extensive topic, moving beyond traditional static devices like computers to encompass emerging devices such as smartphones or tablets. However, with such a spectrum of devices, the question facing decision makers is which devices best promote interactivity and improve educational value in the learning system? Recent studies, mostly conducted in the developed world, have shown that mobile ICT devices are favored by virtue of their mobility (Barak et al., 2006; Ozok et al., 2008). As portable devices, the ICT encourage learners to become more active and engage with contents, creating new contexts and opportunities to explore beyond formal learning processes (Sharples et al., 2007).

Moreover, behind the information and communications technology for education (ICT4E)

17 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/innovation-in-learning-and-rise-of-the-internet/96656](http://www.igi-global.com/chapter/innovation-in-learning-and-rise-of-the-internet/96656)

## Related Content

---

### The Different Views of Software Quality

Bernard Wong (2006). *Measuring Information Systems Delivery Quality* (pp. 55-89).

[www.irma-international.org/chapter/different-views-software-quality/26160](http://www.irma-international.org/chapter/different-views-software-quality/26160)

### Management of Data Streams for Large-Scale Data Mining

Jon R. Wright, Gregg T. Vesonder and Tamraparni Dasu (2007). *Challenges of Managing Information Quality in Service Organizations* (pp. 136-153).

[www.irma-international.org/chapter/management-data-streams-large-scale/6546](http://www.irma-international.org/chapter/management-data-streams-large-scale/6546)

### A Methodology for Information Quality Assessment in the Designing and Manufacturing Processes of Mechanical Products

Zhanming Su and Zhanming Jin (2007). *Information Quality Management: Theory and Applications* (pp. 190-220).

[www.irma-international.org/chapter/methodology-information-quality-assessment-designing/23030](http://www.irma-international.org/chapter/methodology-information-quality-assessment-designing/23030)

### Building and Managing Cultural Capacity

(2021). *Relating Information Culture to Information Policies and Management Strategies* (pp. 296-305).

[www.irma-international.org/chapter/building-and-managing-cultural-capacity/256374](http://www.irma-international.org/chapter/building-and-managing-cultural-capacity/256374)

### Improving Quality through the Use of Agile Methods in Systems Development: People and Values in the Quest for Quality

Julie E. Kendall, Kenneth E. Kendall and Sue Kong (2006). *Measuring Information Systems Delivery Quality* (pp. 201-222).

[www.irma-international.org/chapter/improving-quality-through-use-agile/26166](http://www.irma-international.org/chapter/improving-quality-through-use-agile/26166)