



## CONVERGENCE OF INFORMATION TECHNOLOGY (IT) AND ELECTRONIC COMMERCE IN INDIVIDUAL AND ORGANIZATIONAL LEARNING

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### ABSTRACT

The purpose of this manuscript is to review the applications of IT in e-commerce and to discuss how these applications could improve individual and organizational learning. The manuscript employed only secondary data and established that the convergence of IT and e-commerce enhance organizational learning in strategy formulation and orientation, design of business models and supply chain management.

### INTRODUCTION

Information technologies (IT) are radically changing the face of business and organization in the mist of globalization. Nearly all organizations have invested heavily in IT infrastructure to support the success of their business. One exciting area of intersection of IT and business in recent times is popularly referred to electronic commerce (e-commerce). The purpose of this paper is to review the applications of IT in e-commerce and to discuss how this application could improve individual and organizational learning. To have better understanding of e-commerce, e-commerce leadership needs basic knowledge and skill of information technology upon which e-commerce is built. Therefore mastering of digital computing and communication technologies is a core learning area of e-commerce leaders (Laudon and Traver, 2010). The outcome of the study therefore reflects the immerse support of IT in e-commerce. Another significant factor of the topic is that, it addresses organizational learning which most practitioners and academicians considered as a critical way to maintain competitive advantage in a competitive environment (Marshall and Smith, 2009). A review of e-commerce literature by Ngai and Wat (2001) reveals increasing number of research papers in e-commerce. Previous research in IT and e-commerce intersection has focused mainly on issues related to data and system security, various Internet technologies and

markup languages, network technology, decision support systems and methodologies that assist, enhance, or improve EC applications (Ngai and Wat 2001). What is missing in these studies is how IT utilization in e-commerce could improve both individual and organizational learning. This manuscript extends the knowledge in IT application in e-commerce and how this enhances individual and organizational learning.

### MATERIALS AND METHODS

The paper employed only secondary data which were obtained from text books, internet sources EBSCOhost Business Source Complete and SMC University learning portal. These materials assisted the review of two topics which are: (1) utilization of IT in e-commerce (2) Individual and organizational learning through application of IT in e-commerce

### RESULTS AND DISCUSSION

#### Utilization of IT in e-commerce

The phenomenon of e-commerce is so broad that there cannot be a universally one accepted definition of it. The differences in e-commerce perspective reflect in the definition of Kalakota and Whinston that cut across communication, business process, service perspective, and online perspective (See Ngai and Wat 2001). However one common factor in any definition of e-commerce is that, it is technologically driven and relies on a host of information technologies with the internet and the World Wide Web at the center, There is also a host of

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complementary technologies such as personal computers, cell phones, local area networks, cloud computing, fibre-optic switches just to mention a few (Laudon and Traver, 2010).

The internet and the World Wide Web support e-commerce by ensuring that computer users can access product and service information and complete purchases on line. Laudon and Traver, (2010) have identified seven specific feature of the Internet and the World Wide Web that support e-commerce. Firstly, email uses series of protocol to enable messages containing text, images, sound and video clips to be transferred from one Internet user to another. Email therefore support ecommerce as a marketing and customer support tool. Another customer support tool which is being use by e-commerce businesses is instant messaging. This allows messages to be sent between two users almost instantly. Search engines indentify web pages that match a query submitted by a user and assist users in locating web pages related to items they may want to buy. Other feature of the Internet that support e-commerce are intelligent agents, online forums, streaming media and cookies, all of which are used by e-commerce as marketing tool. Also, other emerging technological services that support e-commerce are blogs, podcasts, Internet telephony, wikis, m-commerce, etc.

#### **Individual and Organizational Learning through Application of IT in E-commerce**

Literature in organizational learning is fast growing and presents a wide variety of definitions (Cho 2007 and Kok 2010). The common features of these definitions include; (1) organizations' efforts to maintain or improve performance (2) efforts to change the range of potential behaviors of the organization; (3) detection and correction of errors; (4) facilitating learning process of both individuals and the organization itself; and teaming up with learning societies. Organizations exhibit these features through manifestation of use of information and knowledge (Cho, 2007) and by adopting appropriate approach of analysis such as system thinking, personal mastery, mental models, and team learning, and building a shared vision (SMC University). Comparing individual and organizational learning, Grant, Hackney, and Edgar (2010) made reference to Senge idea that organizational learning is the sum and combination of individual learning that need to be embedded in organizational structure, processes and strategy. Therefore there is a need, according to Grant, Hackney, and Edgar (2010), for a mechanism of transferring individual learning to organizational learning.

The internet, the World Wide Web (WWW) and related technologies are the major determinants of innovation and applications through e-commerce (Grant, Hackney, and Edgar, 2010). Firstly, Grant, Hackney, and Edgar (2010) noted that rapid development of IT and expansion of e-commerce has enabled many organizations to explore new strategies and business models which are completely different from existing ones. An example is a web strategy that allows organizations, such as Microsoft and Intel, to cluster around a particular technological standard or customer segment to deliver collectively unique customer value. Grant, Hackney, and Edgar, (2010) deduced that this strategy has the effect of

reducing risk by enabling organizations to focus on what they are good at and encouraging learning and innovation.

Also, application of IT in e-commerce is changing the strategic orientations of businesses from products, to services, to solutions and to creation of customer experience (Grant, Hackney and Edgar 2010). Further, e-commerce applications provide opportunities for organizational learning to increase the efficiency of supply chains, provide superior value customers and sometimes totally transforming the supply chain. E-commerce applications also enabled organizational learning in new business models such as e-shops, e-procurement, e-malls, e-auctions, virtual communities, collaboration platforms, third party market place, value chain integrators, value chain providers and information brokerage.

#### **Conclusion**

The manuscript explored a range of different IT applications in electronic commerce. The Internet and the WWW are at the centre of e-commerce supported with a host of complementary technologies such as personal computers, cell phones, and cloud computing and fiber-optic switches. The paper also provides specific areas of utilization of IT in e-commerce. Thus the convergence of IT and e-commerce enhance organizational learning in strategy formulation and orientation, design of business models and supply chain management.

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