

eBusiness Model for Networked Learning

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Abstract

Traditional distance learning has tended to be an isolated and lonely process for its users. Students received study materials by 'snail mail' and then worked alone on these materials. As information technology improves, however, networked learning on-line learning and flexible learning (all of which can be considered eLearning components) have become popular and offer greater opportunities to connect with others. The impetus for eLearning has also been driven by the emerging emphasis on life-long learning – learning is now recognised to be essential for all people and at every stage of life. Learning arrangements today, particularly those concerning learning at a distance, rely more on technology, which requires expertise and money and also necessitates a more business-like approach. Courses and programs can be treated as products which can be seen as important resources for learners in a 'networked learning' arrangement. It is essential to have a business model for 'networked learning'. With all these elements in mind, we adapt Weill and Vitale's eBusiness model for virtual communities for networked learning in this paper.

Introduction

Distance learning, flexible learning, on-line learning, networked learning and e-learning are all similar in that they provide a learning environment at a distance. They all require learners who will be involved in a form of independent learning, e.g. self-motivated, self-paced and self-disciplined.

The concept of distance learning was first put into practice in 1840 by Sir Issac Pitman using the opportunity of a countrywide mail delivery system. In the 1990s modern technology dramatically increased the possibilities of distance learning (Lau 2000). Three IT professionals have found that online degree programs and skills development courses do not have to be lonely experiences (Goff 2001). Ellis (1996) states that networked learning will not be straightforward to implement. The critical success factors include investments in network hardware, access to networked information resources, staff development and course design. Harasim (1999) stresses the importance of instructional design, Internet technology and course content for success in online learning programs as well as effective learning environment. Glasson (2001) suggests two challenges in e-Education: rethinking roles and rethinking content. Learners are critical and sophisticated when using Internet materials, so the content must be impressive. Therefore in the production of content there is a need for partners with technological skills, as well as partners who can provide capital. It is also suggested that artificial intelligence provides mechanisms which have the potential to support networked learning, both at the organisational and educational level (Stamatis, Kefalas & Kargidis 1999). Westera, Sloep & Gerrissen (2000) use the virtual company as an example of a networked learning environment. As Internet technology becomes increasingly popular, virtual universities have been established to meet the demand (Bergner & Bruegge 1998; Huff & Wade 2000). The private sector is interested in becoming involved in these learning programs, in the hope of increasing its contribution to society, developing a good marketing strategy, obtaining specific and appropriate training for employees and, of course, making a profit. Davis & Botkin (1994) argue that education, which was once the exclusive right of the church, changed into the hands of government and then further into large businesses because it is business itself that is most desperate to train a knowledgeable workforce. The knowledge economy requires lifelong learning, and the private sector will have to shoulder a growing responsibility for learning (Tapscott 1996).

All these themes indicate an increased need for a business model for networked learning. In this paper, we adapt Weill and Vitale's eBusiness model for a virtual community and modify it for networked learning.

Weill and Vitale's eBusiness model for virtual community

Weill & Vitale (2001) state that e-business will change the ways in which all surviving companies do business. They define e-business as:

marketing, buying, selling, delivering, servicing and payment for products, services, and information across (non-proprietary) networks linking an enterprise and its prospects, customers, agents, suppliers, competitors, allies, and complementors.
(Weill & Vitale 2001:5)

Nowadays businesses have been quick to recognise the potential value of virtual communities as a way of enhancing their e-business efforts. A virtual community:

creates and facilitates an online community of people with a common interest, enabling interaction and service provision.
(Weill & Vitale 2001:21)

In the eBusiness model for Virtual Community (see Figure 1), the Firm of Interest (also the sponsor of the Virtual Community) is between the members of the community and its suppliers. Fundamental to the success of this model is that members are able to communicate with one another directly. Communication between members may be via email, bulletin boards, online chat, or web-based conferencing, which are the distinguishing features of this model. Virtual communities are positioned to benefit strongly from the 'network effect' (Moore's Law), by which the community becomes more valuable as more members are involved.

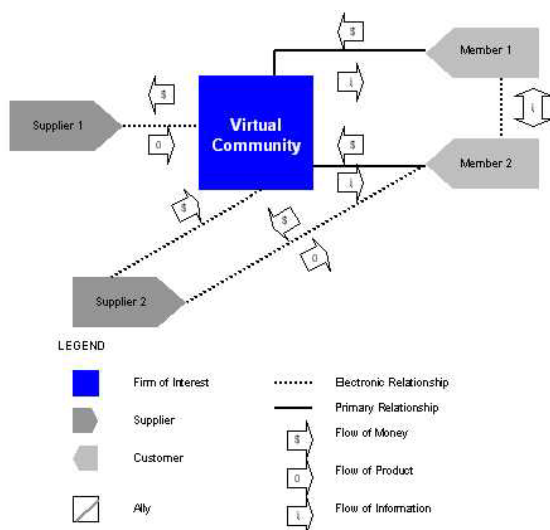


Figure 1. Virtual Community Atomic eBusiness Model Schematic

Reproduced from Weill & Vitale (2000: 204)

eBusiness model for networked learning

Networked learning relies on delivery technology and content. Courses and educational programs can to a large extent be seen as a 'service product' (Chan and Swatman 2000; Swatman and Chan 2001). Researchers have studied networked learning using a variety of theoretical concepts and research methods, but no general business model has yet been produced. An eBusiness model for networked learning is essential for this 'e-age'. We therefore adapt and modify Weill & Vitale's eBusiness model for the virtual community to suit networked learning (see Figure 2).

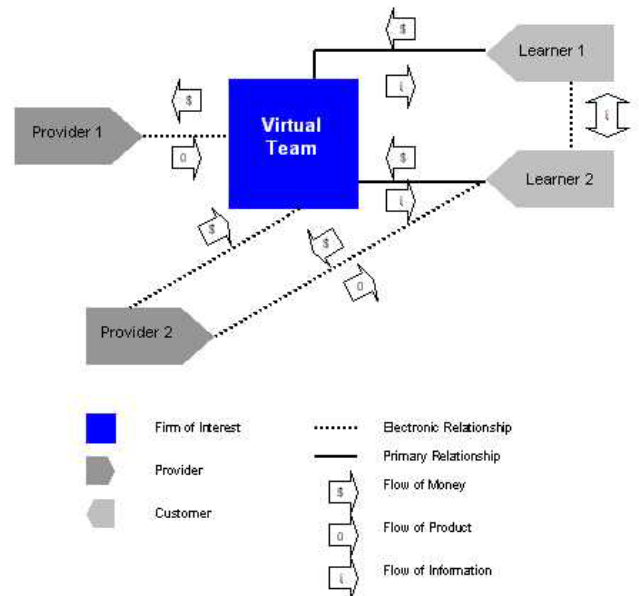


Figure 2. eBusiness Model for Networked Learning

Adapted and modified from Weill & Vitale (2000: 204)

Networked Learning emphasises a technology network and a network of people, ideas and discussions. Networked Learning uses the educational model of collaborative learning, a learning process which depends on interaction with others and a technology process which allows group interaction with others regardless of time and distance.

*Networked Learning =
Collaborative Learning + Online / Computer Conferencing*

(Knowledge Ability 2000)

There are three participants in our model of networked learning. They are a virtual team, providers and learners. The role of each is explained as follows:

Virtual Team

Virtual Team consists of members in remote locations who work together primarily through computer-mediated communication (Lipnack & Stamps 1997; Robey et al. 2000). Xue (2001) summarized the information on virtual team research which he gathered from ISWorld. We define Virtual Team here in our model as groups of people from different organisations who have common interests working remotely to establish a learning environment for learners, e.g. a virtual university or cyber university.

Providers

There are two major categories of providers: delivery technology providers; and content providers. Delivery technology providers can be technical specialists, communication facilitators, software and telecommunication companies which supply the technical supports to the virtual learning environment. Content providers can be learning theorists, educational designers, training companies or universities which provide learning materials, courses or educational programs to the virtual team.

Learners

Learners or a network of learners are interested in some courses or educational programs that are provided by the virtual team. Learners participate in this learning environment and are willing to exchange information with other learners in order to enhance their knowledge through such interactions between them.

The solid lines (primary relationship) between the Virtual Team and Learners represent the potential of the Virtual Team to own the learner relationship rather than other participants. Dotted lines linking the participants are electronic relationships and many use the Internet as the infrastructure.

We have described the participants involved in the model. The following are issues we have considered in the model:

The Revenue

Providers and the virtual team may gain revenues in a number of ways. The content provider provides contents (learning materials) to the virtual team (flow of product from Provider 1 to the Virtual Team) and the virtual team pays for them (flow of money from the Virtual Team to Provider 1). The delivery technology provider may or may not necessarily sponsor the virtual team (flow of money from Provider 2 to the Virtual Team). The delivery technology provider can gain revenue from learners as learners may buy the products or use the telecom and broadband services from this provider (flow of money from Learner 2 to Provider 2). The delivery technology provider may not make any profit under this environment. But some hidden leverage can be obtained, such as having some contributions to society, establishing a better social image for itself or acting as a cutting-edge leader in the information technology markets.

The Virtual Team can gain revenue from two major sources, i.e., through sponsorship from Provider 2 to help it set up the infrastructure at the initial stage; and from regular payment of course fees from learners.

Infrastructure

Virtual teams depend on information technology to exist. If a virtual team is to survive, the creation and continual enhancement of the site as well as the course contents and varieties of courses are essential. The important infrastructure services for this model are the following:

- At the set-up stage, the choice of communications media and learning tool kits such as FirstClass, WebCT or Blackboard etc. must be carefully considered.
- Training in the use of telecommunication software or learning tool kits must be provided to new learners. This is to enable new learners to start communicating with other learners at a very early stage and thus widen their knowledge from other learners.
- Research and development for information technology is recommended. This includes identifying and evaluating new technologies, which may be adapted

to develop the content materials in order to keep them up to date and attractive to learners.

- Market research is essential. New courses or programs are to be put to the market at the appropriate time.

Learner Segments

Virtual team should always begin with learner segments in mind: executive managers, workers, lawyers, trainers, educationists, information technology professionals and mature students etc. Different content materials at different level, price and duration of courses or programs can be tailor-made to suit different segments of learners.

Critical Success Factors

Some critical success factors for this model includes:

- Establishing trust amongst the virtual team members.
- Encouraging collaborative learning between learners for building and maintaining loyalty to the virtual team from learners.
- Finding and retaining a mass of learners.
- Balancing commercial potential and learners' interest.
- Head hunting knowledgeable expertise for developing attractive and valuable contents to learners.
- Motivating learners for life-long learning.
- Developing and adapting new information technology.
- Branding virtual team for satisfying learners' expectation of quality and needs.

Our eBusiness model for networked learning (Figure 2) can be illustrated by Hong Kong CyberU (HKCyberU 2000), i.e. the Virtual Team in our model. HKCyberU is a learning institution on the Internet co-founded by the Hong Kong Polytechnic University (PolyU), i.e. Provider 1 in our model, and the Interactive Multimedia Services Company of Cable and Wireless (CWHKT), i.e. Provider 2 in our model, which is a telephone and internet services providing company in Hong Kong. CWHKT invested money to set up HKCyberU, which does not have a physical campus. It integrates PolyU's expertise in research, consulting and pedagogical development with CWHKT's telecom and broadband capabilities to create the

first Hong Kong-based virtual university. HKCyberU provides learning environments for students in Hong Kong, Mainland China, the South East Asian region and other parts of the world who have access to broadband internet services. The organisation has the potential to benefit all members, while providing an ongoing profit stream to its founders.

Conclusions and Future Research

Traditional 'Brick & Mortar' channels of education do not offer the flexibility and learning style to support learners working full-time in today's world of 'velocity and volatility'. A truly multimedia-enabled, interactive technology platform for a rich and robust learning experience, together with a self-directed and self-paced mode of learning, complemented by online guidance from instructors and technical support staff can cope with present (and future) learners' demands. Learning is shifting to 'Click & Mortar' channels, or even to 'Pure-play', totally online environments. This involves a large amount of investment to set up virtual learning arrangements. In this paper we have presented an eBusiness model for networked learning with which we would like to arouse the awareness of networked learning participants to rethink the business perspectives of their application. The eBusiness model is more appropriate in this e-age as eBusiness moves businesses from 'place to space', while learning environments move from traditional face-to-face to virtual environments.

This model, which as yet has only a theoretical existence, will be tested in the marketplace via strategic experiments with providers of online education throughout the Asia-Pacific region.

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