



African Virtual University

Applied Computer Science: ADM1103

E-BUSINESS

Jackson G. Kabira

Foreword

The African Virtual University (AVU) is proud to participate in increasing access to education in African countries through the production of quality learning materials. We are also proud to contribute to global knowledge as our Open Educational Resources are mostly accessed from outside the African continent.

This module was developed as part of a diploma and degree program in Applied Computer Science, in collaboration with 18 African partner institutions from 16 countries. A total of 156 modules were developed or translated to ensure availability in English, French and Portuguese. These modules have also been made available as open education resources (OER) on oer.avu.org.

On behalf of the African Virtual University and our patron, our partner institutions, the African Development Bank, I invite you to use this module in your institution, for your own education, to share it as widely as possible and to participate actively in the AVU communities of practice of your interest. We are committed to be on the frontline of developing and sharing Open Educational Resources.

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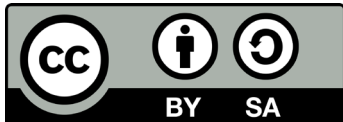
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Course Overview

Welcome to E-Business

The primary goal of this course, is to give you, the learner, an understanding of how the Internet has created a new economy which, by its explosive growth and sheer size, has already changed our perception of the traditional ways of doing business. Companies like Amazon and eBay have successfully created domination on areas, where just a few years ago traditional brick and mortar companies were king. However, in order to be successful on the net, you do not have to be a giant like them. Many small and mid-size companies have managed to build online businesses quite profitably. E-business is a dynamic interdisciplinary topic utilizing concepts from both business and technology. In this regard, i shall introduce the e-business from both aspects where you will discover the effect of traditional business and reasons that lead to the current use of e-business. You shall also study the future potential of e-business, especially in the local context. Forms of e-business such as B2B (Business to Business and B2C(Business to Consumer) will be studied in addition to various revenue models. Strategies that facilitated some successful e-business such as customer relationship management and supply chain management will be introduced.

Prerequisites

A course on introduction to computers including computer organization to include operating systems, memory and central processing units. In addition, an understanding of computer packages such as Word processors, Spreadsheets, Presentation packages and databases will be essential. Basic knowledge of the Internet and related technologies such as Intranets, Extranets, HTML, URL etc. are necessary for this course.

Number of Hours

120 hours

Course/module rationale

You should be able to evaluate a website with e-business value proposition.

Course Goals

Upon completion of this course the learner should be able to:

- Examine the terminology and basic principles behind e-business..
- Discuss the history of e-business.
- Describe the various e-business models.
- Compare the different e-marketing strategies.
- Analyze the major electronic payment options and related issues.

Learning outcomes

- The learner will differentiate a brick and mortar enterprise from e-business.
- The learner will be able to select an appropriate e-business model.
- The learner will be able to design the best e-marketing strategy.
- The learner will select a payment option ideal for the transaction at hand.

Assessment

For each unit covered, there will be a learning activity which will recap what has been learned in that particular unit. This will require additional research in order to answer the questions that follow the unit. There will also be a CAT of which you will be expected to provide short answers and finally, a formative assessment test of which the answers are provided thereafter.

1	Activity details	30%
2	Assessments	20%
3	Final exam	50%
4	TOTAL	100%

Assessment Table

Schedule

Unit	Activities	Estimated time
Pre-Assessment	a) Unit assessment	[5 hours]
Overview of e-business	a) History of e-business	[20 hours]
	b) benefits of e-business	
	c) Limitations of e-business	
	d) CAT	
	e) Unit assessment	
E-business Models	a) Storefront model	[35 hours]
	b) Shopping cart model	
	c) Shopping malls	
	d) Auction models - Group Activity	
	e) Name-your-price model	
	f) Other models	
	g) CAT	
	h) Unit assessment	
E-Marketing	a) Promotions	[30 hours]
	b) Electronic advertising	
	c) CAT	
	d) Unit assessment	
E-business Payments	a) Credit cards	[30 hours]
	b) e-wallets and digital cash	
	c) Micropayments	
	d) CAT	
	e) Unit assessment	

Module Summary

The lessons that will be presented to you cover the general overview of e-business from a business perspective. Learners are expected to apply this knowledge in real life situations in their local context and environment. This module is divided into four learning units:

- Overview of e-business
- E-Business Models
- E-Marketing
- Electronic Payment Systems

Each learning unit contains a learning activity that integrates information and communication technologies and collaborative learning approaches with formative assessment. The summary assessment allows you to compare your progress with the benchmark knowledge and skills set out in the module objectives.

Readings and Other Resources

Unit 0: Pre- Assessment

Required readings and other resources:

- <http://www.internetsociety.org/internet/what-internet/history-internet/brief-history-internet>

Unit 1

Required readings and other resources:

- Combe Colin, Introduction to e-business management and strategy, Elsevier Ltd, 2009.
- Turban Efraim, David King and Judy Land, Introduction to e-commerce 3rd Edition, Pearson custom business resources, 2011.
- http://www.powershow.com/view/ca57-ODA5N/e-business_Fundamentals_powerpoint_ppt_presentation
- <http://software.ucv.ro/~cbadica/didactic/ce/documente/Modelee-business.pdf>
- http://www.palgrave.com/resources/sample-chapters/9780230001466_sample.pdf

Optional readings and other resources:

- <https://sites.google.com/site/ihra2013/lecture-notes>

Unit 2

Required readings and other resources:

- Chaffey Dave, E-business and E-Commerce Management, Prentice Hall, Fourth Edition, 2009.
- Cunningham J. Michael, E-Business, Wiley and sons, 2002.
- Kalakota Ravi & Marcia Robinson, e-business 2.0: Roadmap for success, Addison-Wesley 2001.
- Laudon C. Kenneth and C. G. Traver, E-Commerce Business, Commerce, and Society, Prentice Hall, Fourth Edition, 2010.
- Morrison Janet, The Global Business Environment: Meeting the Challenges, 3rd Edition, Palgrave Macmillan, 2011.
- Osterwalder Alexander and Yves Pigneur, Business model generation: A handbook for visionaries, game changers and challengers, Amsterdam, 2009.
- Olga Ratsimor Vladi, Opportunistic battering of digital goods and services in pervasive environments, (dissertation to university of Maryland 2008)
- <http://dictionary.cambridge.org/us/dictionary/english/>
- <http://www.ubarter.com>
- <http://www.i2i.com/>

Unit 3

Required readings and other resources:

- Adren Linnie, Start your own e-business, 2nd edition 2009.
- Becker Ann, Electronic Commerce: Concepts, Methodologies, Tools and Applications, Information Science Reference, Hershey New York, Vol I 2008.
- Bocij Paul & Andrew Greasley, Business Information Systems: Technology, Development and Management for the e-business, 4th Edition, 2008.
- Carmody Bill, Inline Promotions: Winning Strategies and Tactics, Black Forest Press, 2004.
- Chaffey Dave, e-business and e-commerce management: Strategy, Implementation and practice 5th edition 2011.
- Clifton Rita, Brands and Branding, Bloomberg Press, New York, 2009.
- Davies, Paul Beynon, e-business, 2nd edition 2012.
- D'Costa P. Anthony, The new economy in development: ICT challenges and Opportunities, Palgrave Macmillan, 2010.
- <http://software.ucv.ro/~cbadica/didactic/ce/documente/Modelee-business.pdf>
- <http://www.zdnet.com>
- <http://dictionary.cambridge.org/us/dictionary/english/>

Optional readings and other resources:

- <http://ptgmedia.pearsoncmg.com/images/020171972X/samplechapter/clarkch01.pdf>

Unit 4

Required readings and other resources:

- Chaffey Dave, e-Business and e-Commerce Management, Strategy, Implementation & Practice, Prentice-Hall 2011.
- Chaffey Dave & Fiona Ellis-Chadwick, Digital Marketing: Strategy, Implementation & Practice, Pearson publishers, 2012.
- Davies Beynon-Davies, e-business, Palgrave Macmillan, 3rd Edition, 2013.
- Deitel Harvey, Paul Deitel and Nieto, e-Business and e-Commerce, How to Program, Prentice Hall, Upper Saddle River, New Jersey 2001.
- Stephen Haag and Maeve Cummings, Information System Essentials, McGraw Hill Irwin 3rd Edition 2010.
- <http://dictionary.cambridge.org/us/dictionary/english/>

Unit 0. Pre-Assessment

Unit Introduction

This unit introduces you on the basic terminologies which are the essential building blocks in the e-business module. Analysis of these terms will enable you understand the other units and relate these concepts in the e-business world. At the end of this unit, there shall be an assessment covering basic e-business methodologies and terminologies which will benchmark your general preparedness for this course. It will be assumed that you will have some general background knowledge of the Internet and that you probably have accessed some online services such as government or business related.

Unit Objectives

Upon completion of this unit you should be able to:

- Explain various e-business terminologies
- Review the history of the Internet.

Learning Outcomes

By the end of this course the learner should be able to:

- To describe how e-business started.
- To define basic e-business terms

Key Terms

E-business: It includes buying and selling of goods and services, servicing customers, collaborating with business partners and conducting electronic transactions within an organization.

E-commerce: Describes the buying, selling, transferring or exchanging of products, services or information via the Internet.

E-Government: the use of Internet technology in general and e-commerce in particular to deliver information about public services to citizens.

Internet: The Internet is a global network connecting millions of computers.

IT: Information Technology. The science and activity of using computers and other electronic equipment to store and send information.

Web browser: A computer program that can access a database of Internet resources for specific information and report the results such as Internet explorer® and Mozilla Firefox®

Unit Assessment

Check you understanding!

The aim of this assessment is to check your progress by determining how much you have learned in the unit. Questions cover everything that was presented in the unit in order to assess your overall understanding. Answer them carefully and if your score falls: -

- Below 40%, redo the readings.
- Between 40% and 60%, redo the readings on your weak area(s)
- Above 60%, you have a substantial amount of knowledge

1. What is the difference between e-business, brick & mortar business and e-commerce?
2. How do governments use Internet technology to deliver public services?
3. List any two major e-business companies on the Internet.
4. Define a virtual corporation.
5. What do you think are the major driving forces in e-business?
6. Why is buying with a credit card from a vendor considered e-business?
7. What benefits do you think can be derived from e-business?
8. Why is distance learning considered e-business?
9. Name a major company in your country involved in e-business.
10. Define the term Internet?

Answers

1. E-business is the buying goods and services, servicing customers and collaborating with business partners over the Internet. Brick & mortar is an organization existing physically while e-commerce is buying and selling of products and services over the Internet.
2. E-government.
3. e-bay.com, amazon.com, mastercard.com. visa.com, americanexpress.com, airtel.com.
4. A organization that exists mainly on the Internet and does business on web sites and email.
5. Technology, i.e. innovations, e-commerce, Society, social responsibility, government. regulations, deregulation, shrinking budgets, subsidies, Market i.e. global, changing workforce, consumers, IT and e-commerce support i.e. digital TV, mobile phones.
6. Virtual nature of the transaction.
7. Speed, convenience, discounts, lower startup costs, etc.
8. Conducted over the Internet and it has a cost of doing business.
9. Safaricom.
10. A global network connecting millions of computers.

Instructions

You are requested to provide this feedback on all the four units of this course. Answer the questions objectively as this will go a long way in assisting in future development and improvements of materials presented in each of the units.

- Does this assessment adequately test the materials contained in this unit?
- Do you think the questions are clearly stated?
- Do the questions relate to the unit objectives?
- Suggest any improvements on the assessment styles.

Unit 1. Overview of E-Business

Unit Introduction

Electronic business can be defined as the use of the Internet to network and empower business processes, electronic commerce, organizational communication and collaboration within a company and its customers, suppliers, and other stakeholders. E-businesses utilise the Internet, intranets, extranets and other networks to support their commercial processes. Electronic commerce is the buying and selling, marketing and servicing of products and services via computer networks. Since e-business includes the process of transacting with suppliers and customers there is an overlap in activities with electronic commerce. Although the terms 'e-business' and 'e-commerce' are often used synonymously, the distinction between them lies in the broader range of processes in e-business that incorporates internal transactions within an organisation. These include transactions relating to procurement, logistics, supply chain management, payments, stock control and order tracking. As Chaffey (2004) notes, e-commerce can best be conceived as a subset of e-business. Where the two concepts overlap is in the buying and selling of products and services.

Currently, references are being made in terms of the "new economy" which is used to define the distinct contributions to the economy through the use of the Internet and various Information and Communication Technologies. In contrast, the "old economy" which is the precursor to the "new economy" was characterized by fairly stable markets, competition was localized and the primary form of production was in manufacturing. The "new economy" has been driven by the development of the infrastructure that supports the Internet, ICT and digital technology. This economy is based on entrepreneurship in knowledge creation and sharing, innovation and creativity and using ICTs for developing and selling new products and services. The rollout of high-speed broadband Internet access means more people can connect to the Internet at higher speeds and with greater flexibility and scope of activities. Where once the Internet, television broadcasting and telecommunications were separate and distinct industries, convergence means that these sectors have increasingly merged thereby offering consumers greater scope for accessing services via one technology. For example, the "new economy" is boosted by the development of Internet access on mobile phones because it means knowledge workers can access information and communicate with others from almost any location. The convergence of Internet and television means that interactive television provides an additional media for facilitating online sales of products and services.

At the business level, organizations are no longer viewed as individual entities but as part of an integrated network of organizations where ICTs play a key role in smoothing transactions and collaborative ventures between partners. The Internet has opened up possibility of exchanging information, products and services around the globe without any constraints of distance or time. This has given rise to the concept of virtual organizations as opposed to the brick and mortar organizations of the "old economy". The diffusion of ICTs has played a key role in knowledge sharing, encouraging innovation and creativity, integrating global supply chains, facilitating global trade and creating wealth.

The local characteristic of the “new economy” has been manifested in ICTs created to serve local and regional demand. ICTs have also enabled new forms of control and management within organizations and between organizations. It has also made it possible to simultaneously coordinate economic activity in many different locations and beyond traditional organizational boundaries. This has enabled organizations to create new structures, such as network organization or the virtual organization that are more efficient and flexible while harnessing the best skills and experience of its employees therefore eliminating many of the costs and inefficiencies associated with the “old economy” organizations. The “new economy” is characterised by changes in the competitive structure of industries. The traditional model based on mass production where competitive advantage was gained through decreased production costs or increasing productivity has given way to the need for firms to adapt to changes in the market conditions, seek new opportunities, enhance learning, embrace change and innovation and create and share knowledge. Managers in organizations have to coordinate and control the use of ICTs such as the Internet, extranet and intranet software’s to help meet these challenges and take advantage of the opportunities associated with operating within the new economy. The figure below summarises the key differences between the “old economy” and “new economy” from the perspectives of the overall economic factors, businesses and consumers.

Key differences between the old and new economy:

Issues	Old Economy	New Economy
Economy factors		
Markets	Stable	Dynamic and complex
Competition	National	International and global
Structure	Manufacturing	Service
Value driver	Physical capital	Human capital
Business factors		
Organization	Hierarchy	Network or virtual
Production	Mass	Flexible, customized
Growth driver	Capital and labor	Innovation and knowledge
Technology driver	Machines	Digital and electronic

Competitive advantage	Low cost/high production	Innovation, speed, quality
Relationships	Independent	Collaborative
Consumer factors		
Tastes	Stable	Dynamic, segmented
Skills	specialized	Multiple and flexible
Educational needs	Trade oriented	Lifelong learning
Work place relations	Confrontational	Collaborative
Nature of employment	Stable	Insecure, opportunistic

Source: Becker Ann, Electronic Commerce, 2008.

Unit Objectives

Upon completion of this unit you should be able to:

- Examine the origins of e-business.
- Describe the major types of e-business transactions.
- Discuss the benefits of e-business.
- Assess the limitations of e-business.

Key Terms

ARPANET: Advanced Research Projects Agency Network - Was a large wide area network created by the United States in 1969 and served as a test bed for new networking technologies linking many universities and research centers.

Brick-and-mortar: organizations that are purely physical organizations.

Business-to-consumer (B2C): the sellers are organizations and the buyers are individuals. e.g. Amazon

Business-to-business (B2B): both the sellers and buyers are business organizations. It represents the vast majority of e-business.

Business-to-employee (B2E): An organization uses e-commerce internally to provide information and services to its employees.

E-commerce: it is the business that is conducted over the Internet using any of the applications that rely on the Internet such as email and instant messaging.

Extranet: A network that uses the Internet to link several intranets.

Encryption: Process of encoding messages in transit to ensure that only authorized persons can read it.

TCP: Transmission Control Protocol - Is a standard that defines how to establish and maintain a network conversation via which application programs can exchange data. It works with Internet Protocol which defines how computers send packets of data to each other.

Consumer-to-consumer: (C2C): Consumers sell directly to other consumers e.g. individuals selling cars in online classified ads e.g. eBay

Consumer-to-consumer (C2C): an individual sells products or services to other individuals.

CRM: Customer Relationship management - It entails all aspects of interaction that a company has with its customers, whether it is sales or service-related. .

Domain: A group of computers and devices on a network that are administered as a unit with common rules and procedures.

EDI: Electronic Data Interchange: Is a way for business and banks to send business documents to each other in electronic form directly from one computer to another rather than using the Internet.

IP: Internet Protocol - Specifies the format of packets and the addressing scheme & is usually combined with TCP to establish a connection between destination & source.

Intranet: An internal corporate or government network that uses Internet tools such as web browsers and Internet protocols.

Hybrid e-commerce: Combines B2B and B2C

EFT: A system of moving money from electronically from one bank or account to another.

M-business: It is the subdomain of e-business that relies on mobile devices for communication between business parties.

Mobile commerce: E-business transactions conducted in a wireless environment.

Protocol: It is a set of rules that nodes in a telecommunication system use when they communicate.

Virtual communities: Groups of individuals linked on the Internet

WWW: World Wide Web - It is a system of Internet servers that support specially formatted documents in a language called HTML (Hypertext Markup Language) that supports links to other documents, as well as graphics, audio, and video files.

	Government	Business	Consumer
Government	G2G (Coordination)	G2B (Information)	G2C (Information)
Business	B2G (Procurement)	B2B (E-business)	B2C (E-Commerce)
Consumer	C2G (Tax compliance)	C2B (Compare price)	C2C (Auctions)

A framework for e-business markets, Colin Combe, 2009.

Learning Activities

Activity 1 - History of E-Business

Introduction

E-business was made possible by the development of EDI which is the exchange of documents from one computer system to another in a specified and standardized format. The origin of EDI was in mid 1960s when companies in the transport and retail businesses were trying to create a "paperless" office. In the mid-1970s, EDI was formalized by the Accredited Standards Committee of industry representatives and thereafter, more companies began to adopt EDI through the 1970s and 1980s. Since it was the first generation of e-business, EDI allowed companies to exchange information, place orders, and conduct EFT through computers (Sawanibi 2001). However, EDI diffusion was slow and by 1990s, less than one per cent of companies in Europe and United States had adopted EDI (Timmers, 1999). The huge capital outlay and the technicalities of connection to the EDI network limited the adoption of EDI.

The transaction of goods and services through the Internet characterized the second generation of e-business. The beginning of the Internet can be traced back to the 1960s when ARPANET, the precursor of the Internet was established for research in technology. ARPANET nodes increased from 4 in 1969 to 15 in 1971 and the term Internet did not come into use until 1982 when the number of hosts on the ARPANET reached 213. In 1983 the IP became the only approved way to transmit data on the Internet enabling all computers to exchange information. In 1986, the National Science Foundation a US government agency, launched the NSFNET with the aim of providing high speed communication links among the major supercomputer centers across the US. The NSFNET backbone later became the cornerstone of TCP/IP based Internet (Anthes, 1994).

As by the end of the 1980s, the Internet had still maintained its noncommercial nature and all of its networks were based on the free use of the NSFNET backbone. The main primary users were still scientists and engineers working for the government or the universities. In real sense at that time, academicians and researchers were the only ones capable of using the Internet due to its sophisticated technical nature requiring a high level of computer skills. (Eccleson 1999).

The development of a graphical user interface (GUI) and the ease of navigating the WWW was what changed the nature of Internet use. In early 1990s, the creation of HTML with specifications for URLs enabled the Internet to evolve into what we know it today. The Internet was therefore taken "out of the realm of technical mystique and into common usage" as it became usable for ordinary people without sophisticated understanding of computer science and technique (Eccleson, 199, p.70). Therefore, with the increasing number of users, the Internet became attractive to the business world.

The most significant milestone came in 1991 when NSFNET decided to lift the commercial restrictions on the use of the network and hence opened up opportunities for e-business. Advanced Networks and Services (ANS) established by IBM, MCI and Merit Network Inc. provided Internet connection to commercial users without government restrictions on commercial traffic online. In addition, a portion of the money collected from these commercial applications was used to upgrade the network infrastructure. In 1993 Mosaic, one of the first Internet browsers was released and with its Graphical user Interface and rapid diffusion, the Internet became more user friendly and visually presentable. One year later, Netscape released Netscape Navigator browser which ushered the age of e-business.

In 1995, ANS was sold to America Online which marked "a transition of backbone infrastructure from federal funding to full private commercialisation operation of the Internet" (Kim, 1998 p.283). With NSF subsidy removed, private companies took a leading role on the Internet (Kim, 1998). Commercial use of the Internet gradually became the dominant pattern of Internet use in the mid-1990s. The term e-business came into popular use in 1995, which heralded the rapid development of commercial applications of the Internet.

Still in 1995, Amazon.com which is currently the world's largest online bookstore was launched. Within one year, it became a multimillion dollar business with a database of 1.1 million books searchable by title, author, subject or keyword favoured by both publishers and customers. Two months later, eBay, the world's first online auction site was launched. In 1996, Dell began selling personal computers directly to consumers on the Internet and in 1997, the commercial domain (.com) replaced the educational domain (.edu) as the largest in use (Kim, 1998). The Internet became the fastest growing technology in economic history as investors, businesses and consumers were attracted by the e-business opportunities in that period.

Between 1995 to 1999, many companies built their Web presence and began to conduct transactions online. In 1996, e-business transactions in the United States resulted in \$707 million in revenue, which increased to \$2.6 billion in 1997 and \$5.8 billion in 1998 (Fellenstein & Wood, pp 9-10). From October 1998 to April 2000, more than 300 Internet companies had made Initial Public Offerings (IPOs; Cassidy, 2002, p.192). There were approximately 600,000 e-business sites in the United States by the end of 2000 (Dholakia et al 2002 p.5) Advertising on the Internet also increased from \$267 million in 1996 to \$907 million in 1997 and to \$3 billion in 1999, and the daily sales of Dell increased from under \$1 million to \$40 million in less than 3 years (Costa, 2001, p34)

The growth of e-business coincided with the changes in the regulation of the Internet. Throughout the mid 1980 to 1995, the Internet main backbone was comprised by the NSFnet a wide area network developed under the auspices of the NSF. NSFnet replaced ARPANET as the main government network linking universities and research facilities. In 1995, however, the NSF dismantled NSFnet and replaced it with a commercial Internet backbone. In this regard, the National Science Foundation, decided to award a monopoly contract to a partnership between the Information Sciences Institute (ISI) and Network Solutions Inc. to operate IP numbers and domain registration services from 1992 to 1997. During the same period, the NSF implemented a new backbone called very high speed Backbone Network Service (vBNS) which served as a testing ground for the next generation on Internet technologies.

In 1996, the Internet Society (ISOC) formed a blue ribbon international panel that took over the root server, which is a domain name system (DNS) that points to all the top-level domains and the International Ad Hoc Committee (IAHC) was chartered with a plan to form a monopoly registry administration of the DNS on a nonprofit basis. By 1997, as the NSF decided to terminate its contract with Network Solutions, the IAHC collapsed.

In 1998, the Internet Corporation for Assigned Names and Numbers (ICANN) was formed and this represented a "substantial shift in power to control the Internet from government to private industry" (Fuller, 2001). ICANN made decisions such as allowing more competition among registrars and instituting mandatory arbitration for trademark claims during its first two years of life which had a significant impact on the development of e-business during that period.

The late 1990s was known as the period of the "dot-com bubble" and the bubble burst between 2000 and 2001. The stock price for all the 20 leading Internet stocks dropped, including Amazon.com by 29.9%, eBay by 27.9%, Internet Capital by 72.1% and VeriSign by 59.2% (Cassidy, 2002 pp.292-293). This crash quickly cooled the e-business frenzy and most Internet companies were forced to cancel their IPOs while others such as Value America had to file for bankruptcy (Cassidy, 2002). In the San Francisco Bay area, 80% of dot-coms went out business in 2000 and 2001 leading to a loss of 30,000 jobs directly related to the Internet (Nevaer, 2002, p.xii).

The dot-com crash of 2000 and 2001 has been attributed to the unrealistic expectations for e-business and Internet companies of which stocks were overvalued. Exaggerated projections by Silicon Valley, Wall Street, journalists and government officials all contributed to the inflation of the dot-com bubble. The bubble finally burst, which meant decreases in investment, a slow-down in economic and productivity growth and decreasing corporate revenues (Cassidy, 2002). Despite the bankruptcy of many Internet companies, e-business sales actually increased in the 2000 and 2001. According to the Department of Commerce (2001), estimated retail e-business sales in the fourth quarter of 1999 were \$5.27 billion, increasing to \$8.88 billion in the fourth quarter of 2000 and to \$10.04 billion in the fourth quarter of 2001. This increase suggests that although Internet companies may have been overvalued in the 1990s, e-business itself was still growing and robust.

E-business continued to grow after the burst of the dot-com bubble and some Internet companies that survived have become very successful e.g. Amazon and eBay. Wal-Mart, the world's largest store-front retailer, conducts all the business with suppliers through a B2B network (The Economist, 2004).

E-business however, still does not represent a large proportion of the economy. E-business sales are less than 2% of the total sales in the United States (Department of Commerce, 2004). Though there is still plenty of room for growth, e-business development is hampered by factors such as universal access, privacy and security and Internet fraud among others.

With e-business resurgence, consumer protection, user agreements, contract and privacy all present new concerns regarding regulation of commercial activities (Fustos & Lopez, 2004) particularly as it contributes to the globalization of economic activity. For instance, while the European Union emphasizes consumer rights, the United States is more focused on protecting freedom of expression and intellectual property (Fustos & Lopez, 2004). In order to protect intellectual property in e-business, the World Intellectual Property Association (WIPO) developed the Uniform Domain Name Dispute Resolution (UNDR) policy to help settle disputes regarding domain names.

M-commerce which is the process of using mobile devices such as mobile phones and wireless PDAs to conduct business transactions is an important growth area for e-business. With 1.5 billion mobile users in the world and 140 million in the United States (Cellular Online, 2004), m-commerce is becoming a significant aspect of e-business. With m-commerce, the nature of mobile devices changes from pure communication tools to transactional tools and it has already found important applications in industries such as financial management, travel services and entertainment (Schone, 2004).

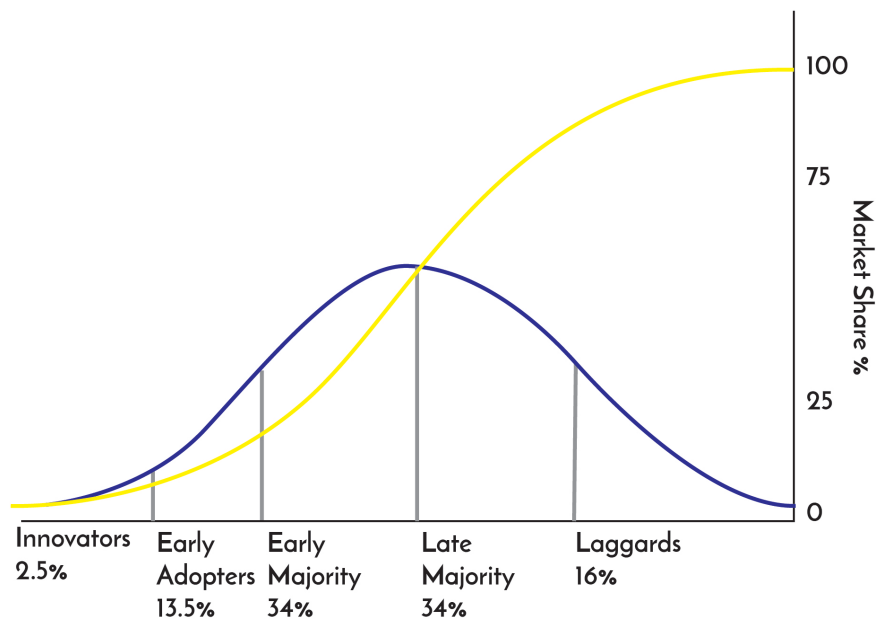
E-business now consists of simple sites that provide corporate data to sites selling goods and services online with new innovative uses such as online language tutoring. Information repositories for research are on the increase and sale of e-books and digital music files are the norm.

Rarely have innovations in human history brought benefits envisioned by the growth of e-business. As you visualize the global nature of this technology and its potential to reach billions, its interactive nature and the rapid growth of the Internet, the end result is innumerable benefit to mankind.

Activity Details

History of E-business

In this activity, you are required read on the history of e-business and its progression to its current state. Draw a diagram to indicate the important timelines in the growth of e-business from the time of EDI to the state of the art technology we have today. Try to fit diffusion and progression of e-business in this manner thus; innovators, early adopters, early majority, late majority and laggards. (See the figure below). List the major software and hardware that characterised early e-business sites and contrast them with state of technology today.



Source: Everett Rodgers, Diffusion of Innovations, 2003.

Conclusion

This activity will help you understand the current trends in the evolution of e-business and hence appreciate its current status. As the learner analyses the software and hardware technologies that were existent since the early days of e-business with the current it becomes apparent that e-business has come a long way.

Assessment

Instructions

This assessment is on the just concluded activity and it is recommended that you do it individually. Submit the assignment in form of short notes within a week via an email to be provided.

1. According to what you know about the history of e-business, when was the first dot.com company conceived and which was it?
2. Why is it important to learn the historical background of e-business?
3. Identify the country with the most robust e-business traffic statistics. (Hint: akamai.com)
4. What do you think is the driving factor(s) behind a company's success in e-business?

Activity 2 - Benefits of E-business

Introduction

Few innovations in human history have provided as many benefits to organizations, individuals and society as has e-business. E-business benefits organizations by making national and international markets more accessible and lowering the costs of processing, distributing and retrieving information. Customers benefit by being able to access a vast number of products and services globally, twenty-four hours, seven days a week. Society benefits by the ability to conveniently deliver products and services to people in rural areas, towns and cities and even the developing countries around the globe.

E-business expands an organizations global reach. A company can easily locate more customers, suppliers and business partners with minimal financial outlay nationally and globally.

E-business offers great cost savings. By introducing an electronic procurement system for example, a company can cut purchasing and administrative costs through reduction in paper processing system.

Business processes improvement. Many innovative business models such as pull-type production processing used by Dell computers allows for inexpensive customization of products and services hence giving the company competitive advantage. You will also realize that by manufacturing to order, a lot of money is saved through inventory reduction and delivery delays offering a company tremendous amount of competitive edge. Better interaction with customers and business partners for better feedback is also enhanced through adoption of e-business.

Low startup costs. Many people are able to enter the global market with their business ideas part-time or full-time since barriers to entry such as huge capital to start a brick and mortar company are reduced or removed.

E-business offers professional services. Professionals such as doctors are now providing consultation for their patients online, IT companies provide technical support for solving client's problems such as device configuration web based hosting services.

Sale of advert space. Many websites derive their income through charging a fee to other business wanting to advertise their goods and services via their sites. Can you think of a company(s) that get their income through this models? You need to realize that the site needs to offer highly focused quality content in order for customers to return and be a source of referral to others.

Source of information. Customers are able to conduct research online and hence can prepare a list of their purchase choices, compare prices, share their shopping experiences with other customers and make decisions on what they have experienced.

Better living standards. People in third world countries and other remote areas can enjoy goods and services that were hitherto unavailable plus the opportunities to study specialised skills through distance learning.

Telecommuting. More and more people now work from their homes hence less travel to work and shopping resulting in less highway traffic and therefore reduced noise and air pollution.

Conclusion

In this activity, you have learnt about the benefits of engaging in e-business. You should understand the benefits to be derived from online trading in goods and services and how these can improve an organizations financial bottom line. Armed with this knowledge, you are in a better position to gauge whether to go e-business or remain in the brick-and-mortar business.

Assessment

1. Define a business process.
2. What business processes could be expedited by going online?
3. List five professional services that can be offered via e-business.
4. What software and hardware tools do you think are used in a telecommuting environment?
5. Write down names of ten companies that sell advertising space online.

Answers

1. A collection of linked activities which find their end in the delivery of a service or a product to a client.
2. Banking, customer service, deliveries e.g. pizza, books e.g. amazon, MPESA, distance learning etc
3. Telemedicine, marketing. e-learning, banking, data hosting on the cloud platform
4. Laptop, VPN software e.g. Ipsec, phone, Skype, trillian, Goggle+ hangouts, Rescue time, Dropbox, Hootsuite, Joinme etc
5. Google, yahoo, eBay, Wikipedia, facebook, YouTube, Live, LinkedIn, Twitter, Msn, Taobao, Qq, Bing, ask. blogger, Netflix, office, Instagram etc.

Activity 3 - Limitations of E-business

Introduction

In spite of the benefits inherent in e-business, it has some limitations which are both technological and non-technological that have slowed its growth and acceptance. Technological limitations include the lack of universally accepted security standards, insufficient telecommunications bandwidth and expensive accessibility. Non technological limitations include perceptions that e-business is insecure, has unresolved legislative issues and lacks a critical mass of sellers and buyers. As time passes by, the limitations especially technological ones will be mitigated or totally overcome.

Security: You should be aware that the biggest hindrance is the issue of security since Internet is not 100% secure medium of communication. Hackers have software tools that can monitor online transactions and even control data passing through the Internet. People therefore are reluctant to provide data such as credit card or debit card numbers out of fear that the information can fall into the wrong hands and therefore used on unintended purposes. It is therefore important to ensure website integrity by investing in learning and implementing good security measures such as digital signatures and data encryption.

Privacy: The Internet is such that private information of individual can be collected and recorded. Software such as cookies are used to track shoppers online and create a profile of their buying habits. The learner should be informed that this information is later sold to marketers without the shopper's knowledge an act that constitutes unethical and immoral conduct.

Physical aspect of product cannot be verified: It is difficult to examine a product quality by touch when purchasing it over the Internet. Products such as clothes and perfumes are better purchased when their attributes can be verified by the sense of touch and smell respectively.

E-business therefore has this limitation in regard to such cases.

Purchase to delivery time lag: Unlike brick and mortar businesses where goods and services are delivered upon payment, e-business purchases have a time lag of purchase to delivery of the physical goods. Hence in some instances, a customer would rather go to the store and buy unless the product can be delivered in soft copy such as e-book or digitized music.

Legal limitations: The learner should know that not all companies can participate in e-business as some may not have the technology or expertise to mount an e-business website. Other companies trade in odd-sized products which cannot be shipped economically across national boundaries. In addition, other products such as explosives, ammunition and certain alcoholic beverages are legally restricted by national and international laws.

Learner Activity on Limitations of E-business

In this activity, you are required to investigate ways in which shopping over the Internet can be more convenient to customers. In what ways can it be less convenient? List at least five products you would have no hesitation buying over the Internet, five products you might want to think about a bit before buying, and five products you would never consider buying over the Internet. Justify your reasons in each case.

Conclusion

At this juncture, you should be able to know the potential threats to e-business and what the owner of an e-business site needs to do to safeguard customer's data. Equally, the learner should know that not all products or services can be offered online.

Assessment

1. Which e-business limitations from this activity do you think can be more easily overcome? Why?
2. Identify three legal issues in your country hindering e-business practices.
3. Name five major successful and two start up failed e-commerce companies.
4. List five products/services apart from the ones in this activity that cannot be sold online.

Answers

1. Cookies, security
2. Copyright, Trademarks, Privacy/security & Electronic payments (lack of legal framework)
3. Successful (Amazon, ebay), Failed (Pets.com, boo.com, KioR, Quirky, powa technologis, lilliputian systems, onlive, coraid, terralliance, solyndra, webvan group, alladvantage.com, kozmo, eToys, caspian networks, paybytouch, copan systems, denovis, aereo, soapstone networks, 38 studios, optiva, colorlabs, webvisible, Ecast, Akimbo, carrierIQ, Homejoy, healthspot, Nebula, Nanochip, Digg, Adbrite etc.
4. Adult sexual content, drugs paraphernalia, get-rich-quick schemes, gambling, wildlife trophies, non-accredited exams, marijuana, multilevel marketing, matrimonial sites (find a bride), sites that promote racial/religious/hatred etc. check cashing, tobacco products, firearms, unlicensed goods etc.

Unit Summary

In this unit, you have learnt what e-business broadly entails and its historical background starting from the earliest form which was the Electronic Fund Transfer. The major types of e-business transactions e.g. B2B, B2C, C2C etc. have been mentioned including the parties involved in the transaction. Finally, the benefits and limitations of e-business have conclusively been enumerated.

Unit Assessment

Check your understanding!

Instructions

1. What is the difference between e-business and e-commerce?
2. Which is the most widely used type of e-business?
3. What is a public portal?
4. What is the difference between an intranet and an extranet?
5. How does e-business facilitate the customization of products and services?
6. There are many e-business failures - how can you avoid them?

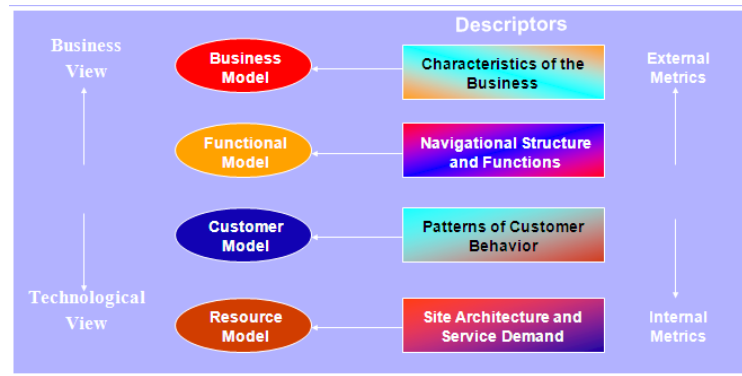
Answers

1. Electronic business (e-business) can be defined as the use of the Internet to network and empower business processes, electronic commerce, organizational communication and collaboration within company and with its customers, suppliers, and other stakeholders. e-businesses utilise the Internet, intranets, extranets and other networks to support their commercial processes. Electronic commerce (e-commerce) is the buying and selling, marketing and servicing of products and services via computer networks.
2. B2B
3. A gateway such as Yahoo! through which the general public can access the Internet.
4. An intranet is an internal or government network that uses Internet tools such as web browsers and Internet protocols. An extranet uses the Internet to link several intranets.
5. Through web authoring tools such as desktop publishing and advertising geared towards a certain class of consumers.
6. Learn from their failures.

Unit 2. E-Business Models

Unit Introduction

In the previous unit, you learnt that e-business is the use of the Internet to network and empower business processes, electronic commerce, organizational communication and collaboration within company and with its customers, suppliers, and other stakeholders. E-businesses utilise the Internet, intranets, extranets and other networks to support their commercial processes. You also learnt that an e-business can offer many benefits such as personalised service, quality customer care and improved supply chain management. In this unit, we explore the various types of e-business models available on the Internet. An e-business with a particular model can leverage its inherent attributes to gain competitive advantage. In addition, you need to know that the combination of a company's policies, operations, technology and ideology is what helps define its business model.



Unit Objectives

Upon completion of this unit you should be able to:

- Examine the origins of e-business.
- Describe the major types of e-business transactions.
- Discuss the benefits of e-business.
- Assess the limitations of e-business.

Key Terms

Model: A description of the different parts of a business or organization showing how they will work together successfully to make money.

Portal: A site on the Internet that allows people to get useful information such as news and weather and to find other websites.

Server: A central computer from which others get information.

Shopping bot: A computer program that automatically searches the Internet for particular products, compares their prices, and often gives the customer opinions of their quality.

Shopping cart: Part of shopping website that records what you want to buy until you pay for it.

Learning Activities

A business model describe the rationale of how an organization creates, delivers and captures value. It is like a blue print for a strategy to be implemented through organizational structures, processes and systems. A business process can best be described through the nine building blocks that show the logic of how a company intends to make money.



Source: Business Model generation, Alexander Osterwalder 2009.

1. Customer segments

It defines the different groups of people or organizations an enterprise aims to reach and serve.

Customers comprise the heart of any business model and without profitable customers, a company can survive for long. In order to better satisfy customers, a company may group them into distinct segments with common needs, common behaviours or other attributes. A business model may define one or several large or small customer segments. An organization must make a conscious decision about which segments to serve and which segments to ignore. Once this decision has been made, a business model can be carefully designed around a strong understanding of specific customer needs. Customer groups represent separate segments if:

- Their needs require and justify a distinct offer.
- They are reached through different distribution channels.
- They require different types of relationships.
- They have substantially different profitability.
- They are willing to pay for different aspects of the offer.

There are different types of customer segments and below are the examples.

a. Mass market

Business models focused on mass markets do not distinguish between different customer segments. The value proposition, distribution channels and customer relationships all focus on one large group of customers with broadly similar needs and problems. This type of business model is often found in the consumer electronics sector.

b. Niche market

Business models targeting niche markets cater to specific and specialized customer segments. The value propositions, distribution channels and customer relationships are all tailored to the specific requirements of a niche market. Such business models are often found in supplier-buyer relationships for example car part manufacturers who heavily depend on purchases from major automobile manufacturers.

c. Segmented

Some business models distinguish between market segments with slightly different needs and problems. The retail arm of a bank like Credit Suisse for example may distinguish between a large group of customers each possessing assets of up to \$200,000 and smaller group of affluent customers each of whose net worth exceeds \$700,000. Both segments have similar but varying needs and problems. This has implications for the other building blocks of Credit Suisse's business model such as value proposition, distribution channels, customer relationships and revenue

streams. Consider Micro Precision Systems which specializes in providing outsourced micromechanical design and manufacturing solutions. It serves three different customer segments - the watch industry, the medical industry and the industrial automation sector - and offers each slightly different value propositions.

d. Diversified

An organization with diversified customer business model serves two unrelated customer segments with very different needs and problems. For instance, Amazon.com in 2006 decided to diversify its retail business by selling "cloud computing" services that is online storage space and on-demand server usage therefore catering for a totally different customer segment that web companies with a different value proposition. The strategic rationale behind this diversification can be found in Amazon.com's powerful IT infrastructure which can be shared by its retail sales operations and the new cloud computing service unit.

e. Multi-sided platforms

Some organizations serve two or more interdependent customer segments. A credit card company for example needs a large base of credit card holders and a large base of merchants who accept those credit cards. Similarly, an enterprise offering a free newspaper needs a large reader base to attract advertisers. On the other hand, it also needs advertisers to finance production and distribution. Both segments are required to make the business model work.

2.Value Proposition

The value proposition building block describes the bundle of products and services that create value for a specific customer segment.

It is the reason why customers turn to one company over the other since it solves a customer's problem or satisfies a certain need. Each value proposition consists of a selected bundle of products and services that caters to the requirements of a specific customer segment. Some value propositions may be innovative and represent a new offer for example mobile phones while others may be similar to existing market offers albeit with added features and attributes such as Personal Computers with faster Central Processing Units and more disk space. Other value propositions could be due to low prices such as the low priced Nano Indian made car, low cost airlines such as Southwest, easyjet and Ryanair, high priced watches such as Rolex while other may be in superior design such as fashion and consumer electronics. Other value proposition rests with risk reduction such as in one year warranty, accessibility features such as Netjets with its fractional private jet ownership offering individuals and corporations access to private jets.

3.Channels

It describes how a company communicates with and reaches its customer segments to offer value proposition. They have several functions such as:-

- Helping customers evaluate a company's value proposition
- Delivering a value proposition to customers
- Raising awareness among customers about a company's products and services
- Allowing customers to purchase specific products and services
- Providing post-purchase customer support

Channel types include, sales force, web sales, own stores, partner stores and wholesaler Below are the Channel phases

- Awareness - Raising customers awareness about company's products and services
- Evaluation - Helping customers evaluate a company's products value proposition
- Purchase - Allowing customers to purchase specific products and services
- Delivery - Delivering value proposition to the customers
- After sales - Providing post-purchase customer support

4.Customer relationships

It describes the type of relationship a company wants to establish with each customer segment which can range from personal to automated. Relationships can be driven by the following: -

- Customer acquisition
- Customer retention
- Promoting sales

Early mobile operators were driven by aggressive acquisition strategies such as free mobile phones but when the market reached a saturation point, they switched to customer retention and increased revenue per customer.

Types of customer relationships

- Personal assistance – e.g. call centers and emails
- Dedicated personal assistance – e.g. bankers for high net worth individuals or key account managers with important companies
- Self-service – e.g. cafes
- Automated services e.g. ATM
- Communities – e.g. online communities such as WhatsApp
- Co-creation – e.g. Amazon's inviting customers to write book reviews.

5. Revenue streams

This represents the cash a company generates from each customer segment while subtracting costs to obtain net revenue. Each revenue stream can have different pricing mechanism such as fixed prices, auctioneering, bargaining, market dependent, volume dependent or yield management.

Types of revenue streams

- Transaction revenues from one-time customer payments
- Recurring revenue from ongoing payments

Categories of revenue streams

- Asset sale – e.g. Amazon.com book sales, electronics etc.
- Usage fee – e.g. Mobile phones, room charges etc.
- Subscription fee – e.g. Gym, world of warcraft online games, online music downloads.
- Lending/renting/leasing - leasing cars for hour(s), paying rental houses etc.
- Licensing – e.g. media and books industry, where content owner retains copyright while selling license to third parties.
- Brokerage fees - Credit card providers earn fees by brokering transaction between credit card merchants and customers.
- Advertising - e.g. Media industry.

Pricing Mechanisms			
Fixed "Menu " Pricing Predefined prices are based on static variables		Dynamic Pricing Prices change based on market conditions	
<i>List price</i>	Fixed prices for individual, products, services, or other value propositions	<i>Negotiation (Bargaining)</i>	Price negotiated between two or more partners depending on the negotiation power and/or negotiation skills
<i>Product feature dependent</i>	Price depends on the number or quality of value proposition features	<i>Yield management</i>	Price depends on inventory and time of purchase (normally used for perishable resources such as hotel rooms or airline seats)
<i>Customer segment dependent</i>	Price depends on the type and characteristic of a customer segment	<i>Real-time market</i>	Price is established dynamically based on supply and demand
<i>Volume dependent</i>	Price as a function of the quantity purchased	<i>Auctions</i>	Price determined by outcome of competitive bidding

Source: Osterwalder Alexander, Business Model generation, 2009.

6.Key Resources

It describes the most important assets required to make a business model work for example a microchip manufacturer requires capital intensive production facilities whereas a microchip designer focuses more on human resources. The Key resources include;

- Physical - e.g. Wal-Mart requires physical assets such as buildings, vehicles, POS systems etc. while Amazon.com requires extensive IT, logistics and infrastructure.
- Intellectual – e.g. Microsoft and SAP depend on software, while Sony and Nike rely mostly on brand as a key resource
- Human - crucial in knowledge intensive and creative industries e.g. call centers
- Financial – e.g. Ericsson borrows funds to provide vendor financing to equipment customers thus ensures orders are placed with Ericsson rather than its competitors.

7.Key activities

This building block describes the most important things a company must do to make its business model work for example Dell key activity is supply chain management.

Key activities categories

- Production - designing, making and delivering a product.
- Problem solving – e.g. consultancies, hospitals and service organizations.
- Network – e.g. eBay.com business model requires for a continual development and maintenance of its website.

8.Key partnerships

This describes the network of suppliers and partners that make the business model work such as: -

- Strategic alliances between non competitors
- Competition - partnerships between competitors
- Joint ventures - develop new businesses
- Buyer/supplier - ensures reliable supplies

Benefits of partnerships

- Economies of scale - through cost reduction and outsourcing
- Risk reduction - Reduce risk in a competitive environment characterized by uncertainty.
- Resource acquisition - A company cannot own all the resources nor perform all activities hence rely on other firms to furnish particular resources or perform certain activities for example insurance company relying on brokers to sell its policies.

9.Cost structure

This describes all costs incurred to operate a business model such as fixed and variable costs.

Types of cost structures

- Cost driven - Focus is on minimizing costs as much as possible for example low cost airlines such as easyjet and Southwest.
- Value driven - They focus on value creation for example luxury hotels and premium cost hospitals such as Bupa Cromwell hospital with their highly personalized services.

In the preceding chapter, we shall look at the different types of e-business models which comprise of the following: -

1. Store-front Model
2. Shopping-Cart model
3. Online Shopping Malls
4. Auction Model
5. Name-Your-Price Model
6. Portal Model
7. bartering Model

Storefront Model.

In a storefront model, an e-business can sell hard goods, soft goods and services. Customers can enter the store either directly, through a portal or through a search engine. Customers generally need to sign up with the online store before they can complete their online purchase. A storefront model contains facilities for ordering and paying for products for example through credit cards. Customers provide their payment information which in this case may be credit cards and their shipping information which is where the goods will ultimately be delivered. Once the payment is authorized, a receipt is issued to the customer and the purchased goods are shipped to the address the customer provided at the time of registration. The advantages of this model include extended sales and marketing, decreased marketing and promotion costs, reduced transaction costs, new product information and testing and the ability to reach specialized markets.

Please note that in this model, the buyer and seller interact directly. The merchant is required to organize an online catalog of products, take orders through the web site, accept payment in a secure environment, send merchandise to customers and manage customer data. The proprietor must also market the site and the products to potential customers. Many successful companies using the storefront model are B2C companies e.g. www.Ticketmaster.com uses the Internet to sell tickets where a customer has access to seating plans, event listings and price discounts.

The learner will appreciate that we are in the age of knowledge and the adages 'knowledge is power' and 'content is king' demonstrate that successful e-business are those that recognise their target customers, match them with relevant content that is easy to use and a friendly user interface. You should realize that the ability to build a successful e-business does not just lie with computer professionals but many successful online firms were actually conceived by college students.

Learner Activity on Storefront Model

You are required to log on to www.Ticketmaster.com and do the following tasks:-

- Shop for events
- Select category
- Select sub-category
- Select data range

Note events that are available in your country.

Write a brief summary of how you would go about purchasing a ticket for one of the shows in your area or if your area is not featured, select any area of your choice.

Shopping-Cart Model

It is one of the most widely used e-business model enabled by a shopping cart. This model allows the customer to accumulate goods they wish to buy and they continue shopping. The shopping cart is supported by a product catalogue which is hosted on the merchant server in form of a database. This merchant server holds the data and the management information system used by the merchant. A database is contained in the merchant server which is used to store and report on the large amounts of product and customer information. Typically, a database on online e-books would include product specifications such as item description, size availability, shipping information, stock levels and customer information such as names, addresses, credit/debit card information and history of past purchases. The leading candidates in shopping cart technology include www.amazon.com and www.sears.com. Others are www.kbtoys.com and www.jcrew.com.

Learner Activity on Shopping-Cart Model

One of the most widely recognized example of an e-business shopping-cart model is www.amazon.com. It was opened in 1994 and has rapidly grown to become one of the worlds largest online retailer. Amazon offers millions of products to more than 17 million customers in 160 countries. For customers who prefer choice, Amazon also offers online auctions. In its first few years, Amazon.com, served as an mail-order book retailer. Their line of products has since expanded to include music, videos, DVDs, electronic cards, consumer electronics, hardware, tools, beauty items and toys. The Amazon catalog is constantly growing and the site allows you to navigate quickly among millions of products. Source: F.Hayes, "Amazoned" Computerworld 17th May 1999:116 & L.Himelstein & R.hof, "Ebay v Amazon", BusinessWeek May 1999:128.

In this activity you are required to log on to www.amazon.com and write a summary on what the process of buying a product for example a book from the site all the way until check out entails. Note that if you are a first time buyer, you will be required to fill a personal identification form with your details such as name, billing address, shipping address, shipping preferences payment information such a credit card numbers.

Online shopping Malls

In this model, the customer can search and shop for a variety of products from many stores rather than making several separate purchases and then use the malls shopping cart technology to purchase items in a single transaction. These interconnected sites act as shopping portals directing shoppers to leading retailers for a specific product. The online malls are shopping.com, pricegrabber.com, pikaba.com, shopzilla.com, eCRATER.com.

Learner Activity on Online Shopping Malls

For this activity, you are required to log and register in each of these sites: shopping.com, pricegrabber.com, pikaba.com, shopzilla.com, eCRATER.com and do some mock shopping.

Write short notes of how they differ in terms of site layout, products, payment options, technical details, customer service feedback etc. Try to be as detailed as possibly can..

Auction Model

In this activity, you will notice that auction sites act as forums through which the Internet users can log on and assume the role of either bidder or seller. If you are the seller, you can post an item you need to sell, the reserve price you require to sell your item and the deadline for closing the auction. There are sites that also allow you to post a photograph or description of the item. If you are the bidder, you may search the site for availability of the item you need, view the status of the current bidding activity and also place a bid (these are in preset increments). There are also other sites that will continue bidding for you as long as you submit a maximum bidding price. Many auction sites require a commission on sales, but their primary task is to act as a forum for online buying and selling. They usually do not involve themselves in payment issues or delivery. Once the auction is complete the seller and buyer are notified and they both decide on payment method and delivery logistics. The learner should note that this type of auction is also used by B2B web sites to sell excess inventories and attract new, price sensitive customers. Examples of B2B auction companies are www.ubid.com

It is also important for the learner to note that a reverse auction model is where the buyer sets a prices and the sellers compete to match or even beat it. The buyer can a also set a reserve price which is the lowest price the buyer is willing to accept. Should no bid beat the reserve price, the auction is then declared unsuccessful. However, you should note that if the bid is successful, the buyer and seller must commit themselves to the finalization of the deal. An example of a popular reverse auction site is www.liquidprice.com.

Learner activity on Auction Model

This activity involves groups to collaborate on a mock auction. You are required to visit www.eBay.com and, in groups of two, one learner should be the seller and the other the buyer. Find out how the bidding process works and thereafter compile a report an all key aspects of the process. Each of you should write a report not exceeding three pages double spaced in times new roman format and submit via an email to be provided.

Name-Your-Price Model

It is a popular way for selling excess inventory over the Internet where the bidder bids on an item and the seller immediately decides whether or not to accept the bid. In the Name-your-Price auction, a potential buyer places a bid for an item such as a hotel room, rental car etc. If the seller judges the bid to be acceptable, the buyers credit card is immediately charged.

This model allows you to choose the price for a product or service where the business offering this service receives your desired price and decide whether to sell to you that product or service. Should your price not be reasonable, you are asked to choose another price.

Learner Activity on Name-Your-Price Model

Visit www.priceline.com and find out how the site helps airlines fill empty seats and therefore make them realize better revenues in addition to helping customers save money through better ticket deals. The site relies on intelligent agents called shopping bots to enhance the site through scouring data across the web for answers to specific queries.

Portal Model

This type of model gives you the chance to find almost everything you are looking for in one central place. The learner should note the difference between horizontal portals which aggregate information on a wide range of topics as opposed to portals which focus the search on a single area of interest and hence referred to as vertical portals. A good example of a horizontal portal is www.hotbot.com while www.about.com acts as a personal shopper for you. Some portals will charge merchants for a link while others do not. A site such as www.goto.com bills merchants per customer "click-through" such that the more a business is willing to pay for each customer "click" the higher that business will feature in goto.com web ranks.

Learner Activity on Portal model

Discuss the assumptions underlying the Portal model from a buyers perspective in a two page report. Submit this report to the email provided by your instructor.

Bartering Model

A barter system is an old method of exchange. This system has been used for centuries and long before money was invented. People exchanged services and goods for other services and goods in return. When money was invented, bartering did not end, instead it became more organized. Due to lack of money, bartering became popular in the 1930s during the great depression. It was used to obtain food and various other services. It was done through groups or between people who acted similar to banks. If any items were sold, the owner would receive credit and the buyers account would be debited. Today, bartering has made a comeback using techniques that are more sophisticated to aid in trading such as the Internet. In ancient times, this system involved people in the same area, however today bartering is global. The value of bartering items can be negotiated with the other party.

In this model, an e-business site provides an online location where various users can offer one item in exchange for another. This e-business generates revenue through fees charged to users for using the service. The bartering websites helps match people who have common needs and desires. Users can list both the products and services they need and the products and services they can provide. Any user interested in an item can be matched up and barter can be finalized. A variety of products can be bartered for example mobile phones, computers, PDAs, smart phones etc. Corporate barter can save companies money by:-

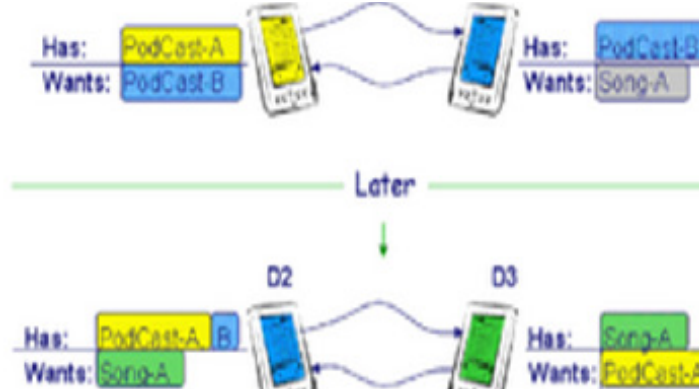
- Reducing inventory storage needs
- Minimizing losses from perishable goods
- Boosting export business
- Cutting corporate purchasing costs for such items such as airfares, hotel stays and advertising.

When companies barter online, they typically use non-cash electronic currency. At ubarter online users haggle over everything from apparel to office equipment to financial services and money never changes hands. Instead, buyers and sellers secure goods and services using "ubarter dollars" as payment.

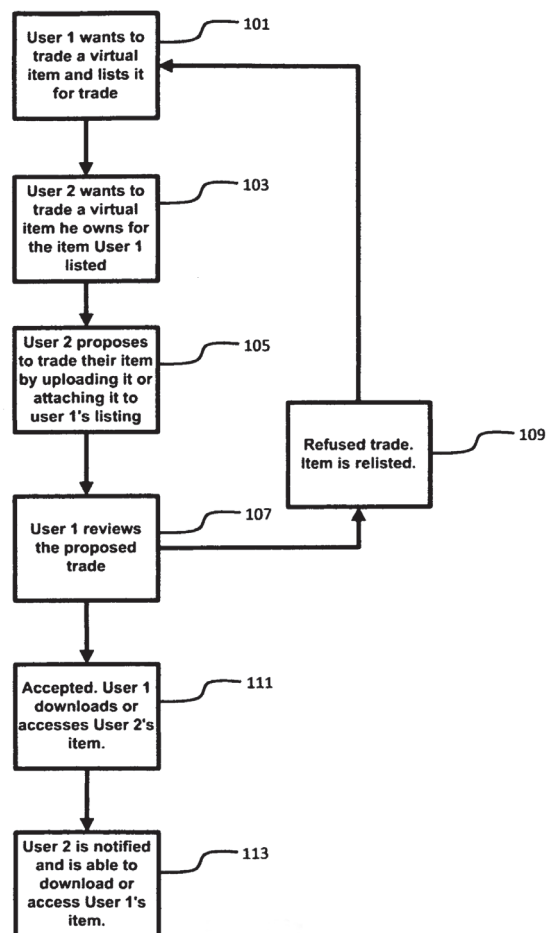
At industry to industry Inc., buyers and sellers can trade and auction goods and services related to construction and engineering, automotive and components and the food and beverage industries. At printbid.com, an e-business market place for the printing industry, the aim is to make it easier for print buyers to find the best vendor quickly as well as to help commercial printers and suppliers attract the right customers for their equipment mix. E-business solutions such as bartering and swapping work for business to business in a variety of situations:-

- replaces brokers and catalogues for procurement
- Good when establishing a long term contract
- When making spot purchases
- as an alternative to liquidation of excess inventory
- In reducing cash flow

Bartering allows you to conduct e-business by offering one item in exchange for another. As the seller you make an initial offer with the notion of bartering to reach a final agreement with the buyer where a broad selection of products and services are available. In some bartering, the final deal is normally part barter and part cash. The learner should remember that items mostly bartered are excess inventory and items almost reaching obsolescence



Source: Olga Vladi Ratsimor, (dissertation to university of maryland 2008)



Source: <https://www.google.co.ke/search?q=barter+e+commerce+diagram&biw>

Learner Activity on Bartering model

- a. Discuss how traditional bartering differs from the online bartering that is currently the fad.
- b. This is an individual activity where you are required to read on the following:-
 - Comparison Pricing Model
 - Demand-sensitive Pricing Model

As you read, make notes as some part of the formative assessment questions will be sourced from these topics. You are not required to submit this work to your instructor..

Conclusion

This unit has demonstrated to you the various models through which e-business is conducted on the Internet. You can therefore evaluate the best e-business strategy on which to launch a website based on the kind of brick-and mortar business that needs to be e-business enabled.

Assessment

1. What is a model?
2. Which model do you think is most ideal for credit card payments? Justify your answer.
3. Discuss security strategies available to mitigate theft of payment information in these models.
4. Does your country have any legal mechanisms for e-business? Discuss three.
5. Write a one-page report (double spaced) on what is involved in a business plan for e-business model

Answers

1. A model is a representation of reality e.g. goal seeking model, optimization model etc.
2. Shopping card - widely adopted by major e-business companies such as Amazon
3. Encryption, Use fraud profiling service such as maxmind.com, Virtual/disposable credit cards which only have only amount of money for purchase.
4. Research on your own country and provide details.
5. Executive summary, company description, market analysis, operational plan, management, products /services, finances and funding etc.

Unit Summary

In this unit, you have learnt about the various models employed by different e-business organizations on the Internet chief among them, storefront, shopping-cart, online shopping malls, auction, portal and finally bartering. Each of these models is unique in the way sellers and buyers interact in the conduct their e-business. It must be however be noted that some models are interrelated and you should hence seek to unmask these similarities and differences on the most ideal one for a given e-business.

Unit Assessment

Check your understanding!

A. Fill in the Blanks

1. A business that has a presence off but not on the Web is described as a _____ company.
2. The _____ model is designed to bring prices down by increasing the number of customers who buy a particular product at once.
3. Customers can shop for products and store them for later purchase using a _____.
4. Reserve prices are set by a buyer in an _____.
5. The two types of portals are called _____ and _____.
6. ivillage and bolt.com can be described as horizontal portals or _____.

7. Auctions that allow the buyer to set a price and have the merchants compete for the best deal are called _____.
8. _____ are designed to help businesses buy, sell and barter their products and services to other businesses over the Internet.
9. E*trade and Charles schwabb are companies that offer_____
10. The e-businesses that allows customers to find the lowest price on particular item are called _____ pricing sites.

B. State whether the following are true or false. If the answer is false, explain.

1. A shopping cart allows customers to continue to browse after selecting each item they wish to purchase.
2. In a reverse auction the seller sets a price and customers make individual bids to buy the item.
3. A reserve price is the highest bid a customer is willing to make.
4. In the demand-sensitive pricing model, the price decreases as more people buy.
5. The name-your-price model is an auction-based model.
6. Brick-and-mortar companies are businesses that build the infrastructure of an e-business site.
7. Web-based training is not yet possible, but will be when streaming audio and video technology improve.
8. Priceline.com employs the name-your-price model.
9. B2B exchanges are e-businesses that facilitate the sale, purchase and exchange of goods and services between one or two companies.
10. High-availability computing refers to the minimization of downtime for a company.

Answers

1. True
2. False this is the concept of true auction.
3. False - a reserve price is the lowest price a seller will accept in auction
4. True
5. False - the name-your-price model allows customers to get a lower price by clearing the price with a number of vendors. This does not involve an auction.
6. False - brick-and-mortar businesses are offline businesses. This term is often associated with companies who have both an online and offline presence.
7. False - web-based training is currently used by organizations around the world.
8. True
9. True

1. Brick-and-mortar
2. Demand-sensitive model
3. Shopping cart
4. Auction
5. Vertical, horizontal
6. Community
7. Reverse auctions
8. B2b exchanges
9. Online trading
10. Comparison shopping.

Unit 3. E-Marketing

Unit Introduction

In the previous unit, we explored the various types of e-business models available on the Internet. It was noted that a particular model can help an organization get a competitive edge over its competitors in the marketplace. Additionally, we emphasised that a combination of the company's policies, operations, technology and ideology help define its business model. In this unit, we look at how an organization doing e-business can market itself on the Internet and hence remain competitive besides attracting new customers. This is informed by the fact that competition is stiff in e-business world and a solid e-marketing strategy is essential for an organization to remain financially stable. In this regard, we explore various e-marketing campaign options such as e-mail marketing, electronic advertising, promotions and branding.

Unit Objectives

Upon completion of this unit you should be able to:

- Compare Internet demographics and a marketing strategy.
- Discuss the various marketing strategies for e-business.
- Explain how market research can help develop a marketing mix.
- Describe the purpose of generating web-site traffic.

Key Terms

Cookie: A piece of information stored in your computer about Internet documents that you have looked at.

Log file: A computer file that contains all the actions that have been done on a computer or website.

Marketing mix: The combination of actions a company uses when selling a product or service.

Opt-in: The fact of choosing to take part in an activity rather than being forced to take part.

ROI: Return on Investments. It is the benefit to the investor after investing in some resource.

Spam: unwanted email usually advertisements.

URL: Uniform Resource Locator. The address of an Internet site where you wish to visit.

Learning Activities

Activity 1 - Branding

Introduction

The word brand comes from the word brandr, meaning to burn, and from these origins made its way into Anglo-Saxon. It was by burning that early man stamped ownership on his livestock and with the development of the trade, buyers would use brands as a means of distinguishing between the cattle of one farmer and another. A farmer with a particularly good reputation for the quality of his animals would find his brand much sought after, while the brands of farmers with a lesser reputation were to be avoided or treated with caution. Thus the utility of brands as a guide to choice was established, a role that has remained unchanged to the present day.

In developed countries consumers have an astonishing array of choice for example dozens of car manufacturers, hundreds of car models and thousands of different vehicle specifications to choose from. This diversity of choice puts pressure on those making or selling products or services to offer high quality, excellent value and wide availability. It also puts pressure on them to find more potent ways of differentiating themselves and securing competitive advantage. Much of the skill of marketing and branding nowadays is concerned with building “equity” for products whose characteristics, pricing, distribution and availability are really close to each other. Take for example Coca-Cola, it has been able to dominate the world wide soft drinks market. The power of its bottling and distribution systems plays a part in this, but the main factor is the strength and appeal of the two brands to consumers. The strong, instantly recognizable names, logos and colours of the Coca-Cola brand symbolizes the makers promise that consumers expectation will be fulfilled. Brands allow a consumer to shop with confidence and they provide a road map through a bewildering variety of choices. The customer does not have to be an expert on the complexities of mobile telecommunications to choose between one service provider over the other. The brand name, the tariff and the billing are all that is required to make an informed choice. As tariffs and billing are the same among competing companies, it is the brand and customers appreciation of its underlying appeals that will ultimately drive the purchase decision. It is the in-calculation of these “underlying appeals”, the bedrock of brand equity that concerns brand owners and has become the subject of unceasing attention and investment. Brands with strong equity embed themselves deeply in the hearts and minds of consumers. The real power of successful brands is that they meet the expectations of those who buy them or put another way they represent a promise kept. As such they are a contract between the seller and buyer: if the seller keeps its side of the bargain, the buyer will be satisfied, if not, the buyer will look elsewhere in the future.

We define a brand as a symbol, name, or logo identifying an organization’s products and services. Its crucial for a learner to know that a brand needs to be unique, recognizable and easy to remember. A brand equity is the value of its intangibles and tangibles monetary value over a period of time, the customer perceptions and the loyalty customers have on the products and services. As you may know, it is easier to transfer a well recognised brand from a brick and mortar business to the Internet (e-business) than building a brand on the Internet from scratch.

Learner Activity Details On Branding

In this activity, you are required to search the web for an e-business with a recognizable brand name and find out what strategies they have employed to cut a niche for themselves on the Internet. List about twenty of these companies in order in which you think they rank depending on their e-business market share. Make sure you also write down their full URL's.

Promotions

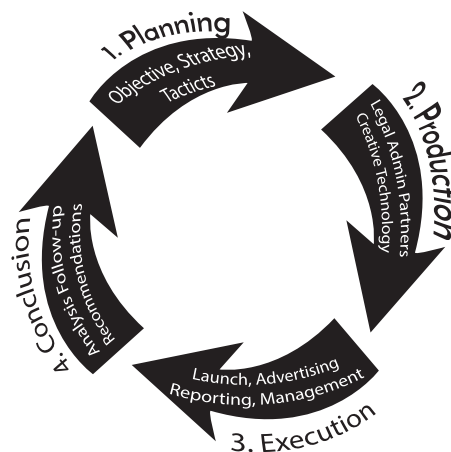
In promoting a product or a service online, you note that it not only attracts visitors which influences their buying habits, but also increases brand loyalty through reward programs such as point based rewards, free trials, volume discounts and free shipping. It is also important for the learner to understand that customers should not get overly loyal to the promotions themselves per se but more importantly, to the company itself. The company should also monitor that the total costs of its promotions be they free trials, discounts or point based rewards justify the cost of its investments by returning a profit.

The learner also needs know that log files are used in e-business to track a customers location, IP address, time of visit and even frequency of these visits. Cookies are also used to track the actions of a visitor where a computer receives a cookie the first time a customer visits a site. This cookie is reactivated every the computer revisits the site but this information remains anonymous such as visit durations, purchase done, other previously visited sites etc.

Benefits of Promotions

1. **Speed:** When comparing online promotions to brick and mortal promotions, it takes less time in general to create, launch and manage an online promotion. However, the best and most effective promotions are still given the right amount of time for planning, creation and execution though online promotions do not exert the same time pressure as traditional promotions. The management of promotional programs is also faster because of the table of components and existing templates which can be made reusable for future promotions without having to reinvent the wheel. Repeat online promotions take further advantage of the speed because as you understand which promotional tactics work best for your target audience, minor changes allows you to repeat future programs hence gaining more time advantages.
2. **Research:** In online promotions, immediate feedback and response occur both quantitative with numbers telling how compelling the promotion is and qualitative where email responses of happy and unhappy customers will manifest themselves. With traditional promotions, you can sit down and review the results at the end of the promotion but with online promotion, this can happen even while the promotion is taking place. Those with the most successful online promotions pay attention to the bottom line numbers along with consumer feedback and use their best judgment to make adjustments as needed. Online promotions allow you to take much of the guesswork out of the promotion and get back to problem solving.

3. **Technology:** With the various online web authoring tools today, we have the ability to create custom unique promotions that were never before possible. It is possible to integrate pictures, streaming media, video and sound into wild promotional concepts. However, this should be done with caution as technology should be a means to end in promotion not the end itself!
4. **Immediacy:** Online promotions are immediate attesting to the fact that even the simplest lotteries instantly confirm that your entry has been received and customers who participate in online promotions have come to expect immediate gratification. By allowing customers to find out if they are instant winners, the promotion takes full advantage of the immediacy aspect of Internet technology. This immediacy is not only an advantage of online promotions, but can assist with a faster to generate a sale. This can contribute to the customers' ultimate conversion from browsing to buying.
5. **Viral:** In the traditional world of promotions, viral marketing is launched in densely populated areas such as airports, malls and college campuses. Online viral marketing can be as simple as providing customers tools to engage with friends such as WhatsApp, tweeter and Facebook. Free email services such as Hotmail, yahoo and Google can be used to send online marketing messages capturing a millions or even billions of potential customers.
6. **Environmental:** The cost savings associated with not printing coupons, samples, direct mail and others such as postal charges means a whole lot to the environmental pollution. With online promotions, there is a self select criteria that allows interested customers to participate and non interested customers to opt out. E-coupons for example are only printed when customers are ready to go to the physical location and therefore have a higher chance of redemption rate. Opt-in direct mail programs ensure that you only send out physical mail to consumers who have either prequalified or have requested that you do so thus reducing the amount of litter in the environment.



Source: Carmody Bill, Online Promotions 2004.

Learner Activity Details On Promotions

You are required to visit five e-business web sites and write down the kind of promotions they feature on their sites. Give three examples of the following types of promotions.

- frequent flier miles.
- Discounts
- free shipping
- e-coupons
- point-based rewards
- sweepstakes.

Activity 2 - Electronic Advertising

No matter what a company's specialty, it needs marketing professionals to tell the world what it has to offer. Marketers are essentially creative businesspeople who use different method to tell the public about their company's products and services. Marketing services can be in-house or outsourced to an agency. A large company with more money and a greater need to do large marketing efforts is likely to have its own marketing department. Other companies find it makes more sense for them to hire advertising or marketing agency to do this work. Its not only for profit businesses that use marketing to generate the revenue they need to survive. Others include nonprofit organizations such as charities, universities, clubs, professional organizations and fundraisers. Every company that sells a product or a survive has a need for marketing expertise.

Advertising on the Internet is similar to traditional brick and mortar in a lot of aspects. Commercial adverts on television, newspapers, periodicals, billboards and radio are all generic ways to reach as many people as possible with same marketing message. To accomplish the same thing online, a lot of companies purchase space on web page for a banner ad. Other ways to reach potential customers on the web are more personal and specific, including e-mail marketing messages, WhatsApp, tweeter, Instagram and other tailored methods.

Perhaps you have seen on television, newspapers, publication of URL's on all mailings, business cards, billboards and other printed materials some form of e-business advertising. This gives e-business an opportunity to establish and strengthen branding increasing brand awareness and thus bringing more visitors to a site. This form of advertising can also take the form of placing links and banners on other companies web sites plus registration of sites with leading search engines such as Google and Yahoo. Pop-up ads are another form of advertisement that appear instantly when a user visits a given site. They can be automatically launched in a separate browser or displayed in the browser the user is currently viewing. As a learner, you may have encountered these pop up ads and found them invasive in nature thus interfering with your browsing experience. This it has been observed, may have be counter-productive to the attracting more visitors to the web site.

Learner Activity Details On Electronic Advertising

- Go to www.priceline.com. Review the strategies used to attract and retain customers. What additional efforts do you think this site could do to retain customers?
- Survey these websites: www.pikaba.com, www.Shopnow.com, www.pricegrabber.com, www.shopzilla.com. Write a report that highlights the different ways they provide customer service.
- Enter www.ebay.com. Identify all the advertising methods used this site. Can you find those that are targeted advertisements? What revenue sources can you find on this site?
- What would you tell a bank CEO about critical success factors for customer loyalty through engaging in e-business?

E-mail marketing

You have probably received emails from companies or individuals purporting to sell you a product or service of one kind or the other. Emails provide an inexpensive way of targeting potential customers in terms of their geographical locations and demographic profiles. In some cases, you may have received personalised emails where you were requested to choose whether or not to accept a certain offer referred to as opt-in email. It is important to avoid flooding opt-in customers with promotional email and this can diminish the effectiveness of an email campaign. Those who have previously declined or have not shown an interest in certain products or services should be purged off the email mailing list.

A company can also engage in marketing research in order to develop its marketing mix that comprises of product or service details, pricing, distribution and promotion. The Internet avails a relaxed and anonymous environment where group discussions can be held and questionnaires can be administered. However, you need to learn about Internet demographics on human population such as age, marital status, income, cultural backgrounds, values and education levels. This kind of information helps tremendously in email marketing as it reveals the customers purchasing preferences and buying power.

Learner Activity on E-mail marketing

Choose a traditionally marketed product or service and create an Internet marketing strategy.

Conclusion

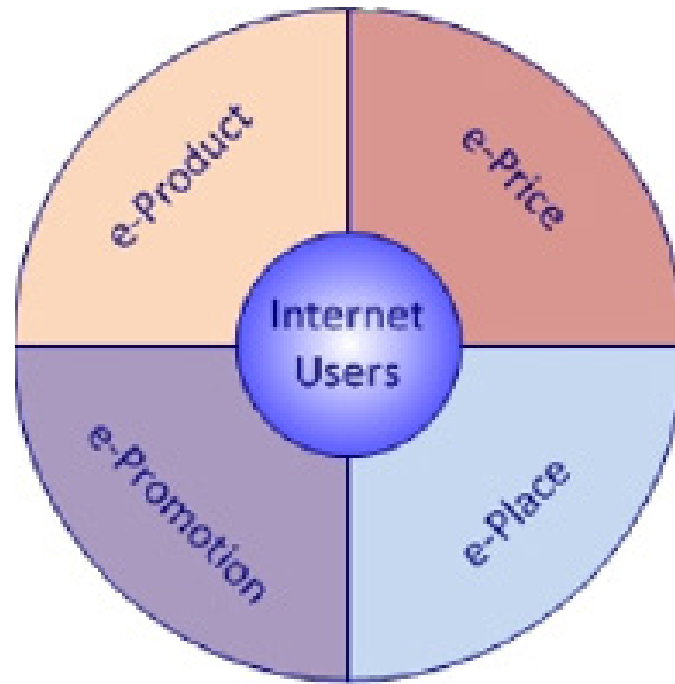
You have learnt the various ways in which a company can promote and market its goods on the Internet from this unit. The type of marketing strategy in most cases depends on the product or service being sold and therefore the proper strategy must be selected for maximum showcasing of the product.

Assessment

1. 1.What is the role of market intelligence in e-marketing?
2. 2.How differently would you conduct marketing for a product online and offline?
3. 3.Discuss the components of a marketing mix and how they impact e-marketing strategy.
4. 4.Describe what is meant by Internet demographics. What is their relevance to e-marketing?

Answers

1. It uses multiple sources of information to create a broad picture of the company's existing market, customers, problems, competition and growth potential for new products and services. Sources of the raw data for that analysis include sales logs, surveys and social media among others.
2. Offline marketing involves use of magazines, television, billboards, posters and newspapers while online is through the Internet tools such as email, pop up ads and streaming videos. With online marketing, changes can be done instantly such graphics and wording which is definitely not the case with offline marketing. However, it is important to keep both your offline and online marketing similar or identical because consistency is the key to getting your audience register what is going on. Consistency helps repeat information which sticks more in the minds of the target or prospective customers. In offline marketing, you can give your customers the opportunity to experience your product for example via in-store promotion. This implies that a real experience is more powerful than a virtual one. Face to face interaction through trade shows or demonstrations gives you an opportunity to meet your customers face to face. This interaction is very important for high value transactions or services that are relationship based.
3. The Internet has changed the way we sell our products and services. Consumers use the Internet to research and purchase products online so firms need online strategies to attract and retain customers



Source: <http://www.learnmarketing.net/emarketing.htm>

Product strategy.

Products sold online have clear facts such as products features and not what a sales person would make as assumptions. The buying process is also customized making repeat purchases easier. Some organizations also offer substitute products along with the main purchase such as buying a printer and printer cartridges.

E-price strategy.

The Internet gives customers power to shop around for the best deal at the click of a button. Websites such as www.kelkoo.com compare products from various websites information customers of where the best deal is. Such easy access to information helps to maintain prices within the online world. The growth of online auctions also helps customers to dictate the price. The online company [ebay.com](http://www.ebay.com) has grown in popularity with thousands of buyers and sellers bidding on daily basis. E-pricing rewards repeat customers through tracking systems hence allowing loyalty incentives to be targeted towards them. E-payment is also easily affected through paypal and online credit and debit cards with the downside being Internet fraud which is a major problem around the world.

E-place strategy.

This refers to where links are place on other websites for example on google.com generating high consumer traffic for the seller. Knowing your customers and where they visit can help you understand where to place your online links and advertisements. This can also be used to sell the product directly to the customers as a result bypassing manufacturers and therefore offering a more competitive price to the end consumer.

E-promotion strategy.

This involves having a recognizable domain name and placing your advertisements strategically there. Web Public Relations (WPR) is where newsworthy stories based on the product or service launches can be placed on the company's website for customers to read. Organizations also send e-leaflets to thousands of respondents hoping a small percentage will respond which is referred to as Sending Persistent Annoying Mail (SPAM). Nowadays however, organizations are choosing to directly communicate with customers via social media websites such as Facebook, tweeter and WhatsApp where they are able to gather useful data on customer profiles.

- Internet demographics provide data, statistics and facts and usage duration on popular online activities and country specific online access such as on factors such as gender, age, education, race, household income and community type such as urban or rural. They are useful in Internet marketing as organizations can profile and target specific consumers based on the these factors and make a more effective sales pitch.

Unit Summary

In this unit, we have looked at how an organization doing e-business can market itself on the Internet and hence remain competitive besides attracting new customers. We have explored the various e-marketing options such as e-mail marketing, electronic advertising, promotions and branding. For each of these platforms, we have discussed how e-business is conducted and the web based techniques such as cookies used capturing customer data.

Unit Assessment

State whether each of the following is true or false. If false explain why.

1. What is a brand equity?
2. List five reward programs available in e-business based promotions.
3. Why is it advisable for an e-business to monitor the cost of its advertisements?
4. Define a cookies and explain why it is important in e-business marketing.
5. What do you think are the shortcomings of pop-up ads?
6. Name two ways to conduct electronic advertising.
7. Why do you think the Internet is an ideal forum for doing market research?
8. Discuss why you think learning human demographics on the Internet can help in e-business marketing.

Answers

1. Value of its intangibles and tangibles monetary value over a period of time, the customer perceptions and the loyalty customers have on the products and services
2. e-coupon, discounts, free shipping, frequent flier mile, free trials & volume discounts.
3. So as to justify cost v ROI
4. A piece of info stored in your computer about Internet documents that you have looked at.
5. Considered invasive and can distract customers ability to shop.
6. TV, newspapers, business cards, billboards, fliers, pop up ads.
7. anonymous/relaxed atmosphere.
8. It reveals customers purchasing preferences and buying power.

Unit 4. E-Business Payments

Unit Introduction

In the world of e-business, you must create or have third party IT systems that enable your customers to pay electronically, easily and securely for their purchases. Credit-card payments, digital cash and e-wallets, smart cards, micro-payments and electronic bill presentment and payment are methods for conducting many online transactions. Many companies offers products, software and services that enable monetary transactions on the Internet.

Unit Objectives

Upon completion of this unit you should be able to:

- Describe how money is made electronic.
- Illustrate how major types of e-payment systems work.
- Outline the risks and advantages of these payment systems.
- Choose the right payment system for a given e-business model.

Key Terms

Card-not-present: Used to show that a credit card has been charged but not seen by the person or business to be paid.

EMV: This is short for Europay, MasterCard and Visa.

Merchant account - A type of bank account that businesses use to accept payment by credit card.

Money laundering - The crime of moving money that has been obtained illegally through banks and other businesses to make seem as if the money has been obtained legally.

PIN: Personal Identification Number

POS: (Point of Sale) A place where people pay in a store.

Learning Activities

Activity 1 - Credit Cards

Introduction

You probably are aware that credit cards are one of the most acceptable forms of e-business payments. However, customers are often reluctant to use them due to security concerns such as credit card fraud by merchants and hackers. This trepidation persists even though this fear has been addressed through the introduction of secure payment platforms such as Thawte[®] and Verisign by major companies such as Visa, American Express and Mastercard thus enabling secure online and offline payments.

In order for a credit card payment to be acceptable, merchants must open a merchant account with a bank. Long established merchant accounts accept only POS transactions which means that a customer must present the physical credit at merchant stores. However, the explosive growth of e-business has necessitated the establishment of special Internet merchant accounts handling e-business based transactions. This comprises of card-not-present transactions such that when a customer makes credit card purchase over the web, they can provide the credit card numbers and expiration dates in lieu of the physical card itself. You need to know that merchant accounts can be opened through a participating bank or third party intermediaries.

Companies like CyberCash (www.cybercash.com) and icat (www.icat.com) also enable merchants to accept credit card payments online. These companies have established business relationships with financial institutions that will accept online credit card payments for merchant clients. icat acts as a third party that receives consumer credit information and securely interacts with both the consumer and merchant bank accounts to verify the sale and make monetary transfers.

Trintech, another company offering online credit card transaction capabilities has created payware product suite that enables companies to process electronic transactions. The suite includes the eMerchant program, which enables merchants to accept online payments; eHost, which can accommodate transactions from multiple stores; and elssuer, which issues the consumer a virtual credit card that is stored on the users computer, providing one-click shopping at participating merchants. Trintech is also developing a mobile payments option that can be used from mobile phones.

CashRegister, an online service created by CyberCash, makes it possible for merchants to receive credit-card numbers, offer the numbers to the appropriate financial institution for validation and accept credit card payments in a secure environment over the Web. All major credit cards such as Visa, Mastercard, Discover/Novus and some debit cards can be processed by CashRegister. In addition to their CashRegister technology, CyberCash also offers affiliate marketing services and payment solutions to office businesses. The CashRegister system works by establishing a direct connection between its own servers and web sites of its e-business customers. A software application called the Merchant Connection Kit (MCK) is used to make this connection; the kit also includes HTML files and sample scripts to use when adding CashRegister to an existing e-commerce site.

The CashRegister process begins once a customer is finished shopping on a merchant web site. The customer completes a form, entering credit card and shipping information and is presented with a screen containing items selected, prices and billing information. This information is then sent to CyberCash for validation. Once validation is received, the purchase can be completed and funds are transferred electronically from the customers account to the merchants account.

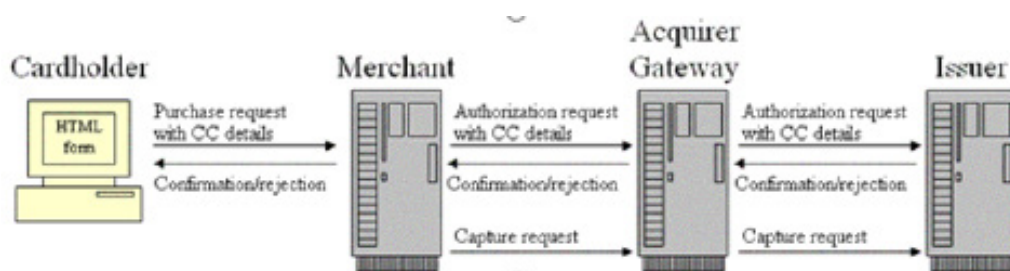
CyberCash Instabuy is another product available to merchants, it allows customers to store their purchasing information in an instabuy e-wallet. An e-wallet electronically stores purchasing information and when customers are ready to check out, they can use the wallet to transfer payment information quickly and securely.

Through efficient use of technology, CashRegister offers both convenience and security to its users using a complete set of redundant servers for back up if one server fails. It is therefore able to maintain continuous service and minimize downtime. It also keeps track of all transactions completed through a merchants web site and produces reports to assist the merchant with record keeping and customer tracking.

CyberCash also offers fraud detection such as Standard Fraud Detection that is designated to protect merchants who want to use a standardized set of requirements for determining fraudulent activity. The merchant selects the appropriate fraud detection rules the same rules are then used for every purchase. In 2005 however, Paypal acquired CyberCash after the company filed for bankruptcy in 2001.

Learner Activity Details On Credit Cards

- In the diagram depicting a credit card transaction below, describe in detail the series of activities from the card holder to the issuer.



Source: <https://www.creditcards.com/>

Do a research of web sites that accept any electronic cash and list the type of organizations that accept this form of payment. You should make a brief report summarizing your findings.

E-wallets and digital cash

The learner needs to recognize that a digital cash is a good representation of digital currency. Digital cash is stored electronically and can be used to make e-business based payments. A digital cash account is almost the same as a regular bank account in that customers deposit money into a digital cash account for use in digital based accounts. This kind of account allows people without credit cards to shop online besides addressing the security concerns associated the credit cards. Many companies have now introduced electronic wallet services as an enabler of credit card order process. This is because every time you shop on the Internet, you are required to fill out a form with your name, shipping address and credit card information which can be tedious every time you shop. Many merchants have resolved this by having you fill out a form once and then saving the information on their servers for later use. A good example is amazon.com which they have dubbed "one-click" shopping. An e-wallet can also be downloaded on the desktop in which the user would store their credit card numbers and other personal information. The moment a user shops at a merchant store where e-wallet is acceptable, the user will click the e-wallet which automatically fills all the necessary information. The e-wallets help keep track of shipping and billing information so that it can entered simultaneously with one click of the mouse at participating merchant stores. An e-wallet has the additional capability of storing e-checks, credit card information and e-cash information for multiple credit cards.

Learner Activity Details on e-wallets and digital cash

Paypal (www.paypal.com) was founded in 1998 as an intermediate solution for users purchasing products and services online. Paypal allows customers to conduct transactions on the Internet quickly and easily without any need to submit credit-card or bank account information every times they wish to spend money on the web. To use Paypal, users are required to establish an account using a credit card or backed by their account at a financial institution. Once an account is set up, users can, among other things, purchase products or services online, pay bills and transfer money to other people via Paypal's partner web sites. Paypal currently has over 30 million users in 38 different countries and is one of the leading businesses that conduct and control online payments. However, eBay, the largest auction site on the Internet, purchased PayPal in October 2002.

In this activity, you are required to visit www.paypal.com and take their guided tour of e-payment processing solutions. While at Paypal, sign-up for a personal account and request for a digital ID that can be used with e-mail. Use the ID to encrypt and e-mail a message to your instructor.

Micropayments

You need to understand that for every credit card transaction processed by a merchant, a fee needs to be paid which makes this costly particularly for inexpensive items such as pens, chocolate, candy bar etc. In many scenarios, the item's price is sometimes lower than the transaction fee making merchants accrue colossal losses. Micropayments (those payments not exceeded \$5 or £3.2 or € 4.40 or Ksh 456) enable ways for these inexpensive products and services to be sold profitably over the Internet. The learner will note that a telephone bill is actually an aggregation of micropayments charged periodically at intervals so as to justify the transaction fee thereof. In order to offer micropayment services, a number of companies have formed strategic alliances with telephone and billing companies such as electric and water companies.

Learner Activity Details on Micropayments

In this activity, you are required to list about twenty items that would qualify for micropayment on the Internet. These items' value should not exceed a value of \$5 (Use the currency converter at www.xe.com/currencyconverter/ to convert to your local country rates). Also find out how much the merchant would be charged by the bank to process each of these items.

Smart Cards

A smart card is a card with a computer chip embedded on its face and is able to hold more information than an ordinary credit card with a magnetic strip. Smart card technology can be used with payphones, health care, transportation, identification, retail, loyalty programs and banking. The smart card can store information about your health care plan and frequent flyer loyalty program.

There are contact and contactless smart cards. In order to read the information on the smart card and update information on the computer chip, contact smart cards need to be placed in a smart card reader. A contactless smart card has both a coiled antenna and a computer chip inside, enabling the card to transmit information. The contactless card enables faster information exchange than is possible using a contact smart card. For example, contactless cards are convenient for transportation services such as automatic toll payment. A contactless smart card can be placed in your car to charge your account as you drive through toll booths.

Smart cards can require the user to have a password giving the smart card a security advantage over credit cards. Information can be designated as "read only" or as "no access" and security measures such as encryption can be used. For additional security, the card can have a picture on its face to identify the user. However, some argue that there is too much personal information stored on the card creating the possibility of personal identity theft.

Therefore a smart card generally resembles a normal credit card and serves different functions such as authentication and data storage. In this regard, they are used to store credit card numbers and personal contact details. A smart card is used in conjunction with a PIN, thus providing two levels of security requiring the holder to possess a smart card and remember its corresponding PIN for him or her access the data stored in the card. Popular smart cards include memory cards and microprocessor cards which can be used to store money that is deducted as per the customer's usage.

Learner Activity on smart cards.

This exercise will have to be done in groups. Each member of the group will play a role. One member will play the role of a merchant. The next will play a customer. The rest of the group should become the banks for both parties. Remove three pieces of paper. On the first, write payment. On the second write product. On the third write smart card. Conduct the transaction for the following scenarios.

- Traditional purchase and sale
- Cash on delivery
- Smart card

Did you run into problems? What conclusions can you draw from the exercise? Is the Internet more efficient for conducting transactions?

Conclusion

In this unit, you have learnt about how money is converted into an electronic format that can be used to pay for goods and services online. The various methods of e-business payments have been analysed in terms of how each one of them works for a merchant and a customer.

Assessment

1. Analyse how money is made electronic for the conduct of e-business.
2. Why might you want to choose one e-payment platform over the other?
3. Which e-payment method do you think involves the most risk?
4. Refer to unit two. Match each e-business model with its appropriate e-payment method.

Answers

1. This is money that only exists in banking computer systems and is not held in any physical form for example nowadays people receive electronic paychecks through direct deposit and millions more spend money through credit cards and debit cards.
2. Security, convenience, expenses control (history of transactions is recorded), time savings, user friendly, minimize overdue payments among others.
3. Credit cards.
4. Open

Unit Summary

In this unit, you learnt that an important function of e-business sites is the handling of payments over the Internet. Most e-business sites are involved in the exchange of some form of money for services and goods and some companies still use EFT and EDI for making these online based payments. For most people, the term payment card is a general term used to refer to all types of plastic cards that consumers use to make their online payments. This scenario is summarized here below:-

PAYMENT CARDS	Credit card: Has a spending limit based on the users credit history, a user can pay off the entire card balance or pay a minimum amount each billing period.
	Debit card: Removes the amount of the sale from the cardholders bank account and transfers it to the sellers bank account.
	Charge card: Carries no spending limit and the entire amount due at the end of the billing period.

Source: Turban Effraim, David King & Judy lang, 2009.

You may have recognized that payment cards have characteristics that make them very popular with customers and merchants for offline and e-business type of transactions. Payment cards provide a great measure of fraud protection for online payments even for card-not-present transactions since the merchant can authenticate and authorize purchases using a card processing network. In the United States, the Consumer Credit Protection Act limits a cardholders liability to \$50 if the card is lost and used fraudulent manner. The learner will note that payment cards greatest benefit is they can be used anywhere in the world and should any currency conversion be required, it is done by the card issuer. Even for e-business transactions, all a customer needs to do is enter the payment card number plus the shipping and billing information (if the customer does not have an e-wallet) in the necessary fields to finalise the transaction. You may recall that payment card companies charge merchants transaction fees for every transaction in addition to the monthly fees. A merchant whose e-business does not accept payment cards stands to lose a great amount of sales volume to others who can accept these cards. Customers do not pay any transaction charges but merchants may transfer transaction fees and monthly processing charges by increasing the cost of goods and services purchased online. Moreover, credit card issuers levy an annual fee for charge cards and credit cards.

The learner needs to understand that payment card processing has been made more convenient as Visa and MasterCard including MasterCard's international affiliate Europay have now launched a single seamless standard for facilitating payment card transactions referred to as the EMV standard.

Electronic cash transactions are in general more amenable to business since they are less costly compared to the other brick and mortar methods which translates into better prices for customers. Note that electronic transactions happen on the existing infrastructure and there are no additional costs to the purchaser irrespective of the distance a transaction must span. One drawback of electronic payments is the lack of audit trail just like ordinary cash. Since tracing the sources of this cash is difficult, money.

Unit Assessment

1. Internet payments for items costing for a few cents to \$5 are called?
2. Online cash storage is the virtual equivalent of money in a wallet.
3. _____ is a method used by criminals to convert money that they have obtained through illegal means into cash that they can spend without having it identified as the proceeds of an illegal scheme.
4. _____ wallet stores a consumers information on a remote server belonging to a particular merchant.
5. List three benefits of e-payments.
6. Define what is meant by EMV?

Answers

1. Micropayments
2. False
3. Money laundering
4. Server-side electronic
5. Less costly, occurs on existing networks, its everywhere, many platforms
eg smart card, credit cards
6. Conglomeration of europay, mastercard & visa.

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