Unit I: Introduction to E-Business

The Origin of E-Commerce:

In the late 1960s the U.S. Defense Department developed a secure and robust communications network (ARPANET) linking organizations engaged in defence research, which was designed to be able to continue functioning even if part of it was damaged, e.g. by nuclear attack. During the 1970s ARPANET became increasingly used by academics for sharing research material and eventually evolved into the worldwide network of interconnected networks known as the Internet (or simply the net).

In 1989 Tim Berners Lee proposed the World Wide Web (WWW or web) while working at CERN, the Swiss-based scientific organization for research into subnuclear physics. Berners Lee initially envisaged a text-based global hypertext system enabling fast and efficient communication between scientists located around the world and released the first text-based browser in January 1992.

The 1990s saw the advent of affordable desktop computers together with the emergence of Microsoft's Windows as the dominant personal computer (PC) operating system. It's point-and-click graphical interface utilized a set of (supposedly) universally understandable icons to represent tasks such as file management and printing.

September 1992 saw the release of Mosaic. Developed by Marc Andreesen and others at the National Center for Supercomputing Applications at the University of Illinois, Mosaic was the first web browser with a graphical interface. The web started to become the familiar face of the Internet providing easy access to a wealth of text, images, animation, sound and video.

Growth and Evolution:

Matthew Gray, of the Massachusetts Institute of Technology estimated there were a mere 130 web sites in June 1993, which had risen to 650,000 by January 1997. Leading search engine Google now claims to index 1,346,966,000 web pages. Global Reach placed the worldwide number of Internet users at 369,400,000 in Sept 2000. The Electronic Telegraph quoted a survey by MMXI Europe in July 2000, which found that nearly one in five people in

Britain use the Internet from home. Many more have access to the 'net at work or school, or from public libraries and Cybercafés.

The largely academic roots of Cyberspace meant the commercial exploitation of the 'net was initially viewed with hostility. In 1994 two Arizona lawyers, Laurence Canter and Martha Siegal, posted advertisements to a large number of newsgroups offering legal help to foreigners seeking U.S. work permits. Their act caused outrage, resulting in thousands of complaints including death threats. Since then attitudes have changed with most users accepting most forms of 'net advertising as a means of paying for the huge amount of valuable free content available, just as television advertising pays for the programs. However, the non-commercial ethos of the web remains evident in the vast quantity of valuable content which is still freely available, including daily newspapers such as The Times and the entire contents of the Encyclopedia Britannica. This is significant for contemporary e-commerce enterprise.

Definition of E-Commerce:

Electronic commerce, commonly known as E-commerce or e-commerce, is trading in products or services using computer networks, such as the Internet. It is *"any transaction completed over a computer-mediated network that involves the transfer of ownership or rights to use goods and services,"* U.S. Census Bureau.

Transactions aren't required to have a price and include both sales and items like free downloads. E-commerce includes transactions made on the internet, Intranet, Extranet, World Wide Web, by email and even by fax.

It draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems. Modern electronic commerce typically uses the World Wide Web for at least one part of the transaction's life cycle, although it may also use other technologies such as e-mail.

Scope of Electronic Commerce:

E-Commerce has a very wider scope as laid down by its wide areas of application, some of the major areas of which are:

1. Financial Services: A large number of users use the internet for some form of financial guidance.

2. Stock Trading: Online stock brooking companies offer market access at a competitive price as a key advantage.

3. Banking: Internet banking has become a key process in recent days for customer-related services such as transaction reporting, fund transfer, utility payment, etc.

4. Legal and Professional Services: Many legal and professional services could provide the legal, professional and regulatory advice to the users of the internet which has led to an increase in the number of eCommerce users.

5. Tour and Travel: Travel industry has been effectively using the eCommerce and has obviously expanded its reach throughout the global market. For example, a reservation for hotels, ticketing, and travel guides, etc.

6. Healthcare: Another prominent uses in the health section as the major concern of the public in the health sector has also been made much easier and effective through the use of eCommerce.

Traditional Commerce vs Electronic Commerce:

BASIS FOR COMPARISON	TRADITIONAL COMMERCE	E-COMMERCE
Meaning	Traditional commerce is a branch of business which focuses on the exchange of products and services, and includes all those activities which encourage exchange, in some way or the other.	e-Commerce means carrying out commercial transactions or exchange of information, electronically on the internet.
Processing Of Transactions	Manual	Automatic
Accessibility	Limited Time	24×7×365
Physical Inspection	Goods can be inspected physically before purchase.	Goods cannot be inspected physically before purchase.
Customer Interaction	Face-to-face	Screen-to-face
Scope Of Business	Limited to a particular area.	Worldwide reach
Information Exchange	No uniform platform for exchange of information.	Provides a uniform platform for information exchange.
Resource Focus	Supply-side	Demand-side
Business Relationship	Linear	End-to-end
Marketing	One way marketing	One-to-one marketing
Payment	Cash, cheque, credit card, etc.	Credit card, fund transfer etc.
Delivery Of Goods	Instantly	Takes time

E-Business:

E-business (electronic business) is the conduct of business processes on the Internet. These electronic business processes include buying and selling products, supplies and services; servicing customers; processing payments; managing production control; collaborating with business partners; sharing information; running automated employee services; recruiting; and more.

E-business is broader than e-commerce; including the transaction-based e-commerce businesses and those who run traditionally but cater to online activities as well. An e-business can run any portion of its internal processes online, including inventory management, risk management, finance, human resources.

Advantages of E-Business:

1. Cost-Effective Marketing:

With an e-business, all of our marketing efforts end with one goal, to drive target traffic to our business website. It allows us to use many online marketing tactics including email marketing, article marketing, social media networking and e-newsletters. Most of these online marketing efforts are very low cost or free, so an e-business allows for highly cost-effective marketing strategies.

2. Flexible Business Hours:

E-business breaks down the time barriers that location-based businesses encounter, according to E-Commerce Education. Because the Internet is available 24 hours a day, seven days a week, our business never closes. An e-business can literally be making money while we are fast asleep.

3. Eliminates Geographic Boundaries:

An e-business also allows us to broaden our reach. An online business can reach customers in the four corners of the Earth. As long as someone has an Internet connection, we may be able to reach and sell our product or service to these visitors to our business website.

4. Reduces Transaction Cost:

Running an online business reduces the cost per transaction because it takes less manpower to complete an online transaction. Once we get our website up and running, the customer

places the order online, which removes the need for a salesperson. The customer payment goes through our online payment processing software or system again eliminating the need for a store clerk. Someone has to download the order and ship it, which is probably us, but an e-business transaction has less burden of cost on the business, making each transaction more cost-effective than a brick-and-mortar business.

5. Low Overhead Costs:

Running an e-business cut back or out most of the costs involved in running a physical location. E-businesses have less expensive phone, rent and utility bills than businesses with physical locations. An e-business also reduces the cost of paying employees because we do not need someone to "man" our website during business hours. Some e-businesses do not require any additional space and can be run out of our home, which we are already paying rent for or our mortgage payment. Even housing inventory may not be an issue because we may be able to establish a drop-shipping situation, where our wholesaler ships orders for us on behalf of our business.

Disadvantages of E-Business:

1. Security and Integrity Issues:

Hackers are adept at manipulating online business websites to harvest financial data. The information we require of our customers: shipping address, credit card details and email potentially provides ample resource for hackers to initiate identity theft. This risk keeps some people from shopping online. We have to assure customers of the security of their personal data as they interact with our e-business. Ensure site integrity by investing time and money in learning and implementing good security measures, including digital signatures and data encryption, to protect client information lest it falls in the wrong hands and lawsuits ensue.

2. Purchase to Delivery Time:

As much as the Internet has the advantage of processing orders and payments in real-time, this has little benefit to the customer who requires the purchased item equally fast. Unlike

brick-and-mortar businesses, purchases from our e-business typically have a time lag from purchase to delivery of the physical goods. Some customers would rather go to the physical store and pick up the item unless it's of a digital kind, such as an e-book or music file.

3. Momentary Intangibility:

The personal touch is a missing factor in online transactions. An e-business normally offers the customer no physical proximity to the items purchased until delivery. Experiencing the feel, taste or smell of a product can influence the decision to buy. Unless it's a repeat buyer, our typical customer would want to feel the texture of the leather wallet, the comfort of the shoe or smell the cologne before ordering. The absence of an opportunity to physically examine the product places a major limitation on e-businesses.

4. Sectoral Limitations:

Not every company can participate in e-commerce. Some are challenged in terms of expertise and availability of technology, while others carry products that can't be shipped economically. For example, some large, odd-sized items may be uneconomical to transport across state lines, making it difficult to sell them online. Other products may be legally restricted, depending on state and federal laws, such as certain explosives, ammunition and alcoholic beverages.

5. System Up-gradation:

Once a system is developed, the responsibility of ad hoc up-gradation at intervals follows suit. If this does not happen, the site turnover would be poor. To improve site performance and tow in a good share of online customers, keeping up with the advancements is pivotal. Though, some sites may find doing this an unnecessary feature.

Applications of E-Business:

1. Retail And Wholesale:

There are numerous applications for retail as well as wholesale in the case of e-business. Here comes e-retailing or may be called as online retailing. This refers to the selling of goods and other services through electronic stores from business to consumers. These are designed and equipped using a shopping cart model and electronic catalogue.

2. Marketing:

Using web and e-business, data collection about the following are possible:
a. Preferences
b. Behaviour
c. Needs
d. Buying patterns
The marketing activities like price-fixing, product feature, and its enhancement, negotiation, and the relationship with the customer can be made using these.

3. Finance:

E-Business is being used by financial companies to a large extent. By the name finance, we know that there will be customers and transactions. The customers can check the balance in their savings account, as well as their loan account. There are features like transferring of money from and to their own accounts, paying off bills online and also e-banking. Online stock trading is also another feature of e-business.

4. Manufacturing:

E-Business is included and used in the chain operations (supply) of a company. There are companies that form the electronic exchange. This is by providing buying and selling items together, trading market information and the information of runback office like inventory control. This is a way that speeds up the flow of finished goods and the raw materials among the business community members.

5. Auctions:

E-Business customer to customer is direct selling of goods among customers. It includes electronic auctions that involve bidding system. Bidding allows prospective buyers to bid an item. In Airline Company they give bidding opportunity for customers to quote the price for a seat on a specific route, date and time.

6. Entertainment:

E-Business application is widely used in entertainment area also for video cataloguing, multiplayer games, interactive ads and for online discussion.

7. Education:

In educational training also e-business has a major role in interactive education, video conferencing, online class and for connecting different educational training centres.

Difference between E-Commerce and E-Business:

BASIS FOR COMPARISON	E-COMMERCE	E-BUSINESS
Meaning	Trading of merchandise, over the internet, is known as E-commerce.	Running a business using the internet is known as E-business.
What is it?	Subset	Superset
Is it limited to monetary transactions?	Yes	No
What they carry out?	Commercial transactions	Business transactions
Approach	Extrovert	Ambivert
Requires	Website	Website, CRM, ERP, etc.
Which network is used?	Internet	Internet, Intranet and Extranet.