

13. E-SERVICES



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13.1. E-services

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13.2. E-commerce

13.3. E-learning

13.4. E-government

E-services Learning Objectives

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- Define e-service
- Describe the three requirements of an e-service
- List examples of e-services

Describing E-services

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- E-service is short for electronic service
- Services for consumers (business or individual) using ICTs
- Services require a transaction to occur



E-services Components

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- Three main requirements
 - ▣ Service provider
 - ▣ Service receiver
 - ▣ Service delivery channel (i.e., technology)
- Automated
 - ▣ Not required, but many e-services are fully automated

Component (1): Service Provider

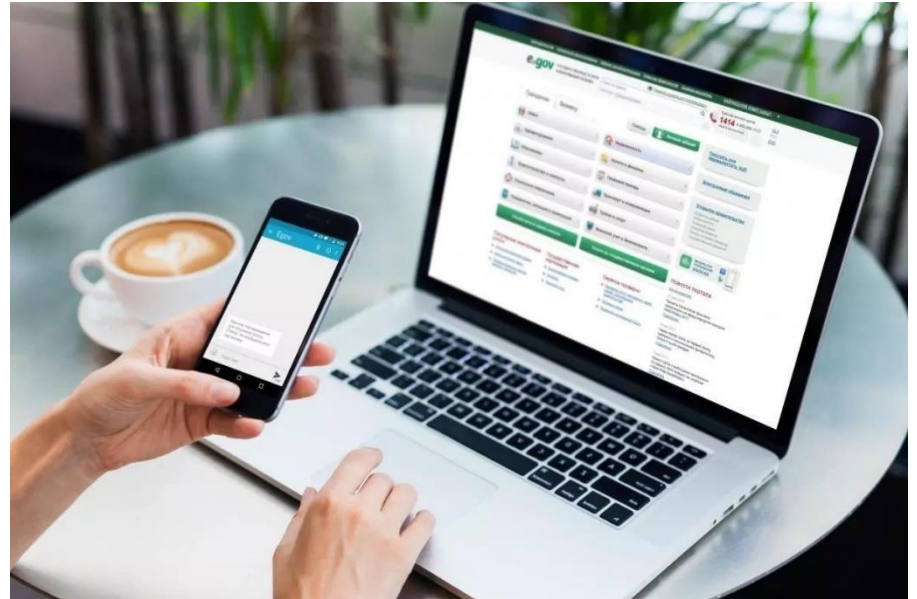
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- An agency or office that provides some service for profit or for free
 - ▣ Postal system – Sending and receiving of parcels
 - ▣ Print services – Copying or printing documents
 - ▣ Commerce – Buying or selling products
 - ▣ Banking System – Accessing or transferring funds
 - ▣ Travel Agency – Buying tickets or tour packages

Component (2): Service Receiver

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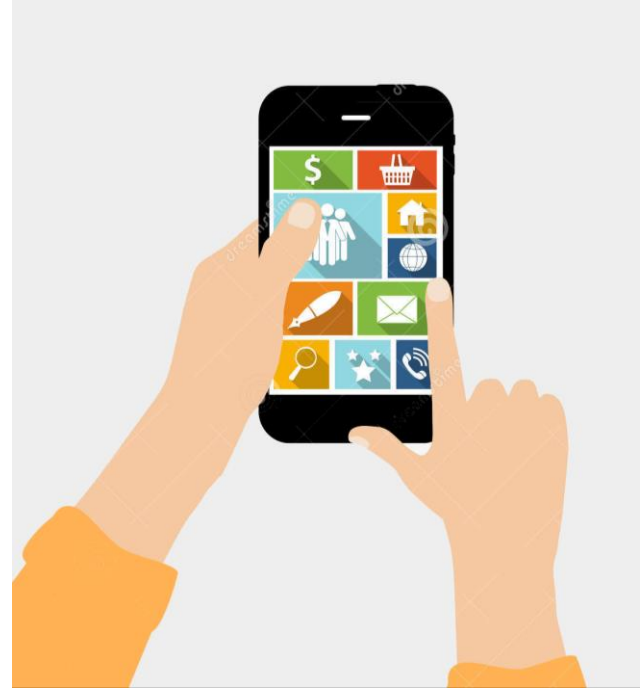
- Anyone who uses the service
 - ▣ Businesses
 - ▣ Individuals



Component (3): Service Delivery

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- The method of how the provider delivers the service
 - ▣ Internet (most commonly)
 - ▣ Cellular technologies
 - ▣ Kiosk/pay terminal
 - ▣ Call center



Component (4): Automated

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- The service is usually automated
- Allows the consumer to use the service with minimal or no human intervention
 - i.e., purchasing a ticket



Examples

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Virtual Services

- ❑ Streaming music or movies
- ❑ E-books
- ❑ Cloud computing
- ❑ Online or downloaded games

Physical Services

- ❑ Metro/bus ticket
- ❑ Online commerce
- ❑ Pay and manage utility bills



13.2. E-commerce

13.1. E-services

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E-commerce Learning Objectives

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- Define e-commerce
- Explain the e-commerce procedure
- List the categories of e-commerce
- Describe the advantages and disadvantage of e-commerce

Defining E-commerce

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- E-Commerce or electronic commerce is a process of buying, selling, transferring, or exchanging products, services, or information using ICTs.
- E-business is another word for e-commerce



Defining Commerce

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- The exchange of goods and services for money
 - ▣ **Buyers** – those with money who want to purchase a good or service
 - ▣ **Sellers** – those who offer goods and services to buyers
 - ▣ **Producers** – those who create the products and services that sellers offer to buyers



E-commerce Process

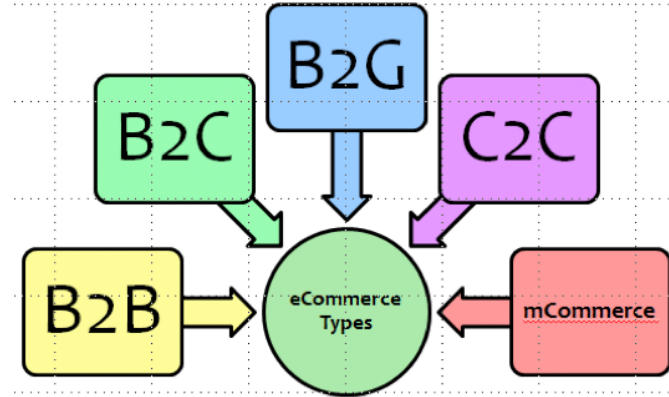
Typical E-commerce Process:



Categories of E-commerce (1)

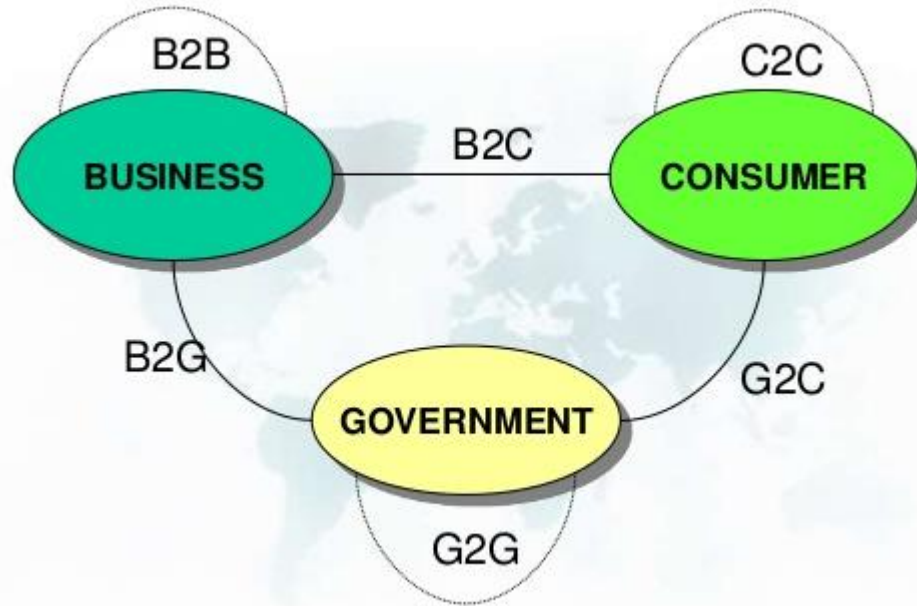
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- Business-to-business (B2B)
- Business-to-consumer (B2C)
- Business-to-government (B2G)
- Consumer-to-consumer (C2C)
- Government to consumer (G2C)
- Government-to-business (G2B)



Categories of E-commerce (2)

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Advantages of E-commerce

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- ❑ Buying/selling 24/7 from a computer
- ❑ Not limited to a geographical location
 - ❑ Businesses have a broader reach to customers
 - ❑ Customers have a larger selection
- ❑ Easier to find uncommon or special products
- ❑ Low operational costs without a physical storefront
- ❑ Easy to start and manage a business

Disadvantages of E-commerce

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- ❑ Unable to examine products personally
- ❑ Rely on other customer reviews of products
- ❑ Requires a way to transfer money electronically
- ❑ Possibility of credit card number theft
- ❑ Receive defective product
- ❑ Slow delivery
- ❑ Difficult to return products

13.3. E-learning

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E-learning Learning Objectives

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- Define the term elearning
- List the benefit of elearning
- Describe the difference between asynchronous and synchronous learning
- Explain blended and online learning
- List types of elearning tools

What is elearning? (1)

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- Elearning is intentional learning over the internet
 - Uses educational psychology and instructional design
 - Thoughtful integration
 - Interactive
 - Synonymous with online learning
 - Evolves with technology



What is elearning? (2)

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- Elearning facilitates and supports learning through the use of information and communications technology
 - **Learning** is the key component to elearning
 - Elearning describes how students learn using technology

**Technology
& Learning**

Benefits of Elearning

- Engages learners who have difficulty attending face-to-face lectures
 - ▣ Live far away; work during class hours; taking care of a sick family member or kids; disabled
- Different learning modes for those who struggle with lectures
 - ▣ Low language, ineffective listening skills, writing disability
- Interactive learning continues outside of the classroom

Modes of Elearning

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- Synchronous
 - ▣ Elearning sessions that happen in real time
 - ▣ Not as common in elearning
- Asynchronous
 - ▣ Elearning happens over a duration (e.g., a week)
 - ▣ Commonly used in elearning

Synchronous Elearning

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- Synchronous learning activities are chat conversations and audio/video conferencing
- Real-time interaction between student and instructor

Asynchronous Elearning

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- Asynchronous events are time-independent
- Usually students are interacting and learning together using an online tool
 - ▣ Learning material and then discussing in a forum
 - ▣ Creating a class wiki
 - ▣ Developing an online presentation to share knowledge

Examples

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Synchronous



Asynchronous

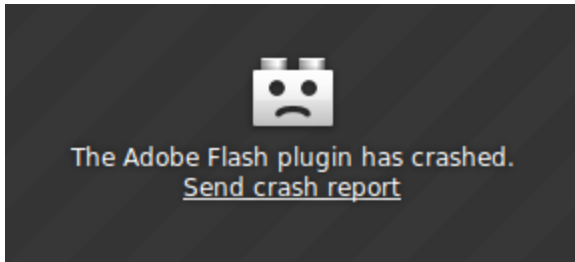


Limitations

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Synchronous

- ❑ Technology may not work
- ❑ Students have to meet at a fixed time



Asynchronous

- ❑ Students feel isolated
- ❑ Requires self-motivation



Elearning Categories

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- Elearning covers a range of activities
- Most fall into these categories
 - ▣ (1) Blended learning; (2) Fully-online learning



**FACE-TO-FACE
TEACHING**



**ICT
IN SUPPORT OF
FACE-TO-FACE
TEACHING**



**BLENDED LEARNING
(FACE-TO-FACE
+
ONLINE)**

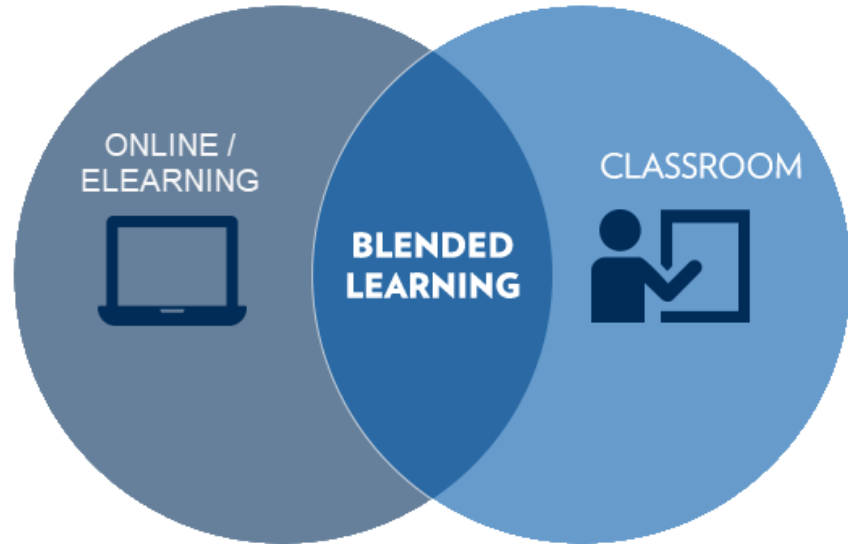


**FULLY ONLINE
DISTANCE LEARNING**

eLEARNING

Blended Learning

- ❑ Blended learning is **classroom learning** combined with **online learning**
- ❑ Takes the best of both formats



Blended Learning Examples

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- Students acquire knowledge at home. During class, they discuss, apply, or demonstrate the learned material
- Discuss material online through a forum
- Work on a collaborative online project



Fully Online Learning

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- ❑ Formal education that takes place entirely only
- ❑ Students do not attend face-to-face lectures
- ❑ May use synchronous or asynchronous technology
- ❑ Students learn and apply knowledge online
- ❑ Usually more work and more interactive than classes in traditional education

Elearning Tools

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- ❑ Learning Management System (LMS)
- ❑ Web conferencing software
- ❑ Web-based discussion tools
- ❑ Collaborative learning tools

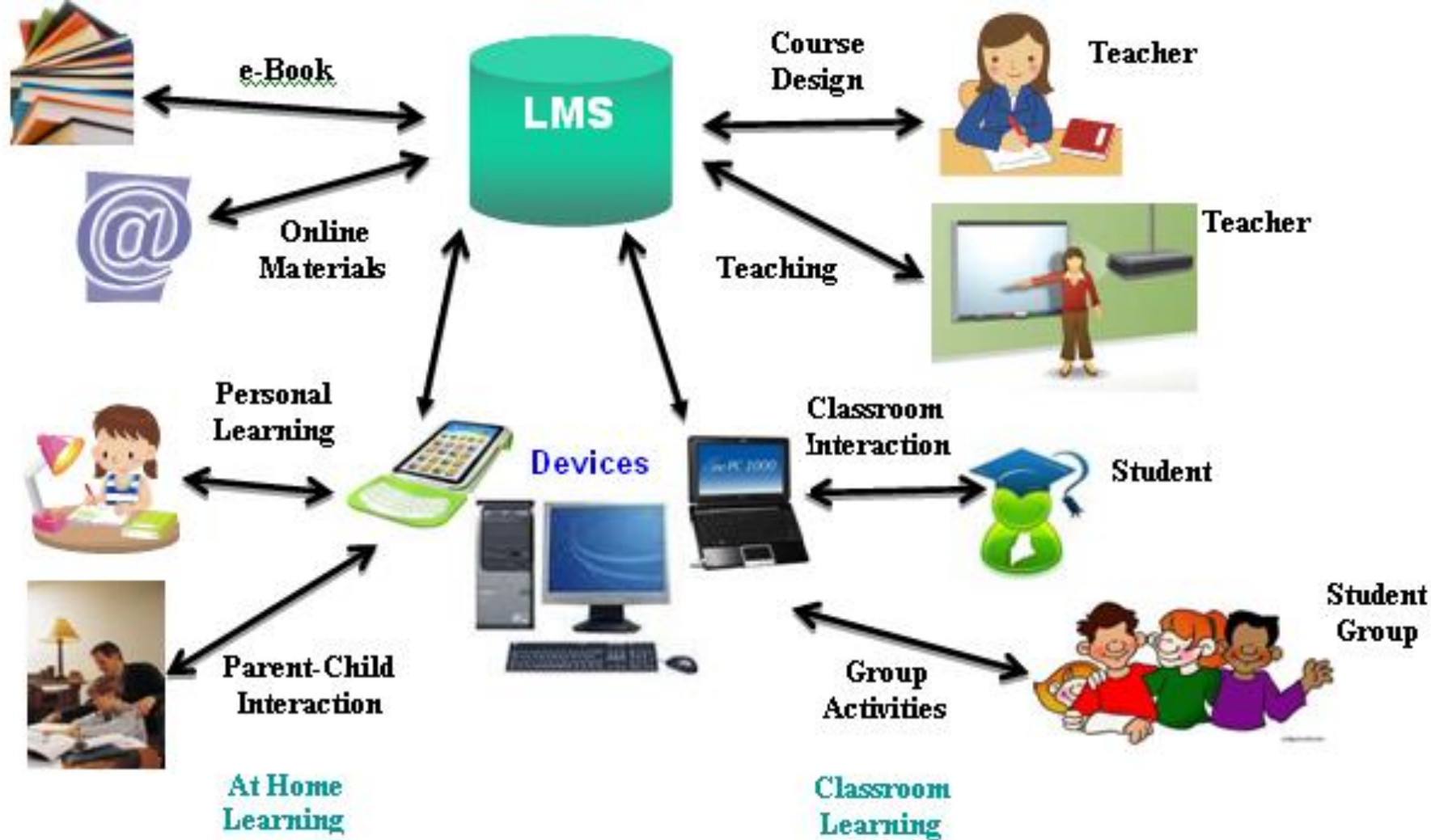


Learning Management System (LMS)

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- All-in-one online course platform that includes the essential tools for teaching and learning online
 - Administrative features
 - Asynchronous
 - Synchronous
 - Blended learning
 - Fully online





Web conferencing software

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- Allows the instructor and students to have live learning sessions online
 - ▣ Audio/video/chat
 - ▣ One-to-one
 - ▣ One-to-many





Web Participants



Presentation



Group & Private Chat

The screenshot shows a video conferencing application window. The main area displays a presentation slide titled "The Precision Approach" with a diagram of a runway and glide slope. The diagram includes labels: "Glide slope (typically 3 degrees)", "WAP", "Decision height", and "Runway". A compass rose is also visible. On the left, there are panels for "Web" participants (listing Dennis, Richard, and Tyler) and "Voice" participants (listing Dennis, Richard, and Tyler). On the right, there is a "Chat" window with messages from Tyler, Richard, and Dennis. Below the chat is a "Stream webcam" window showing a man in a blue shirt, and a "Desktop Sharing" window showing a technical diagram.



Voice Participants



Web Cam



Desktop Sharing

Web-based Discussion Tools

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- Allows students and teachers to interact online
 - ▣ Real-time chat sessions (synchronous)
 - ▣ Forums (asynchronous, group learning)
 - ▣ Blogs (asynchronous, individual learning)



Online Collaborative Learning Tools

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- Online tools that allow students to work together to create content
 - ▣ Writing projects
 - ▣ Spreadsheets
 - ▣ Presentations
 - ▣ Multimedia
 - ▣ Programming
 - ▣ Wikis



E-learning Summary

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- Elearning facilitates and supports learning using ICT
- Reaches learners who cannot attend classroom learning
- Synchronous learning happens in real time
- Asynchronous learning happens over a duration
- Fully online learning takes place entirely online
- Blended learning combines online and classroom learning
- Some elearning tools
 - LMSs, web conferencing software, web-based discussion tools, and collaborative learning tools

13.4. E-government

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E-government Learning Objectives

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- Define e-government
- List the interactions of e-government
- Describe the e-government functions

Defining E-government

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- E-government (short for electronic government) is the use of ICTs to provide public services to citizens and other persons in a country or region.



E-government Interactions

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- Between a citizen and their government (C2G)
- Between governments and other government agencies (G2G)
- Between government and citizens (G2C)
- Between government and employees (G2E)
- Between government and businesses (G2B)

E-government Functions (1)

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- Pushing information over the internet
 - ▣ Making information available online
- Two-way communications between the agency and user
 - ▣ Users can engage in dialogue with agencies and post problems, comments, or requests to the agency
 - ▣ Ability to interactively access and exchange information with the system

E-government Functions (2)

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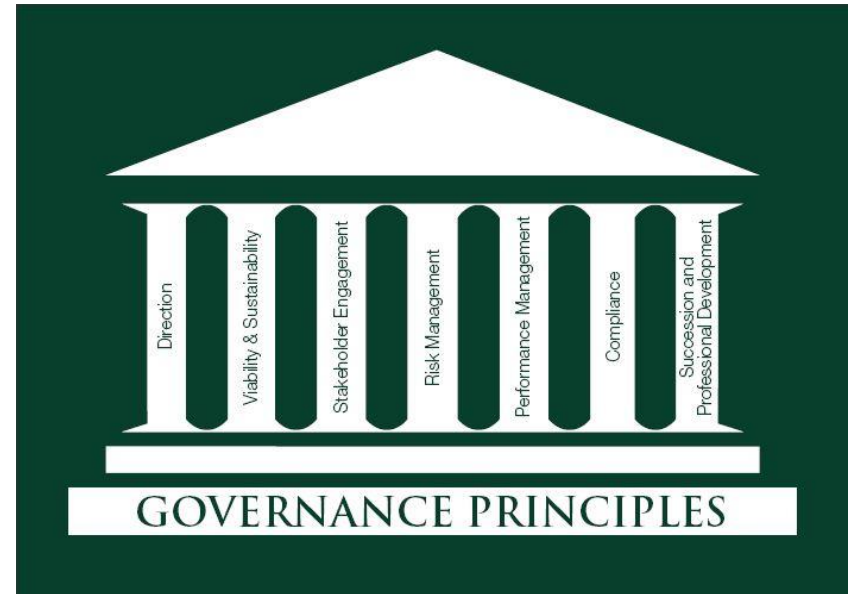
- Conducting transactions
 - ▣ Accessing or paying taxes, applying for services and grants, document renewal, etc.
- Governance
 - ▣ To enable the citizen transition from passive information access to active citizen participation by:
 - (1) informing the citizen; (2) representing the citizen; (3) encouraging the citizen to vote; (4) consulting the citizen; (5) involving the citizen

Primary Goals (1)

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- E-government systems should aim to:

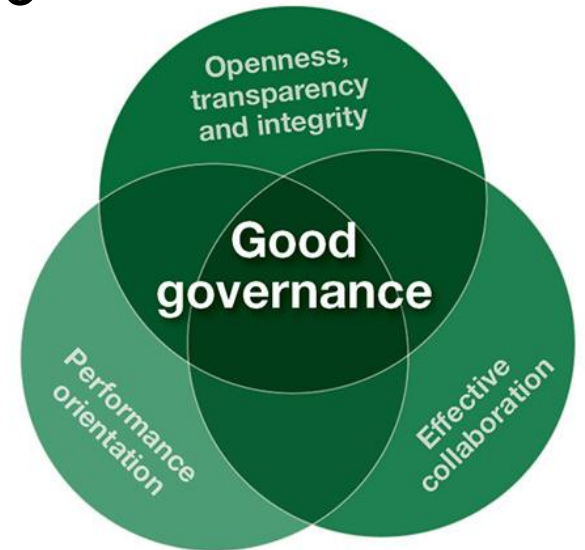
(1) Improve the quality, cost, accessibility, and speed of delivering government information and services.



Primary Goals (2)

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- E-government systems should aim to:
 - (2) Make government more accountable by increasing the opportunity for citizen participation in the governance process and bringing citizens closer to elected officials and public servants.



Primary Goals (3)

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- E-government systems should aim to:
 - (3) Organize the production and distribution of public information and services in new ways, that is, to transform government services to meet citizens' needs in an automated world.



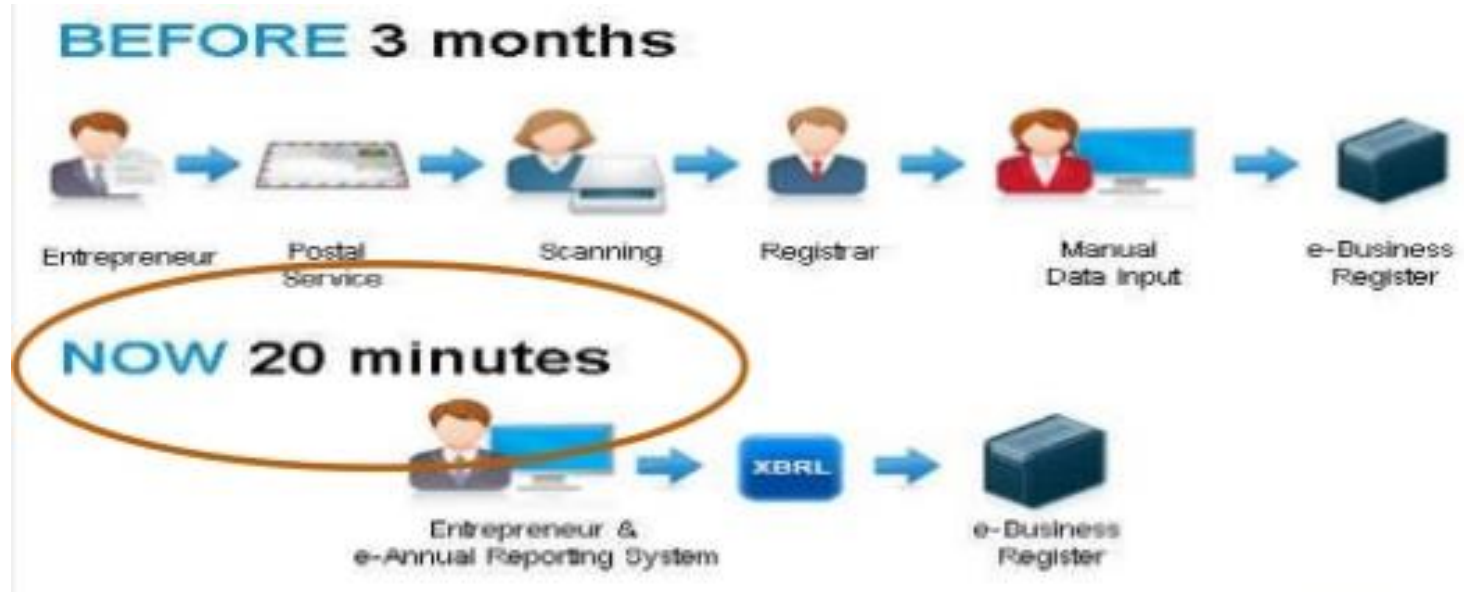
E-government Advantages

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- More services offered to citizens more cheaply
- Citizens can perform much of the work online
 - ▣ E.g., Visit office for certain things, such as document verification for a name change after marriage
- Government transparency
- Increases citizen participation
 - ▣ E.g., Voter awareness and participation in elections

Example of an Improved Process

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E-government Disadvantages

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- Lack of equality in public access to computers and the internet
 - ▣ Some citizens can't access a government service
- Distrust of government
 - ▣ System failure leads to distrust of the government
 - ▣ Makes it easier for governments to track their citizens
- Cost
 - ▣ Cost is shifted from working with the citizens to maintaining the system for the citizens

E-government Summary

- E-government (short for electronic government) is the use of ICTs to provide public services to citizens and other persons in a country or region.
- E-government makes the government more accessible and increase access to government services.

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