Essentials of Technology Adoption by Teachers

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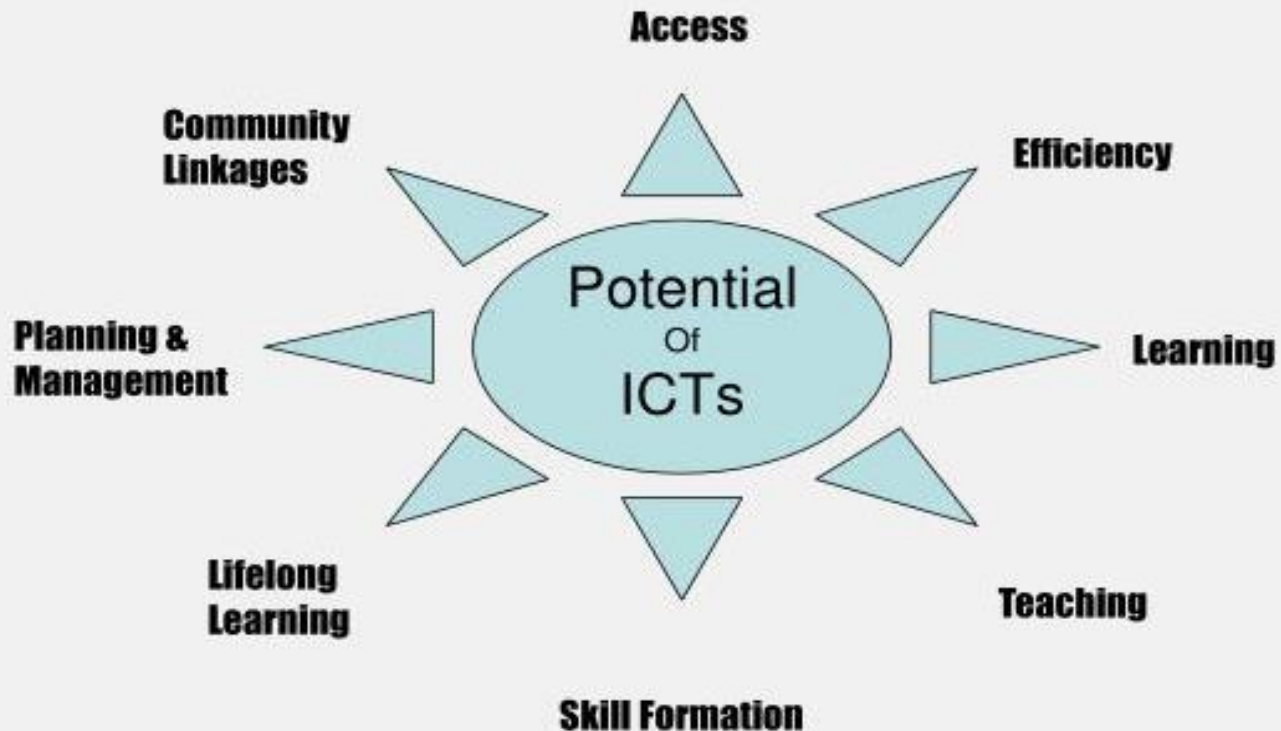**Pune**

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Importance of IT-Changing role of Teacher in 21st Century
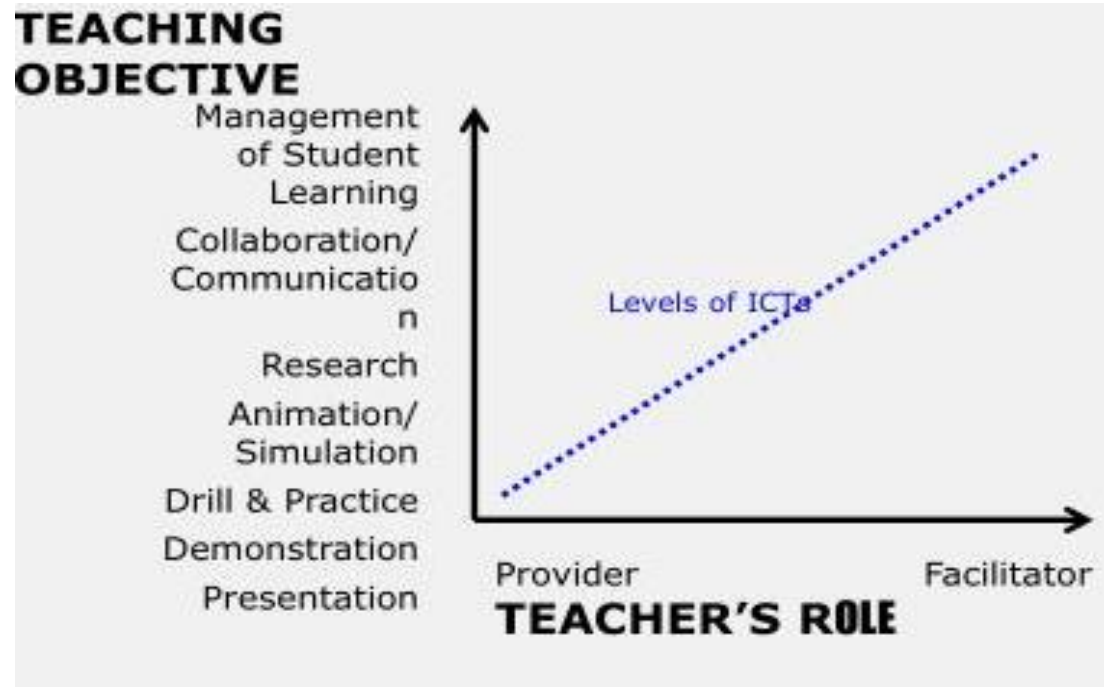
Changing the Role of Teacher and Learner

Potential of ICT

# Level of ICTs for different Teaching Uses and Roles of Teachers

Traditional Classroom vs Modern Classroom

Traditional and E-learning approaches		
	Traditional Classroom	E-Learning
Classroom	• Physical – limited size • Synchronous	• Unlimited • Anytime, anywhere
Content	• PowerPoint/transparency/etc • Textbooks/library • Video • Collaboration	• Multimedia / simulation • Digital library • On demand • Syn & Asyn. Communication
Personalisation	• One learning path	• Learning path and pace determined by learner

Delivery mode is to be changed now

Building E-learning Culture
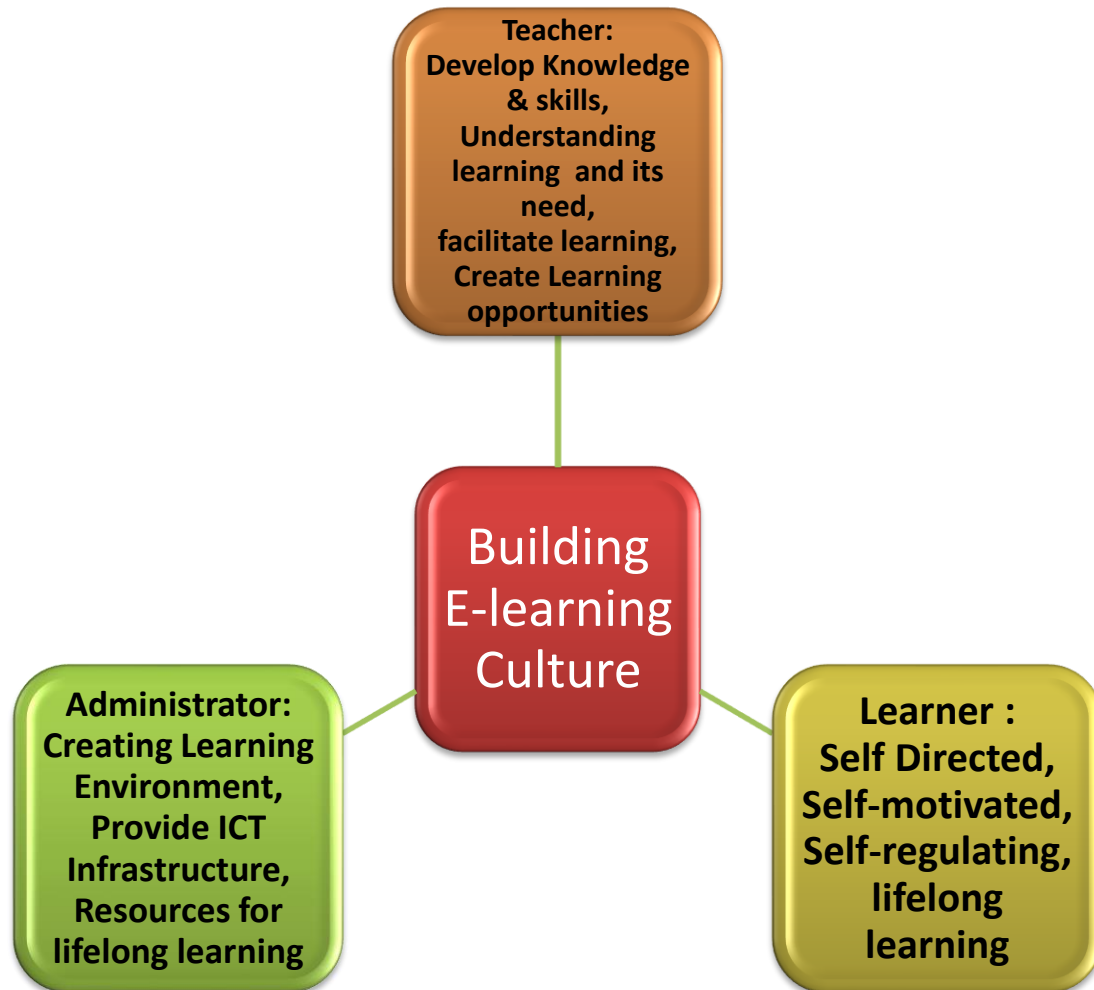
Changes in Teachers and Students Role

| Changes in Teacher Role A Shift from: ✓ Knowledge transmitter, primary source of information, content expert and source of all answers. ✓ Teacher controls and directs all aspects of learning	A shift to: ✓ Learning facilitator, collaborator, coach, mentor ,knowledge navigator, and CO-LEARNER ✓ Teacher gives students more option and responsibilities for their own learning
Changes in Student Role ✓ A Shift from: ✓ Passive recipient of information ✓ Reproducing knowledge ✓ Learning as solitary activity	A shift to: ✓ Active Participants in learning process ✓ Producing and sharing knowledge, participating at times as expert ✓ Learning collaboratively with others

ICT stages in Teaching and Learning
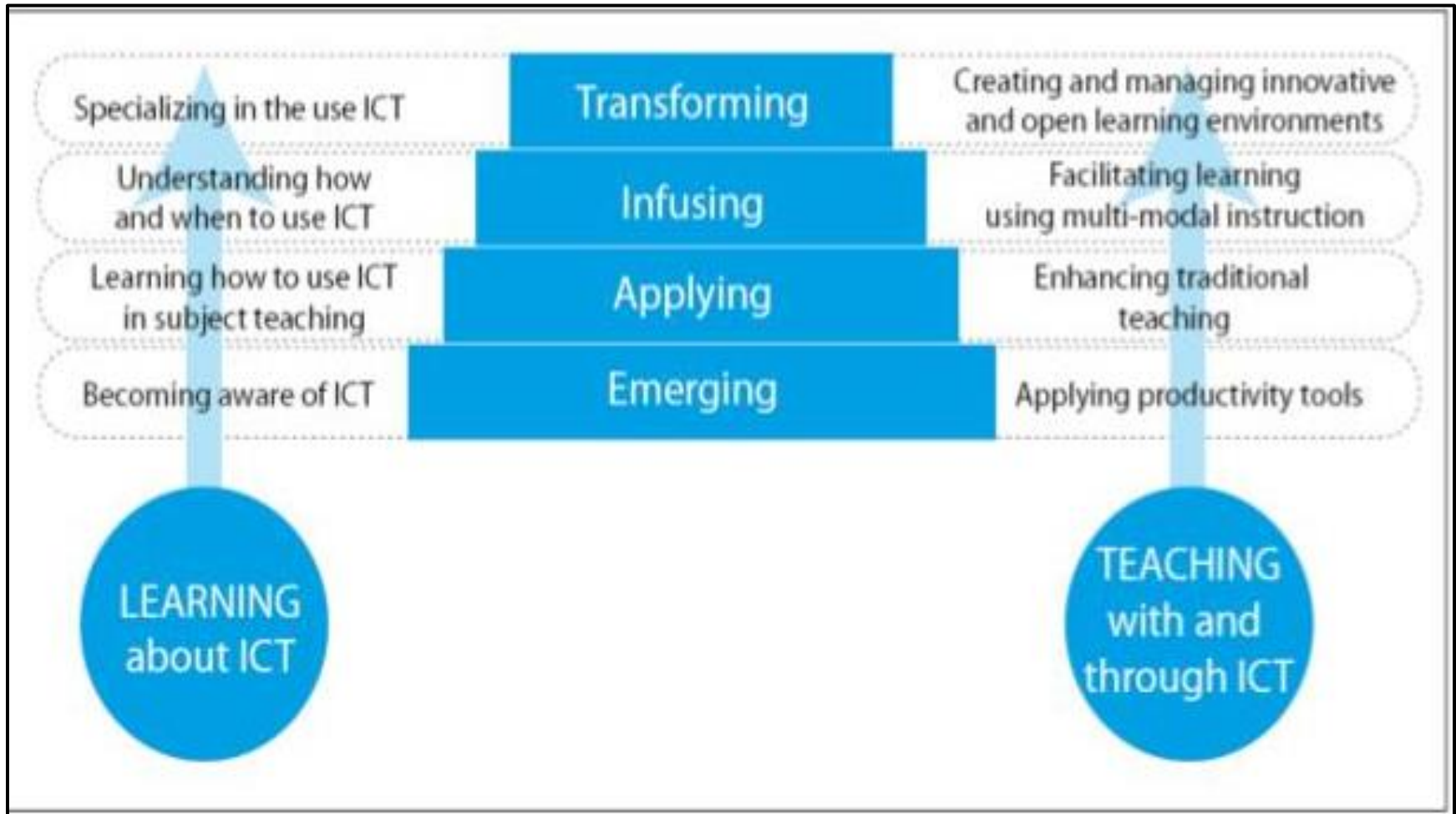
Role of ICT in Effective Teaching & Learning
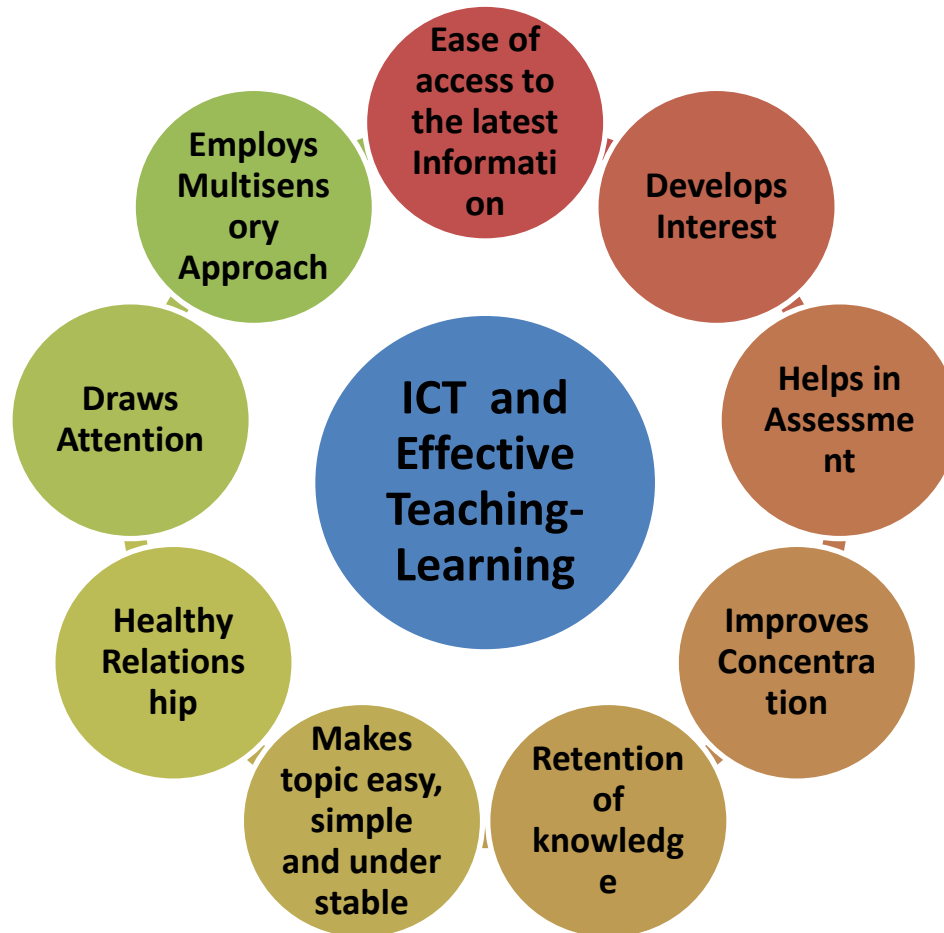
Benefits of ICT in Education

- ICT become today's integral part of teaching and learning process.
- Provide greater opportunity for teacher-to-teacher and student-to-student communication and collaboration.
- Provide opportunities for multiple technologies delivered by teachers.
- Create greater enthusiasm for learning amongst students.
- Provide teachers with new sources of information and knowledge.
- Prepare learners for the real world.
- Provide learners with additional resources to assist resources based learning. Learning for the benefits of all lea
- Leveraging ICT to assist and facilitate learning for the benefits of all learners and teachers across the curriculum.
- Improving the efficiency of educational administration and management at every level from the classroom, school library , through the school and on to the sector as a whole.

In brief summary

- ICT helps to simulate , motivate and engage learners.

- Enable better understanding

- Cultivate improved communication

- Quick access to information

- Easy availability of updated data

- Wider range of communication media.

- Wider learning opportunities for learners.

- It promotes individual learning

- Technology bridges the gap between teachers and students

- Technology encourages group learning

- It simplifies teachers work

Impact of ICT

- On the curriculum
- On teaching and learning process
- On teachers role
- On educational management
- On assessment and evalution

List of ICT tools in Teaching and Learning

- Technology-It refers to the collection of tools that make it easier to use,create,manage and exchange information.

- Technology is just a tool. In terms of getting the kids working together and motivating them, the teacher is the most important.
  - Bill Gate 2010

ICT Tools

Computer

Laptop

ICT Tools Cont..

Notebook

Smart Phone

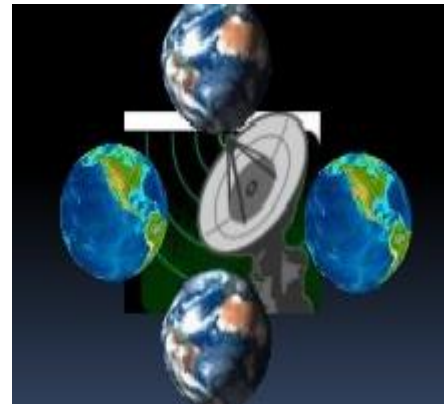# ICT Tools Cont..

PDA

ICT Tools Cont..

LCD Projectors

Internet & E-mail

ICT Tools Cont..

Software's

Resources

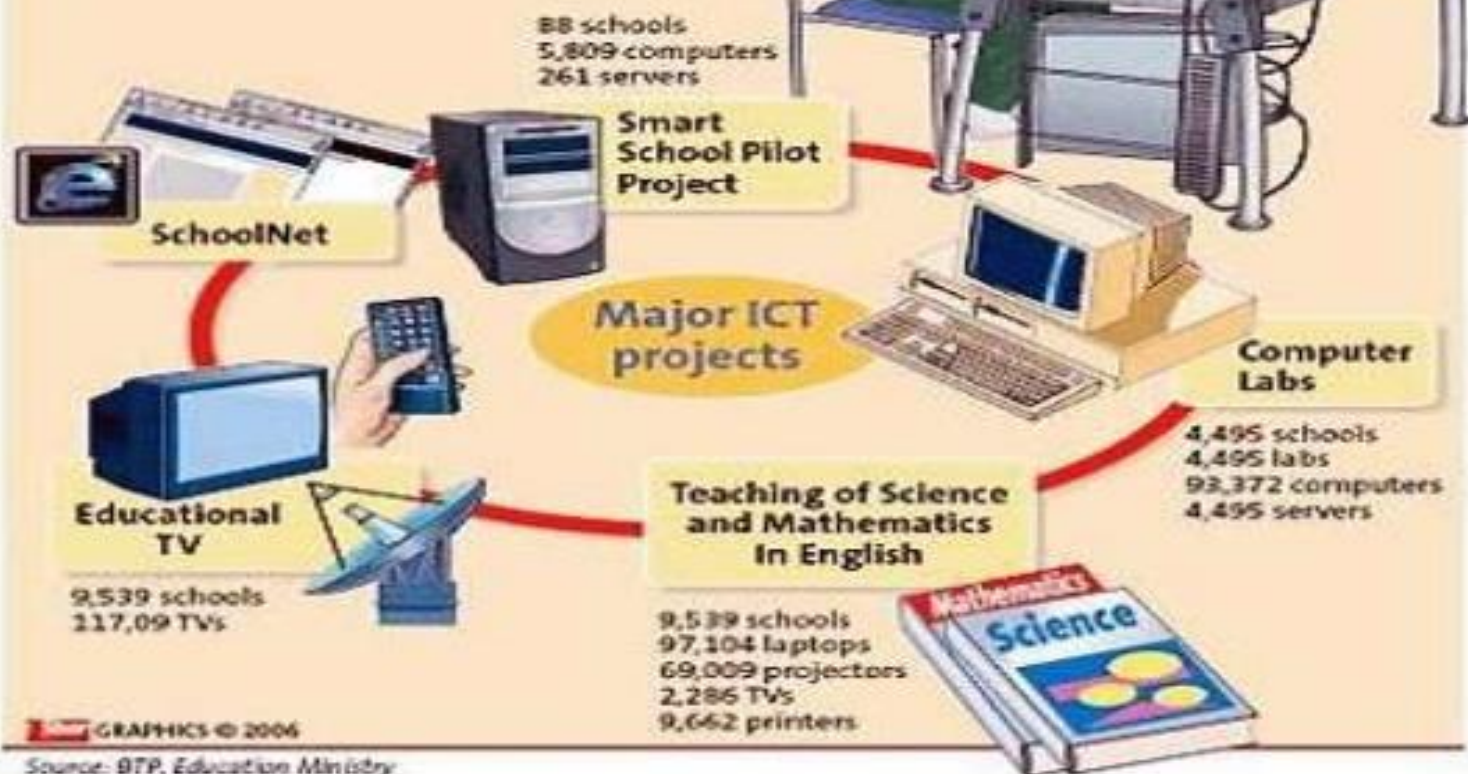- Teachers and Students can find information on Anything,Anytime,Anywhere using…

Communication Channels

Skills that can be acquired through ICT tools

- Teachers and students can get the following skills-
    - Blogging
    - Programming
    - Designing
    - Tagging
    - Uploading
    - Twittering
    - Bookmarking
    - Searching
    - Editing
    - Downloading
    - Subscribing
    - Commenting
    - Linking
    - Linking

Making all schools "smart"

Major ICT projects

Smart School Pilot Project
BB schools
5,809 computers
261 servers

SchoolNet

Computer Labs
4,495 schools
4,495 labs
93,372 computers
4,495 servers

Educational TV
9,539 schools
117,09 TVs

Teaching of Science and Mathematics In English
9,539 schools
97,104 laptops
69,009 projectors
2,286 TVs
9,662 printers

GRAPHICS © 2006

Source: 9TP, Education Ministry

Technology adoption - knowledge of software tools on Computer

- MS-Office
  - MS Word
  - Ms Excel
  - Ms Power Point

MS-Word

- Microsoft Word is a valuable part of the technology now available for educators in schools. students and teachers b oth receive many benefits when doing class work on the computer. Many of the headaches of paper work are eliminated.
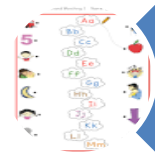
Usages of MS-Word

Lesson plan

Test Papers

News letters/Magazines

Student worksheet

Attendance sheet

MS-Word

- Microsoft Word is very helpful word processing software which can easily be used as a learning medium for student. students of one hand utilize MS word for the **assignments preparation** while teachers can use it for **report writings, paper setting and result compilation.**

Microsoft Word is excellent for creating different documents on your computer!
This presentation will cover the basic steps for the following:

Text Formatting

TABLES

GRAPHICS

You can use different formatting tools when creating the following:

- School Papers

- Class Newspapers

- Resumes (for when you get MUCH older)

You can also create tables in MS Word

You could also insert pictures, photos and clip art into your documents…

Usages of MS-Word

Student List

Student Report card

Leave report

Fees Collection report

Bill Generation

Fees Pending report

School Balance sheet
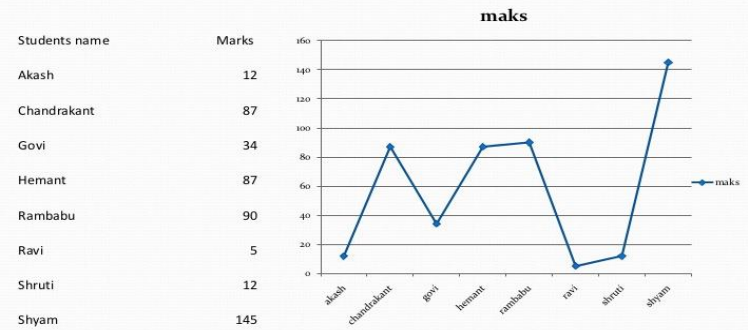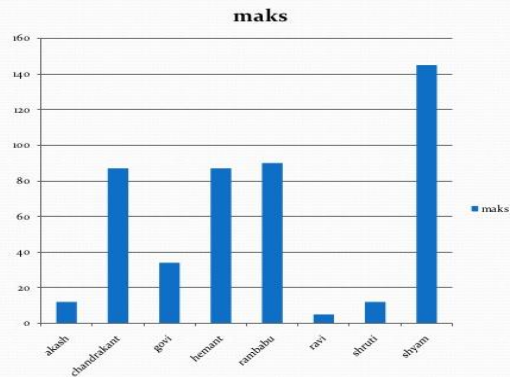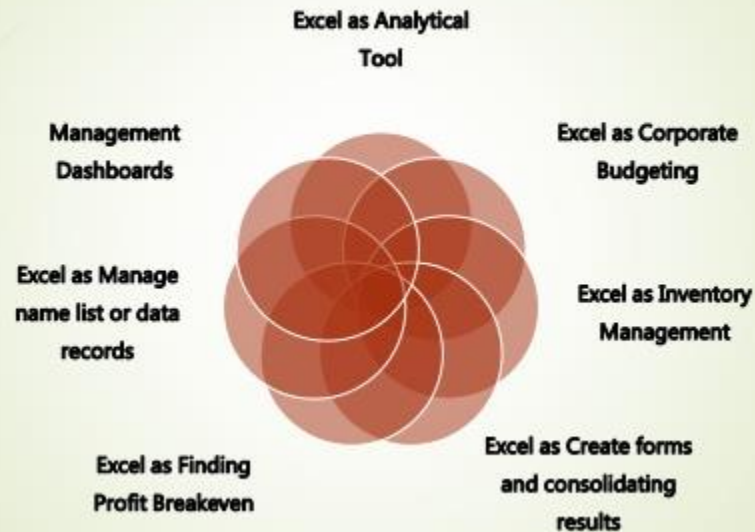
Profit and loss Statement

MS-Excel

- Microsoft Excel offers a lot of benefits with its functions, formulas, graphs or charts and tables.

- Excel worksheets are of a great help to almost all professions. Teachers can extract several benefits from Excel worksheets in the classroom.

- In the process of teaching and learning, both teachers and students find it easier to make use of excel worksheets.

- The activities, such as, **preparing lesson plans, grading papers, creating graphs or tables and many more can be carried out effectively and efficiently by using excel spreadsheets**

For Example

student name	maks
Akash	12
Chandrakant	87
Govi	34
Hemant	87
Rambabu	90
Ravi	5
Shruti	12
Shyam	145

Students name	Marks
Akash	12
Chandrakant	87
Govi	34
Hemant	87
Rambabu	90
Ravi	5
Shruti	12
Shyam	145

Business Uses of Excel

Excel as Analytical Tool

Management Dashboards

Excel as Corporate Budgeting

Excel as Manage name list or data records

Excel as Inventory Management

Excel as Finding Profit Breakeven

Excel as Create forms and consolidating results

Usages of MS-Excel

Student List

Result Analysis

Bill Generation

Fees Pending report

School Balance sheet

Sorting List

Calculating grades

Entering tabular data

MS-Power Point

- Nowadays, PowerPoint is an educational tool for teaching and delivering materials in classes.

- It was basically developed for presentation and not essentially for teaching and learning in a classroom. Its applications in teaching and learning settings should provide better means of communicating information to the students.

- PowerPoint can enhance your teaching sessions by providing a roadmap, reinforcing what you say and allowing you to use graphics and other multimedia to clarify understanding and to support different learning styles

Features

Potential benefits of using presentation graphics include:

- Increasing visual impact
- Improving audience focus
- Providing annotations and highlights
- Analyzing and synthesizing complexities
- Enriching curriculum with interdisciplinary approach
- Increasing spontaneity and interactivity
- Increasing wonder

Smart Phone-Communication with Parents

- ## WhatsApp- is a free messenger application that works across multiple platform and is being widely used among people to send multimedia messages like photos, videos, audios along with simple text messages

Features of WhatsApp
- Multimedia
- Unlimited messaging
- Cross Platform Engagement
- Group Chat
- Offline Messages
- No Charges
- Need not Pins and User name
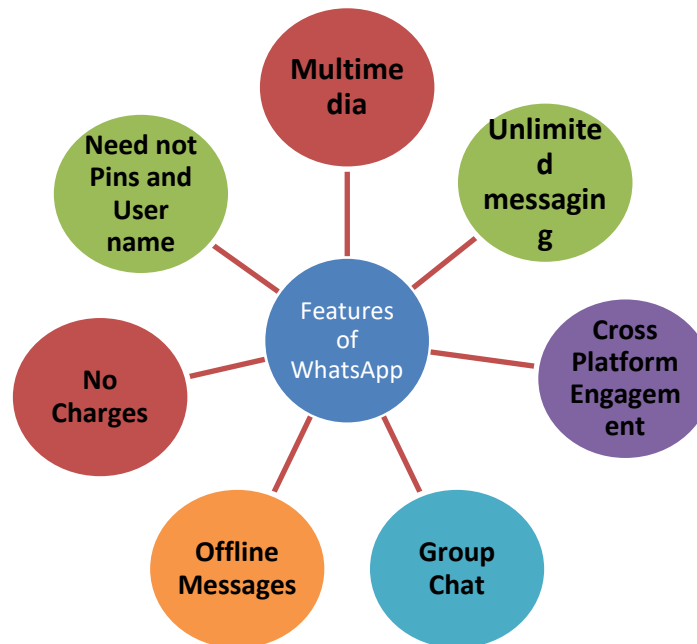
Role of WhatsApp as teaching learning tool

Technical

- Free to use
- Free calls and video calls
- Easily available & downloadable
- Simple to use
- Privacy

Educational

- Interaction with students and sharing materials
- High interaction with facilitators
- Doubts immediately cleared
- Conductive Environment
- Sense of belonging group

Instructional

- Easy accessibility of learning material
- Facilitators Availability
- Learning anytime anywhere
- Provide secure environment

FaceBook
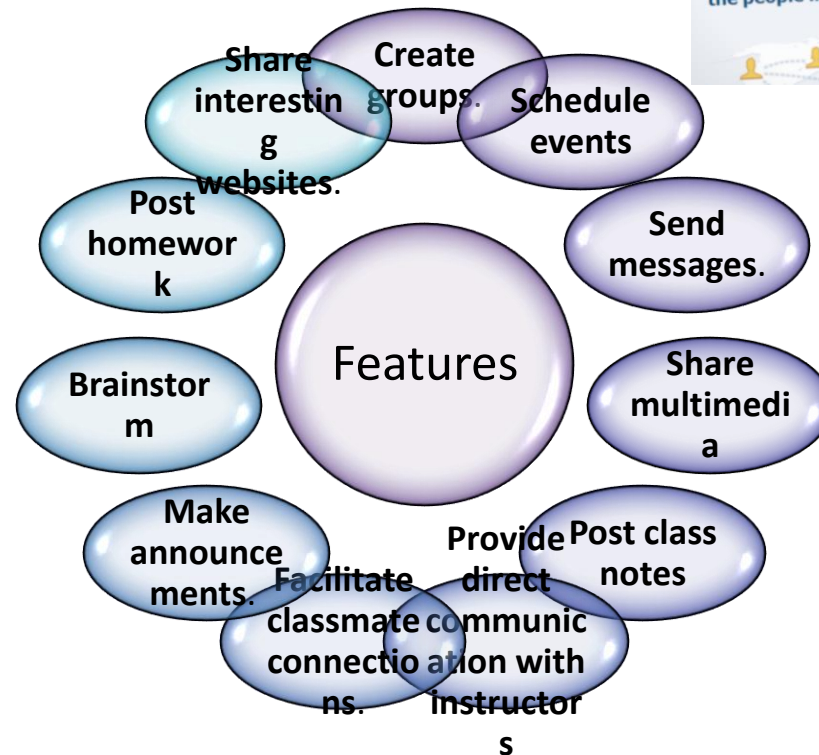
Use of Facebook in teaching and learning

👍 Calendars and events are easy to share. Through this tool, we can remind students of important dates.

👍 Students are connected. Students are checking Facebook multiple times per day.

👍 Almost every student is familiarized with Facebook, and most of them are excited to be able to use the site for collaborative learning.

👍 Online resources. Posting links on your classroom wall makes it easier for students to read them.

👍 Class resources are available anywhere. Students can read notes and assignments anywhere they can find Internet connection.

👍 Students who can't attend to the class can stay updated using the Classroom Facebook group.

👍 Facebook help students practice the skills they need to be successful in the 21st century.

👍 Debates can be encountered online. Extend classroom discussions onto Facebook, where students can spend more time in active learning and debate.

Students can create, posting discussions, resources, and more. They can learn the importance of creating content.

Ask questions of our class on Facebook and get easy answers using polling tools on this website.

We can find tons of applications for classroom learning, including mathematical formulas, slideshow apps, notes, and more..

YouTube-Useful Learning Resource

Benefits of YouTube

Students
- create a more engaging sensory experience than using print materials alone.
- Videos increase knowledge retention
- They provide a go-to resource that can be watched from anywhere
- They greatly assist in the learning of all subjects
- They increase proficiency in digital literacy and communication

Teachers
- Videos increase student engagement
- They offer the flexibility
- Digital videos facilitate remote learning opportunities
- They provide opportunities for student feedback and assistance
- Videos seek to change the roles of teachers from lecturers to facilitators
- Ideal for slow learners
- One teacher, multiple classrooms

Institutions
- The potential to improve marketing and communications
- More flexible faculty and staff training.
- Ability to record campus events for live or on-demand viewing

Important tips for using YouTube in Classroom

Trigger unique and interesting discussions

Access high quality education materials for free

Short clips to put a topic in context

Archive your work

Review for exams

Teach when you are absent

Allow students to gain in-depth information
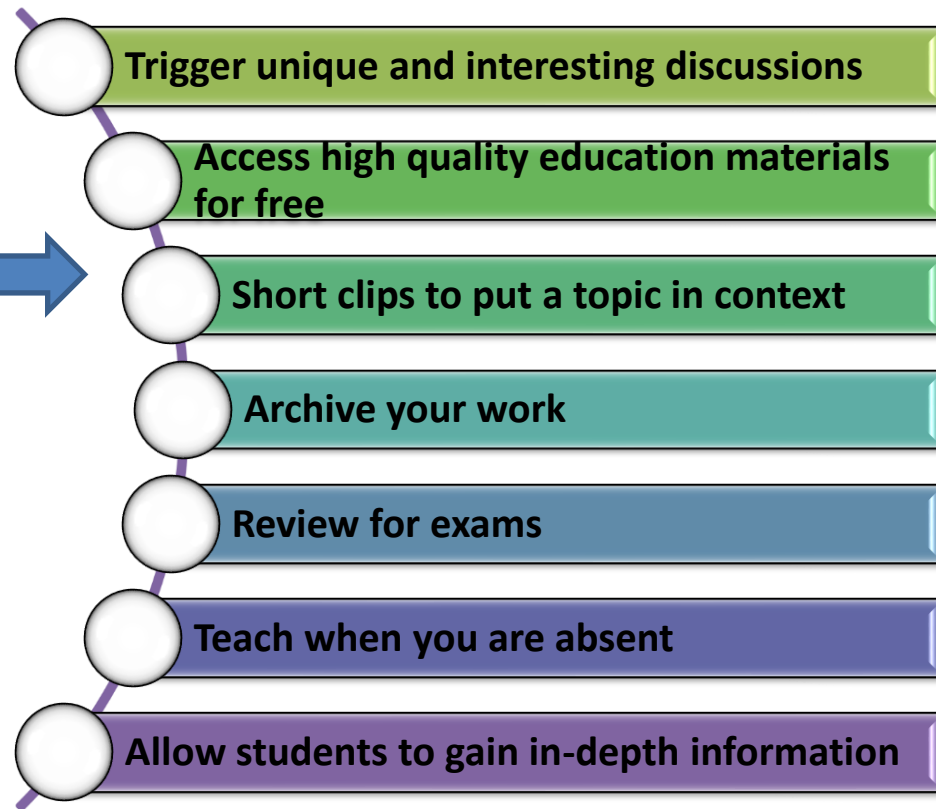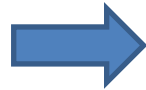
Amazon Alexa –For Self Learning

- Alexa is the voice service that power Echo device, or skills that enable customers to interacts with devices in more intuitive way using voice.

- It is built in the cloud ,so it is always getting smarter.

Amazon Echo is a hands-free speaker controlled with your voice.

Alexa kills Kit:

- Collection of self service APIs
- Tools
- Documentation
- Sample Codes

Order Foods & Drinks

Get a ride

Control smart home device
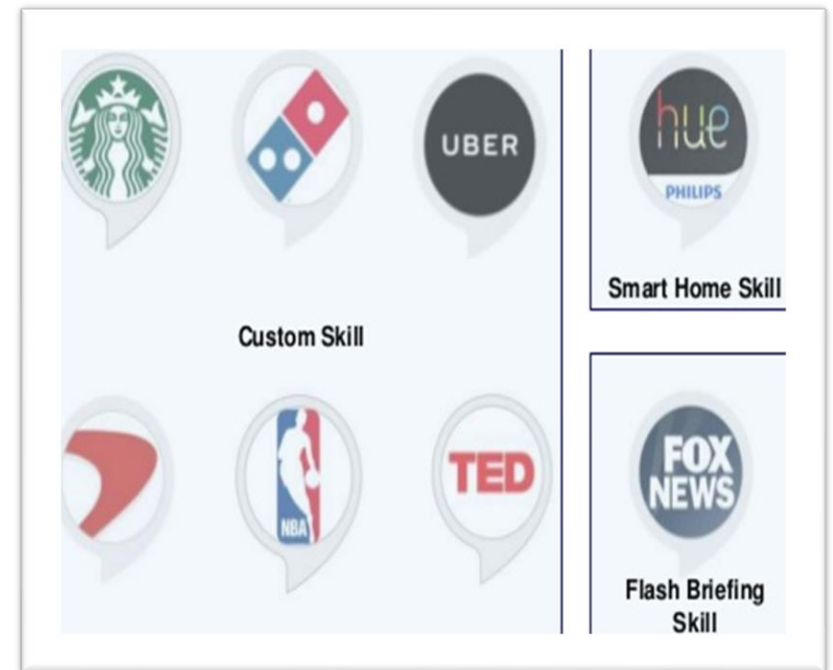
Check bank account

Game scores Todays game

Learn

Get latest news

Alexa Skills Types

- Custom Skills
- Smart Home Skills
- Flash Briefing Skills

ICT based Educational Activities

Preparation of PPT	Use of social media for educational event	Curriculum display for information	Question Bank
Make use of E-mail	Audi Book	Online progress report	Preparation of e-Content
Prepare Video Lectures	Do E-assessment	Online admission	Use of sound effect
Create Google Classroom	Online Examination	Collecting information using google	Blog writing for teacher
Result Analysis	Make use of Projector	Building learning community	Online registration for course