How to use ICT for teaching

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What is ICT?

Information and Communication Technology (ICT) is a diverse set of technological tools and resources used to communicate, create, disseminate, store, and manage information. ICT has been largely associated with computer and internet usage. It also involves TV, radio, LCD, audio devices, etc. *But, how do these relate to teaching?*

In an exclusive interview with Tech@Edu, Dr Ajay Kumar, Chairman of Kerala State IT Mission (KSITM) and the principal secretary, Department of IT, Government of Kerala, states that *IT@School* is a revolutionary project to empower all the existing teachers in schools to use ICT as an educational tool. *"This will bring in the paradigm shift from passive learning to methods that would foster children's capacity for critical thinking and their ability to learn on their own."*

ICT in teaching

Before we look at how ICT can be used in teaching, let us list the problems in the classroom: large number of students, students from different backgrounds, lack of space, deficient attention, lack of exhibit facilities, vast syllabus. *Can ICT help in bringing about a drastic change in the attention and participation of students?*

Use of multimedia (Computer, LCD, Speakers) in the classroom

The teaching method depends on the nature of the topic. Certain topics are easily adapted to group discussion, while some needs explanation, and some can be debated while others require lab work. Multimedia can be used in the classroom for a topic in which many pictures, animations, videos need to be shown. Powerpoint is very useful in making multimedia presentations. Pictures and information are available on the net, but photos, or videos locally taken, can also be used. All the information in the textbook need not be reproduced in the ppt, and students can be given worksheets for their responses based on the ppt, as the lesson proceeds. This helps to assimilate information.

If the topic to be taught is Rabindranath Tagore's poem, a picture of the poet, the places, events related to the poem, pictures depicting the meanings, pictures showing lifestyle at the time of the poet in Bengal could be shown. Students would understand the real significance of the word in the poem, rather than the word meaning on the board. *Kabuliwala* cannot be understood by

the students who are mall hoppers. If it is about East India Company, then short videos depicting the then India, the lifestyle, the political situation which led to the establishment can be shown, instead of cramming them with dates and battles. If it is about animal kingdom, then the pictures, videos of different types of unicellular and the environment where they are found, the comparison of different unicellular, different components of the cells, can be shown very effectively on the ppt. If it is about digestive, respiratory systems, then computers can be of great help - the animation of the processes, the internal structures, the exact location and size can also be shown.

Use of computers in teaching (without net)

Computers can be used for teaching in the computer lab. This is a very different style of teaching from the use of multimedia in the classroom. Here, students can be made to sit in groups of 4 or 5 at a computer. The teacher prepares a ppt for a topic and loads it on all the computers – it contains instructions, tasks and questions for students to respond to. It encourages discussion among the group members to collate their ideas and share, and can be further adapted to suit different ability groups – slow learners, differently abled, gifted. Students can store their work for teachers to see and respond. Again, if you are teaching about trapezium and area of trapezium, you can ask students to draw a trapezium on the computer and colour it! Similarly, if you are teaching about soil, ask students to draw the layers of soil on computer and colour it!!

Use of Internet in teaching

Teacher can make a blog to store pictures, lessons, worksheets, assignments, notes, etc. Students can also upload their work on the blog. If you type *teacher blog* in Google, you will get many sites to help you create a blog of your own. Your students can have an account in your blog. This helps in supplementing teaching by providing more information and a platform for students to share their ideas that are not always possible in a large class. Shy, introvert, slow students also get a chance to participate at their own pace. You can give diversified assignments which students can choose, test them and give scores too. Students get a chance to learn and relearn, go through the topic several times, ask questions without the embarrassment of asking in the class.
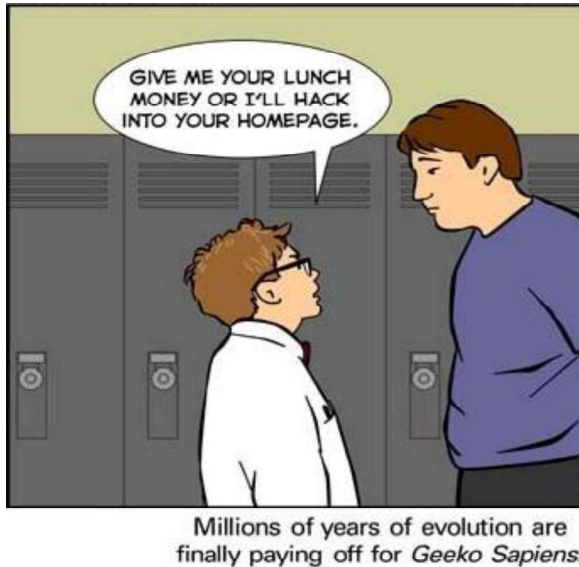
Conclusion

The crux of the matter is not just making use of some gizmos to make teaching very techno driven, but the purpose is much higher. Let's look at some of the 21st century skills that every individual needs to possess to keep pace with the changing times:

> ➢ Demonstrating originality and innovativeness in work.
> ➢ Acting on creative ideas to make a tangible and useful contribution to the domain in which the innovation occurs.
> ➢ Making complex choices and decisions.
> ➢ Understanding the interconnections among systems.
> ➢ Exercising flexibility and willingness to be helpful in making necessary compromises to accomplish a common goal.
> ➢ Using digital technology, communication tools and/or networks appropriately to access, manage, integrate, evaluate, and create information in order to function in a knowledge economy.
> ➢ Defining, prioritizing and completing tasks without direct oversight.
> ➢ Utilizing time efficiently and managing workload.
> ➢ Demonstrating commitment to learning as a lifelong process.

These skills of **collaborating, working in groups, decision making, innovating, finding solutions, time and work management** will be nurtured unknowingly when teachers start using ICT.

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<u>Words Section</u>

GIVE ME YOUR LUNCH MONEY OR I'LL HACK INTO YOUR HOMEPAGE.

Millions of years of evolution are finally paying off for *Geeko Sapiens*.

Alpha geek (noun)

Meaning

➢ A person who has great expertise in computing and related technology. (*Oxforddictionaries.com*)

➢ The most technically adept, knowledgeable person in a workgroup or office. (*wiktionary.com*)

Origin (and additional information) ~ Origin: 1978

The word *geek* is a slang term for odd or non-mainstream people, with different connotations ranging from "a computer expert or enthusiast" to "a person heavily interested in a hobby", with a general pejorative meaning of "a peculiar or otherwise dislikeable person, especially one who is perceived to be overly intellectual".

This word comes from English dialect *geek*, *geck*: *fool, freak*; from Low German *geck*. The root *geck* still survives in Dutch and Afrikaans *gek*: *crazy*, as well as some German dialects, and in the Alsatian word *Gickeleshut: geek's hat*, used in carnivals.

Formerly, in the 18th century Austria-Hungary, *Gecken* were freaks shown by some circuses. In 19th century, in North-America, the term *geek* referred to a freak in circus side-shows. In some cases, its performance included biting the head off a live chicken.

The stage was thus set for the next American evolution of *geek* as another kind of person, one whose talents were concealed behind an awkward exterior. The word appears in the modern sense of a science, math, or technology enthusiast in Robert Heinlein's 1952 short story *The Year of the Jackpot*.

The exact date is hard to pin down, but in student slang of the 1970s and later, a *geek* was someone who partied too little and studied too much. And when these geeks migrated to Silicon Valley and began building computers and writing software programs that made them millionaires, they gained respect.

In the 1990s, *alpha geek* was coined as a term of humorous respect for the person in a workplace who knows the most about computers. And the richest man in America was the alpha *alpha geek*, billionaire Bill Gates of Microsoft.

Words Section

Usage ~

(i) The <u>alpha geeks</u> are often a few years ahead of their time.

(ii) Ask Larry about the software program, he's the <u>alpha geek</u> here.

(iii) The <u>alpha geek</u> we used to make fun of, now owns a million dollar software company.