Computers in Schools

Sri Sri Ravi Shankar Vidya Mandir
(SSRVM)

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SSRVM - Vision

- Inspired by Sri Sri Ravi Shankar

- Stress free education
- Inculcating human values in children
- Nurturing awareness and a questioning mind

- Focus on excellence
- Strong, inspiring teachers as role models
- Act as catalysts for change in society

Introducing computers in schools

Questions:
- What should we do?
  - The world seems to be going in for technology in a big way.
- When should we introduce computers into the curriculum?
- What should be the contents and syllabus?
- How should we go about it?

  - What are the specific options for SSRVM (our school)?

- We need to address these as general concerns first and understand the possibilities.

- Then we should reflect about it in the light of our school's emphasis and finally arrive at what SSRVM (or any other school) should do.

Approach

- Awareness –
  - see what exists, what are other people doing.
  - this presentation is a first step.

- Appreciation –
  - do some hands-on usage of technology.
  - reflect upon its implications.

- Adoption –
  - include computers in curriculum appropriately.

Computers in schools

Various conflicting view points exist

- Some teachers and schools, especially in western countries, seem to believe that there should be widespread adoption of computers.
  - An extreme viewpoint is that computers can replace the teacher.
  - Often, this reaction is due to a mindless belief that technology is always "good".

- Others, especially those who do not have much exposure to technology, seem to believe that there should be only minimum introduction of technology.
  - A extreme viewpoint is an insistence that traditional ways are always "better".
  - Often, this reaction is from one's own insecurity.

Computers in schools

Our belief

- We should be aware of the capabilities of present-day technology and continuously stay updated.

- We should use the technology carefully, only in places where:
  - it can add real value to the children.
  - it can help teachers explain things better.
  - it can reduce some routine drudgery for the teachers.

- We should not use technology to the point where:
  - it stifles the creativity of the children or the teachers.
  - it makes the teachers too dependent on external support.
  - it distracts us from our main objective.

Examples - 1

- For giving experiences of processes that are too slow.
  - Plant growth: (video clip – plant)
  - Frog life cycle: (video clip – frog)

- For giving experiences of processes that are too fast.
  - Hummingbird flight: (video clip – bird)
  - Wave motion: (video clip – wave)

Examples - 2

- For giving experiences of processes that are too microscopic.
  - Bacteria cell division: (video clip – bacteria)
  - Plant respiration: (video clip – leaves)

- For giving experiences of processes that are too risky.
  - Chemical reactions: (video clip – metals)
 - Fireworks: (video clip – fireworks)

Examples - 3

- For giving experiences that cannot be otherwise given inside a classroom.
  - Pollination: (video clip – pollination)
  - Space exploration: (video clip – space)
  - Water freezing: (video clip – kenya)

- For giving experiences that are:
  - Rare; Costly; Geographically remote.
  - Can you suggest more such examples ?

- And, everything need not be only Videos!
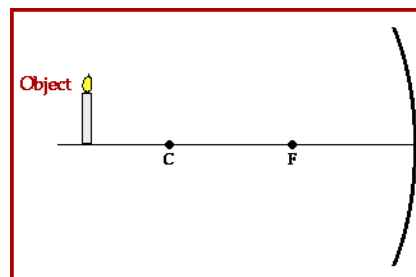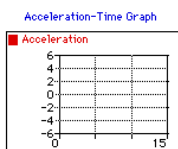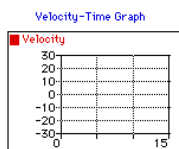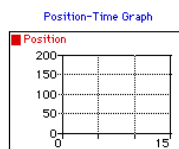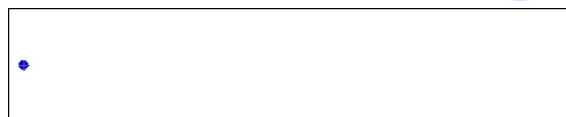
Animations - 1

Animations - 2

Animations - 3

- Can you think of some more examples?
  - Elephant and feather falling in vacuum and in air.

- Animations can also be interactive
  - Biology flash demos: (WaterCycle, Ecosystem)
  - Project OSCAR demos: (http://oscar.iitb.ac.in)

- Interactive animations can also be used as laboratory experiments and exercises.
  - Maths; Physics; Chemistry; Biology
  - Chemistry lab demo (Run Chem-lab).

And that's not all…

- Tablet PC
  - similar to working on paper; for example using 'paint'.
  - store and archive children's work.

- There is a host of other software
  - Moodle – Learning management system.
  - drupal – Content management system.
  - koha – Library management system.

- Note: A lot of software have license issues
  - We need to take care before distributing to schools.
  - We should prefer the Free and Open Source versions. See catalog.

And then, there is the Internet

- A host of teacher resource websites
  - www.teach-nology.com
  - www.enchanted-learning.com

- It is like a vast library
  - Searching it is made easy by Google, Yahoo, etc.

- It has redefined the way we do things
  - For example – 1st Std asked to get pictures of houses.
  - Earlier days – Parents store magazines, cut snippets...
  - Today – Search Google Images, download and print.

Caveats…

- It is only a 'virtual' world.
  - We should not substitute a computer for 'real' experiences.

- The computer can be highly addictive.
  - Too much of it is detrimental to eyesight and physical development.
  - We should always limit the time, irrespective of whether the child is playing games or using educational software.

- The internet has a lot of sites that are unsuitable, and even harmful for children.
  - Every site is but a few 'clicks' away.
  - We need to educate and teach children to identify and keep away from the undesirable elements.

- In any case, keeping children ignorant about computers and Internet, is not an option.

How should we go about introducing computers in our schools?

What is being done elsewhere

- Typical curriculum in other schools in India
  - 5th std – General introduction, folders, etc.
  - 6th std – Word.
  - 7th std – Power-point. Introduction to Internet and Email.
  - 8th std – Excel and other software.
  - 9th std – HTML and even some Java programming.
- No specific syllabus nor textbooks.

- Typical curriculum in schools abroad
  - I still need to complete this study.

Our approach

- We need to keep in mind that, requirements of
  - Indian schools may be different from those of schools abroad.
  - Urban schools may be different from those in rural areas.
  - Children with special needs.

- We need to be clear about what is not appropriate
  - Too much of technology.
  - Information overload for teachers and children.
  - Relying too much on downloaded content. For example, worksheets.

Requirements

- We need to have a plan for
  - Computer usage by children,
    - Not only as part of curriculum but also for learning in other subjects.
    - For example, having virtual labs related to classroom work, esp. Science.

  - Internet usage by children,
    - Searching for information effectively will be an important skill.
    - For example, having projects related to classroom work, esp. History, Geo.

  - Computer and Internet usage by teachers,
    - To stay up-to-date and also enhance their productivity.
    - For example, a wiki for collaborative lesson planning.

Summary (so far…)

- Our curriculum needs to include:
  - Learning about how to use a computer.
  - Using the computer to learn about other subjects.
  - Learning about how to use the Internet.
  - Using the Internet to learn about other subjects.

- We also need to focus on:
  - Teacher training for hands-on usage of various software.
  - Content development that is aligned with the syllabus.

- next steps
  - reflect upon what content is suitable for which class.

Acknowledgements etc.

- This presentation was created after inputs from many people. Some examples and videos are from the Jnanaprabodhini School, Pune.

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- **65 Sri Sri Ravi Shankar Vidya Mandirs (public schools)**
- **30 tribal schools (Sri Sri Vidya Mandirs) teaching 9,000 children**
- **13,000 children in Sri Sri Ravi Shankar Vidya Mandirs**
- **Sri Sri Center for Media Studies**
- **Sri Sri Ravi Shankar College of Ayurvedic Sciences**

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Ved Vignan Maha Vidya Peeth	Vyakti Vikas Kendra India	International Association for Human Values
Disaster and trauma relief	**Developing the individual**	**Largest volunteer-based NGO in the world**
– Iraq post-war relief – 9/11 and Hurricane Katrina relief – Gujarat earthquake relief – Flood relief in Maharashtra – Peace initiatives in Bosnia, Kosovo, Afghanistan – Drug de-addiction programs – Prison SMART – Tsunami relief – River Elbe flood relief – Rehabilitation of Kashmiri children	– Art of Living Part I Course – Corporate Executive Program – Youth Empowerment Seminar – All Round Training in Excellence – Sri Sri Yoga – Nava Chetna Shibir – Youth Leadership Training Prgm – Sahaj Samadhi Meditation – Art of Living Part II Course – Divya Samaj Nirman – Eternity Process	– Presence in 160 countries, 4000 cities – 40,000 centres of meditation and service activities – Organisation, programs and social initiatives all run by inspired and dynamic volunteer base
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– Corporate Culture & Spirituality – International Women's Conference – World Youth Peace Summit – Conference on Female Foeticide – Shivaratris, Christmas, Navaratris, New Year – Satsangs – Ayurveda Conference – Organic Farming Conference	– The 5-H Program – Sri Sri Rural Development Program – Value Integrated Service To All – Bio-dynamic Agriculture	– Veda Agama Samskruta Maha Patashala (Vedic School) – Research on ancient Indian techniques such as agnihotra – Sri Sri Ayurveda – Library of Indian scriptures