WORLD CONGRESS
ON SCIENCE,
ENGINEERING AND TECHNOLOGY
(WCSET)

Conference VENUE:
HOLIDAY INN PARIS
Montparnasse-Av.Du Maine
79-81 Avenue Du Maine Paris, 75014 France
www.holidayinn.com/parisgare

Conference held on -
June 24-26, 2009
Impact of Technology on Education
Research Studies
### Dale Mann’s Research Study

<table>
<thead>
<tr>
<th>Research Study</th>
<th>Year</th>
<th>Theme of Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic skills / Computer education</td>
<td>1991-92</td>
<td>Integrating learning system technology</td>
</tr>
<tr>
<td>program analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample Size-950</td>
<td></td>
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</tbody>
</table>

**Outcome:**

- Students and teachers both became more enthusiastic
Computer users have secured 60% marks and non-users have secured a maximum 50% marks.

Study also highlights positive attitude of students towards the study.
Use of technology directly affects higher level reasoning and problem solving.

Inculcates group work and less lecturing.
Marlene Scardamalia and Carl Bereiter’s Research Study

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<tbody>
<tr>
<td>Computer supported international learning environment (CSILE)</td>
<td>1996</td>
<td>Collaborative computer applications</td>
</tr>
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</table>

Outcome:

- Increased the depth of understanding, reflection and language.
- Encouraged progressive thought, multiple and independent thinking.
Harold Wenglinsky’s Research Study

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<thead>
<tr>
<th>Research Study</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Simulation and higher order thinking</td>
<td>1998</td>
<td>Mathematical Software Impact</td>
</tr>
<tr>
<td>Sample size- 6,227</td>
<td></td>
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</tr>
</tbody>
</table>

Outcome:

- Developed higher order thinking.
- The use of technology made learning a playful proposition through games.
- Facilitated fast forward thinking.
Jay Sivin-Kachala Research Study

<table>
<thead>
<tr>
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<th>Year</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Sivin-Kachala’s Study</td>
<td>1998</td>
<td>Effect of Technology on Learning</td>
</tr>
<tr>
<td>Sample Size- 215</td>
<td></td>
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</tbody>
</table>

Outcome:

- Rich technological environment is well correlated with learning.
- Study also highlights the positive attitude of students towards the study.
## L dit Harel Research Study

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<tr>
<th>Research Study</th>
<th>Year</th>
<th>Theme of Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching through programming software e.g. LOGO</td>
<td>1998</td>
<td>Software as a tool in mathematics teaching learning process</td>
</tr>
</tbody>
</table>

### Outcome:

- ✔️ Learning process improved as compared to traditional tools, i.e. board & chalk.
- ✔️ Programming made learning of mathematics easier.
Research Studies conclusion

- Process of learning and teaching improved.

- Initiated network, creative design skills and positivity among students.

- Teaching & learning effectiveness enhanced.

- Pedagogy improved & Andragogy initiated.
Education enlightens, enables & facilitates empowerment & enactment
Other key contribution of 'Education'

- Quest for reality / truth
- Spirit of learning is encouraged
- Consideration for humanity
- Self esteem
- Noble thoughts
- Contribution to advancement of civilisation in fact ‘onward march of human progress’
Technology

- Tool for the learner & the facilitator
- Greater opportunities for exploration
- Skills refinement
- Problem solving
A combination of Education and Technology

- Knowledge asset / bank
- Professional attitude
- Positive attitude towards research
- Passion for learning
Technological education interface has contributed to better management by teaching / learning in term of –

- Speed
- Accuracy
- Relevance
- Economy of time, money and effort spent
Thus Technological Education interface facilitates

- information efficiency
- information integration
- retrieval of information
Technological Interface Stages

Awareness

Applications

Success

Satisfaction

24-26 June 2009
Education System in 21st Century

POES  →  PANES
Virtual Education System is one of the PANES approach
Virtual Education Concept

A learning environment where teacher and students are on different ends. Teacher conducts classes through the technological tools.
Virtualisation is a technology that allows one computer to do the job of multiple computers by sharing the resources of a single computer across different environments and users simultaneously across global network on a 24 X 7 basis.
Virtual Education System

- Globalisation
- Equalisation
- Liberalisation
Features of Virtual Education World

- Multiple Outlook Integration
- Permission Based Remote Control
- Share Course Material
- Annotation tool for Testing and Evaluation
Different Forms of Virtual Education

- E-conference
- E-library
- E-blogs
- E-chat
Inputs – Course contents with IT Resources

Four mantras –

- **Focus** – Focus on core competency and enhance other areas
- **Fun** – Humour can inject interest in teaching/learning process
- **Fraternity** – Achieves greater momentum in the activities and assuring the dignity of every individual and group
- **Functionality** - Ideas to be acted on immediately
Virtual Education Model

Blended with pedagogy and Andragogy

Change through presenting perceptions and realities

Network based multiage tutoring through graphic simulation
Main Objectives of VEM

Demands of Learning → Conceptual mode with responsibilities

Role of Teacher → Practical examples with facts

Purpose for learning → Goal Oriented

24-26 June 2009
What is important in VEM?

- Connectivity
- Course Contents
- Technology tools knowledge
- Time Management
Survey Study

Respondents – Delhi University and Mumbai University
## Descriptive Survey Outcome

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Respondents</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applications</td>
<td>68</td>
<td>100%</td>
</tr>
</tbody>
</table>
| Satisfaction | 68          | 50% - completely satisfied  
                          29% - neutral  
                          21 % - not satisfied |
| Awareness    | 68          | 37% - completely aware  
                          28% - neutral  
                          35 % - not aware |
Suggestions on the basis of survey

While analyzing, it was observed that there is a common belief that only IT faculties can effectively use the technology. Moreover, the concept of Virtual learning is not very much clear to all faculties and being a facilitator, it is important to know the applications and process/procedures of applying.

Therefore, with proper training and guidance, faculties can apply technology in their respective disciplines. Knowledge of core content is very important and success would depend on the use of technology comprehensively.
Conclusion

- Change in technology paradigm if applied in systematic order can give remarkable results and help to achieve the objective of education.

- Expand the World of digital knowledge.
An illustration – Paradigm Shift Due to Technology
Thank you !!!