ICT in Science Education

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Facts and Figures

- India has one of the largest proportions of population in the younger age groups in the world. 35.3% in the age group of 14 years at the Census 2001. 41% account for less than 18 years of age.

Age group	Populatin	Percentage
All Ages	1,028,610,328	100.0
0 - 4	110,447,164	10.7
5 - 9	128,316,790	12.5
10 - 14	124,846,858	12.1
15- 19	100,215,890	9.7
20 - 24	89,764,132	8.7
25 - 44	284,008,819	27.6
45 - 64	139,166,661	13.5
65 - 79	41,066,824	4.0
80+	8,038,718	0.8
Less Than 18	422,808,543	41.1
Less than 21	492,193,906	47.9
Age no stated	2,738,472	0.3
Source : C2 and C14 Table, India, Census of India 2001.		

Expenditure on education

- Only 3% of GDP spent on education. Apparently, only 0.37% on higher education against 1.41% in the US, 1.07 % in the UK and 0.6% in China.
- As a relative measure , expenses per child for education are as follows.

Country	Expenses (USD)
US	9689
UK	8502
Brazil	2728
Russia	1024
China	3986
India	400

Questions

- Why is it hotter in summer than in winter ?
- How to break a regular Cadbury 3 x 5 bar into single pieces ? You can break a given piece along any line at a time.

Problems

- Negligence in designing text books.

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SPECIAL: INDIA'S HOTTEST YOUNG EXECUTIVES

Fortnightly magazine

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May 4, 2008 Rs. 15/-

AICTE: Time to Revamp

The regulator of technical education is doing more harm than good.

BT Money

Should you be buying pension products?

Licence to Bank

NBFCs are muscling into banking territory.

PLUS:

- BT-TeamLease Employment Outlook Survey
- Will Orchid Change Hands?
- IITians Bet on India

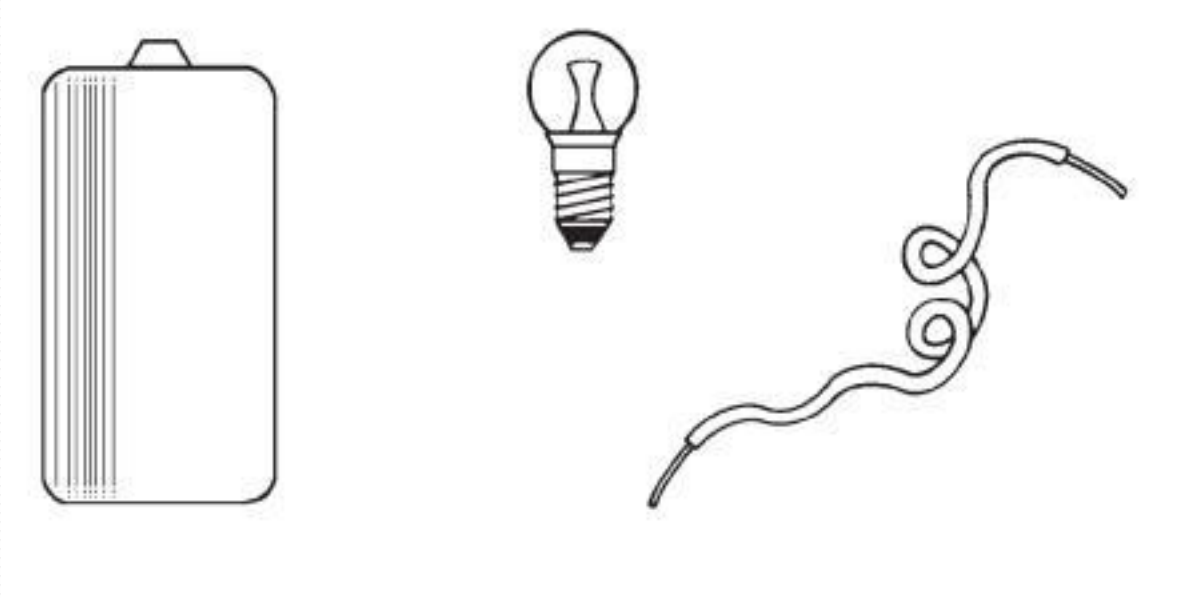
ECONOMY

Why the Slowdown Won't Kill You

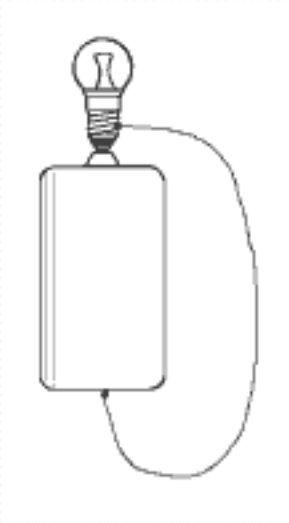
Problems

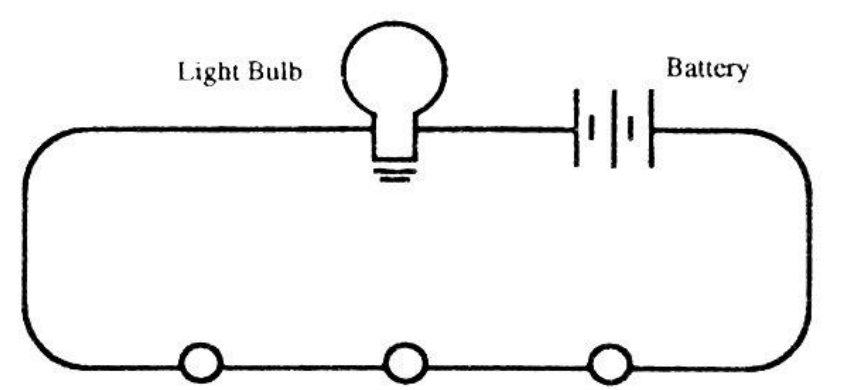
- Disinterest amongst teachers and lack of proper training .
- Lack of infrastructure.
- ICT can provide for certain infrastructural facilities.

Gap between theory and Practice



Solution



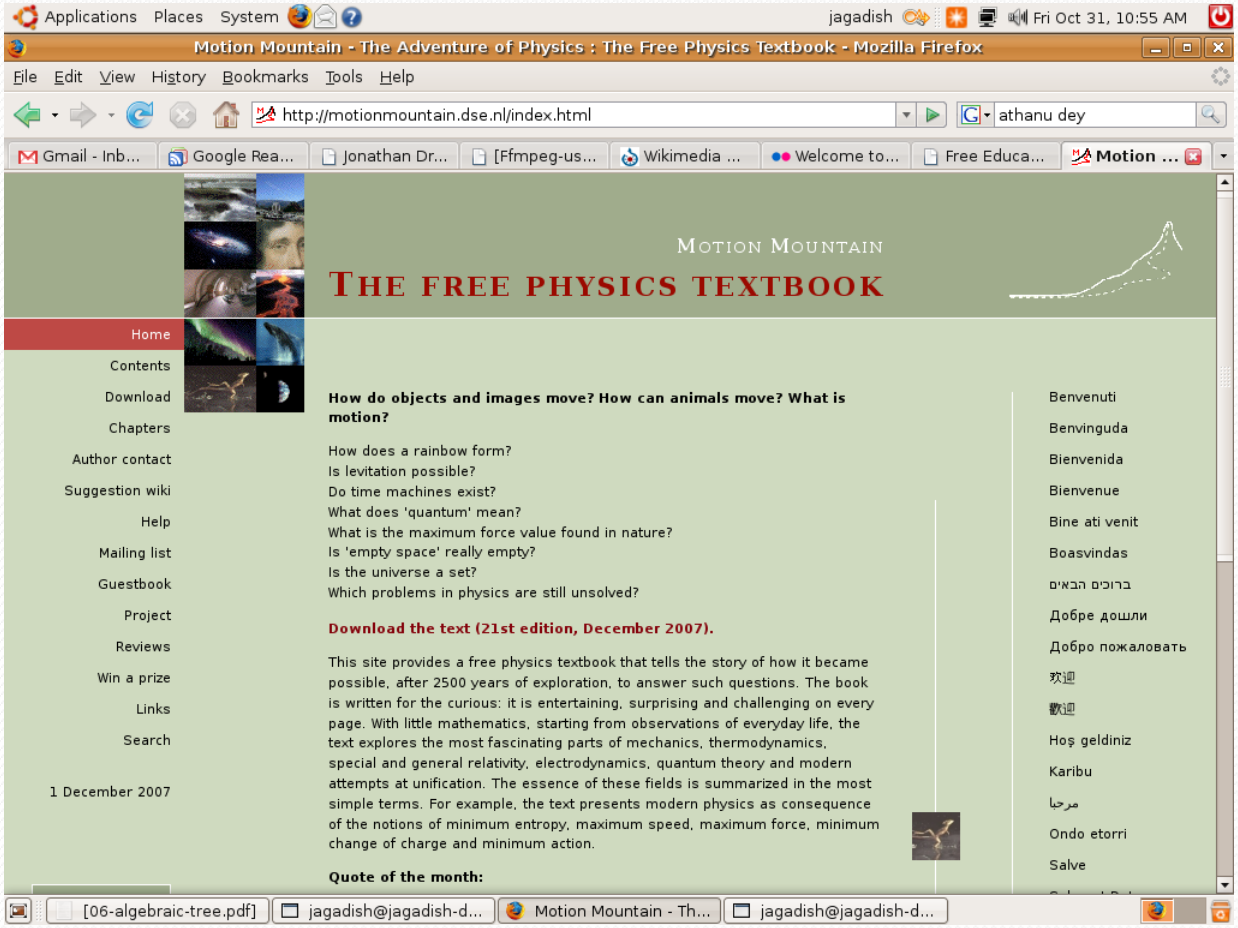


Overload

Innovative learning methods

- Understanding common misconceptions
- Creating situation for learning through experimentation and observation.

Quality Content

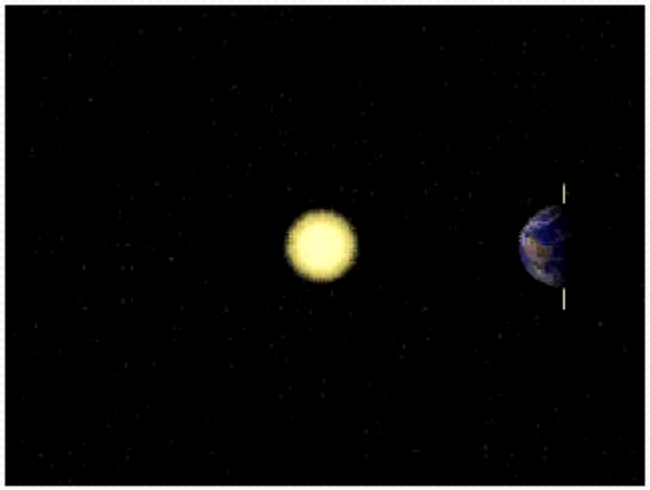


Quality content

- Physics
  - Julius Sumner Miller experiments.
- Mathematics
- Chemistry
- General

Our experiences

- Teaching ‘seasons on the earth’ to students at Vidya.
- Students were excited to learn from videos.



ICT case study

- Integration of ICT to science education through professional development of teachers . *Jari Lavonen, Kalle Juuti, and Veijo Meisalo*

  Department of Applied Sciences of Education, University of Helsinki, Finland

Goals

- Developing new approaches for science education where ICT can be utilised in a versatile manner.
- Helping science teachers to adopt and develop models for utilising ICT.
- Developing digital learning material for science education.

Case Study : Results

- Permanent, positive changes occurred in schools participating in the activities:
  - Teachers increased ICT use in science education, (developed together, tested in practice and evaluated)
  - Once the teachers had adopted a certain ICT use they did not drop it
- Use of available ICT tools as medium for active learning increased amongst students.

Our proposal

- Collaboration between teachers around Mumbai and IITB.
- Share innovative methods of teaching science.
- What about feasibility?