Objective: Develop Computer Fluency

**Research gap**
- Absence of clearly defined computer science curriculum, appropriate teaching resources
- Clearly defined computer science curriculum, appropriate teaching resources
- Computer skills - skills that are currently essential, e.g. database, internet, basic CS features
- Computer ethics, health & safety - share resources, exercises to prevent computer use hazards, Internet safety

**Actions Taken**
1. Developed curriculum for elementary & middle school
2. Teaching material
   a) Prepared teacher’s handbook for levels I –IV
   b) Textbook – Computer Masti - for Level I – printed
3. Pilot test in one school (July, 07 – April, 08) – to assess impact of the curriculum and teaching material.

Curriculum
- For each standard, syllabus is defined by:
  i. giving the topics that should be taught ("what")
  ii. the reasons for doing so ("why")
  iii. a plan ("how")

Three aspects addressed:
- Concepts: Learning computer science concepts that are generally useful in many areas as well as some concepts that are specific to computer usage/functioning.
- Usage Skills: Developing hands-on skill in the use of various hardware/software and programming packages/languages.
- Social Aspects: Understanding ethical and security related issues of computer and internet usage.
- Spiral organization of the curriculum
- Detailed syllabus available online

Teaching Material
- FOSS used: Edubuntu operating system and Open source educational games
- Creative commons license
- Team comprised people from varied disciplines

Sample content from Computer Masti
- Moz, the teacher
- Illustration of what activities can be done on computer
- Worksheet sample: Search for computer parts

Field Insights
- Elementary school students are avid learners and explore various computer applications with minimal assistance.
- Computer-based activities interest the students and can be used for developing skills in other subjects.
- Collaborative learning enabled students to proactively explore various applications.
- No gender differences are observed in computer proficiency and usage, likely reason - controlled exposure in the school setting ensures equal opportunity to use the technology.
- Confidence of teacher with the technology has a positive impact on confidence of students.

Students with their CS Projects
- Rural/ adult adaptation for Information Literacy
- Multilingual content – translation in vernacular languages

Plans for Further work
- Rural/ adult adaptation for Information Literacy

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