

Box 1

Learnings for NPISE from the Kerala IT@Schools program¹

While policy should seek to guide and influence program, it also needs to benefit from actual experiences and learnings therefrom. The Kerala IT@Schools program has several features which are worthy of emulation and hence need to be stressed in this policy document. These include

1. Primacy to role of teachers.

The capacity building of teachers, teacher educators should be first priority and is a pre-requisite before student ICT literacy. The overall coordinator for the program in the school should also be a regular teacher in the school. In BOOT Model, the coordinator and trainer role is outsourced to an external resource person employed by a private company. From experiences of BOOT Models in other states, it is clearly evident that this prevents the integration of ICT learning with regular learning. Kerala has avoided the BOOT Model, instead preferring to invest in its own teachers and school support systems and this has helped in the integration of the ICT education program with the school and ensuring its sustainability

2. use of Free and Open Source software (FOSS)

The most obvious benefit from FOSS, that royalties or license fees need not be paid for it, helps in addressing the needs of the large public educational systems in India. Proprietary software would be too expensive, both initial purchase and the upgrades. But, even more than the economic/equity reasons, the pedagogical superiority of FOSS is clearly demonstrated in the Kerala program. Along with the GNU/Linux operating system (which serves the limited purpose of ICT literacy), the department has been able to bundle several FOSS educational software as well, covering different topics in science, mathematics etc. Such bundling is possible since both the the operating system and the educational software are freely shareable. Also teachers and students can freely create content as well as customize the educational software for their own local contexts. Proprietary operating systems will not allow these possibilities and free educational software is not easily available on proprietary platforms.

3. Going far beyond basic ICT literacy

The Kerala program has gone far beyond basic ICT literacy. (ICT literacy is a pre-requisite, hardly enough as th draft policy rightly points out). For eg. The program includes

- a. capacity building of teachers for collaborative educational content creation
- b. capacity building of teachers to setup and maintain web sites where the collaborative content as well as school based content can be freely shared. This includes use of FOSS content management systems
- c. Capacity building on use of several FOSS educational software such as K Tech, Rasamol, Dr. Geo. These tools do not replace regular teaching in any manner, but allow students and teachers to relook at the concepts in new ways which also enable greater student participation. Teachers are unanimous that this enhanced participation has had significant positive impact on their learning processes and outcomes.
- d. Teachers are also trained for basic hardware troubleshooting. While deeper hardware issues are handled by hardware mechanics, this training enhances the understanding and confidence of the teachers
- d. Each school has a 'School IT Coordinator' (SITC) who has received basic training and has the confidence and competence to do the periodic software upgrades. (Conventional 'wisdom' often promoted by vested interests is that FOSS is too difficult to use, in Kerala, apart from extensively using FOSS, teachers even upgrade FOSS versions easily.)
- e. Kerala has got a good arrangement with BSNL for providing broadband internet to all schools, internet connectivity is a weak point in the CLPS of other states. Good internet connectivity helps teachers and students to access variety of resources and also use it in their school projects, lessons etc

The above facets and features are not limited to a 'few good/exceptional' schools, but widespread across the school system in Kerala.

1 Based on ongoing research by IT for Change