

Abstract of the report

Public school systems in India face a serious problem of limited curricular resources; usually the textbook supplied by the department of School Education and Literacy is the sole resource at a teacher's disposal. The singular emphasis on the textbook is reinforced by the limited availability of alternative resources. Open Educational Resources (OER) can enrich a learning environment of this kind; however, there are several challenges to adoption, including poor availability of ICT infrastructure and limited competency on the part of teachers to utilize digital technologies in the classroom. In this context, the teacher is typically seen as a "minor technician" (Scheffler, 1973),¹ whose job it is to merely cover the contents within the confines of the textbook, rather than use the textbook as one resource, to explore the same topic in a deeper and broader manner with students.

A participatory OER adoption² programme was studied in an Action Research, conducted with 67 Mathematics, Science and Social Science high school teachers and teacher educators in Karnataka state, India. This group was embedded within a larger professional learning community (PLC) of around 12,800 teachers across Karnataka, developed through the 'Subject Teacher Forum' (STF), an in-service teacher education programme in the public system.

The research methods included 19 workshops with the 67 teachers, where they participated in collaborative OER adoption processes. The effectiveness of this model of OER adoption was studied through structured questionnaires and focus group discussions, review of mails shared in the PLC's mailing lists, and review of content created on the Karnataka Open Educational Resources³ (KOER) repository. Data analysis suggests that teachers are able to use digital methods to adopt OER, and to contextualize it to their needs. The OER processes have aided teacher professional development through increasing teacher agency in the exploration and utilization of resources, and in their active collaboration with peers. Based on interviews with key actors, comprising these 67 teachers, teacher educators and education administrators, the systemic factors that enabled and constrained the participatory resource creation model have been analyzed.

The participatory resource creation model has been acknowledged as a national best practice by a review mission⁴ of the Government of India. Other state governments⁵ have evinced an interest to adapt this model in their own in-service teacher education programmes.

Keywords: OER, participatory, systemic, PLC, structuration, FOSS, Teacher Professional Development

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- 1 Scheffler (1973) writes that "The transmission model of education coupled with the drive for increased efficiency tends to foster the view of the teacher as a minor technician within an industrial process". When policy makers and bureaucrats see teaching as a process of transmitting content to students, they may view the teacher's role as simply passing on this content, which will be developed centrally. In this perspective, the teacher is seen to have the role of a technician.
 - 2 As discussed in the ROER4D "[Research Concepts Note](#)", 'adoption' is used throughout the report in a comprehensive manner, to include resource reuse, creation, revision, remixing and redistribution. This document is available on the ROER4D portal <https://docs.google.com/document/d/1Iz1kVC4CYLFBtZNm2o5ziFJKW96SjtNjhWHfTKKkbI/edit>
 - 3 A wiki portal for sharing the content created in English and Kannada languages by the teachers, see <http://karnatakaeducation.org.in/KOER/en/index.php> and <http://karnatakaeducation.org.in/KOER>
 - 4 Joint Review Mission (JRM) of the Ministry of Human Resource Development, which is responsible for education in the federal government. The report is available on http://mhrd.gov.in/rmsa_jrm, see http://mhrd.gov.in/sites/upload_files/mhrd/files/upload_document/3rd%20Jrm%20Aide%20Memmiore.pdf
 - 5 Including Telangana and Assam state governments