

Designing and implementing an Information Communication Technology for Rural Education Development (ICT4RED) initiative in a resource constraint environment: Nciba school district, Eastern Cape, South Africa

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Abstract:

This book is a representation of all the activities, which were recognised as essential components to consider when implementing a certain ICT4D initiative in a resource constraint area in the poorest province of South Africa with significant educational challenges. This initiative was coined the ICT4RED initiative and was a research, development and implementation project that changed the way teachers teach with technology in their specific context over a period of 3 years (2012-2015). The book aims to provide insight into how this initiative was implemented and how the components were adapted to form an Evidence-based ICT4RED Implementation Framework in the end. This framework was developed by adopting design science research as the methodology. Certain specific case study phases were applied within the Design Science Research process and lessons were learnt in each phase, which was documented as the initiative moved from one phase to the other. Certain steps were followed during each phase. The book provides an overview of how each of the components, within the final Evidence-based ICT4RED Implementation Framework, were managed and how it was operationalised to provide specific deliverables or to reach certain aims. There was a core team (one representative from each component) that met once every week to track and trace progress and deliverables. What emanated from this ICT4RED initiative was far more than just processes or models which were tested and refined, it was a change in the way 350 teachers (in 26 schools) applied technology and teaching strategies to support their teaching and learning and to improve their 21st century teaching skills. This initiative can be viewed as a successful intervention within a specific period of time involving specific people in a specific context where technology was deployed to support education.

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SOCIAL CONNECT



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ICT in Education is a very new and extremely fast developing area. In this field, it is necessary to explore and develop qualitatively different attitudes that have their roots in scientifically validated theories based on results of many foreign researches. Thanks to the fact that one of our doctoral students, the second author of the paper, had chance to spend. The project has focused on the fact that school-based teaching and learning are producing the digital data but tools for analytics of the data (which can lead to enhancing and individualizing of teaching process) are still missing. This new tool enables teachers not only to collect but also to analyse and visualise educational data of their pupils. This development of knowledge-based software which can be used in real education 3. Focus Areas • Health • Nutrition • Water & Sanitation • Renewable energy • Science and Technology Centre • Teacher and Learner support • ICT for Rural Education Development (ICT4RED) Cofimvaba Rural Education Intervention. 5. Project Scope • Provide tablets to teachers, learners and district officials at 26 Nciba Circuit schools, within the Cofimvaba School District • 6 10. Implementation Process – 2013/14/15 STEP 1: Meeting with District Officials Explain and get buy-in for project STEP 2: Meeting with Principals and Deputies – 12 Schools Explain and get buy-in for project Change management - how to manage technology in a school Homework STEP 3A Workshop with District Officials Hand out tablets to each attendee Course(s) on how to. However, access to ICT in the region's schools is limited due to infrastructure constraints, a lack of investment and research into the uses of ICT in education, and a lack of capacity of teachers and school leaders to use ICT to enhance the quality of teaching and learning. Another challenge is equity, including financial, gender, and racial fairness in access to education. In some countries in Asia, many middle-income parents send their children to private schools, which diminishes the support for maintaining the quality of public schools. In addition, the poor, girls, and children from marg