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Unlocking Education lockdown with the iNethi platform

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In South Africa, only 22% of households have a computer, and 10% have an internet connection at home. This disparity has exacerbated education inequalities during the COVID-19 pandemic; school closures and limited online schooling saw learners struggling to catch up – especially in crucial subjects like Science and Mathematics. The iNethi project seeks to solve the lack of access or affordable access to the Internet and locally relevant content in low-income communities. The iNethi platform allows communities to quickly bootstrap a community owned network to provide affordable Internet access and host a local cloud server that allows communities to interact with fast free local content easily. The local cloud service currently provide free access to a local file storage platform, a local chat server, and a video streaming platform and education-focused resources such as Physics Education Technology (PhET) simulations, Wikipedia, Khan Academy and TED talks. iNethi also provides a mechanism to automatically synchronise content uploaded to a global server from anywhere in the world to a server running in a local community. iNethi has been deployed in Ocean View, Cape Town and during COVID-19 it allowed teachers to stay in contact with high school learners. The learners downloaded free teaching videos from nine hot spots around Ocean View; these videos were recorded by the high-school teachers, uploaded to the global platform and then synchronised to the server in Ocean View. The “Essential Skills” Physics Videos and resources created by the UniZulu Science Centre have also recently been uploaded to the platform to enrich the learning experience of matric students. These videos will also be available for free from any iNethi hotspots in Ocean View. In this work, we will describe the architecture of iNethi, its current impact and the potential of iNethi to provide public access to high-value digital resources in low-income communities throughout South Africa.

Apply to be considered for a student ; award (Yes / No)?

Yes

Level for award;(Hons, MSc, PhD, N/A)?

MSc

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