

## Content in Box - Extending Moodle

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Aim of this research is to propose a systematic way to share Moodle-based learning materials such as video to remote schools that have limited Internet access. This has become a need in Sri Lanka. Because, serving multimedia contents over the internet is heavily limited by bandwidth and the link speed and this is a common problem everywhere, especially in the rural areas where the penetration of the Internet is very limited. On the other hand, the use of Multimedia has become an inevitable practice in classrooms. Further, self-paced learning has become a focal point in recent time. The government has also taken initiatives to promote self-learning and has invested a lot in setting up the environment and developing content for self-paced learning. In addition, there are studies in the region show that the use of multimedia content would increase the performance of students in national examinations. Shortage of school teachers in remote schools is also another serious issue. On the other hand, now there are several computer laboratories around the nook and corners of the country which are rarely utilized. Some of these laboratories have the Internet, however, students are usually not permitted to use the Internet due to the concern of Internet data cost. Aki.coach has been developed as an online course delivery platform for secondary education in Sri Lanka. To break the obstacles in taking this school level, a portable Aki box is introduced. This box will act as an integrated Content Delivery Network using squid proxy for Moodle. The box comes with all the video and the bandwidth consuming content. If this box is plugged to a laboratory, all the students can do self-paced learning using video and other materials. However, when students access a newly updated video, it will be downloaded via the Internet and stored in the Aki box. Students can also do an online examination. More importantly, students can continue their activities when going home. However, the content will be served from the main server when they access from home which students will feel any differences. Aki box has a Moodle installation which will periodically update the main server. Even if there is an Internet problem still the content can be served from the Aki box and the data will be synced when there is an internet connection. Moodle is altered to always get the video and other bandwidth consuming content from the squid cache if it is available. Now, this box is piloted in one location and soon it will be made available to other schools.

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