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Does India really need the Aakash tablet?

E-readers might just work better for Indian students

The Aakash tablet project of India has been dubbed by all as an ambitious and forward thinking project that will go miles to help children in rural parts of the country gain access to education and modern learning tools. Make no mistake- to build a tablet at this price point (in the range of $35-$50) is a remarkable achievement for DataWind and its CEO Suneet Tuli. However, the Internet is full of both positive as well as negative stories about the Aakash tablet. I have read

reviews praising it, reviews dismissing it as slow and clunky and reports about how the IIT, the government and the manufacturer were embroiled in some dispute about minimum specs.

It is perhaps fair to expect both praise and criticism for an ambitious endeavor such as this. While there are probably many good things that can be achieved by putting a tablet in the hands of students, I have often wondered if there is a better way to achieve similar idealistic goals by opting for a solution that is not only more practical but also cheaper.

Let us first try to understand what the Aakash tablet is intended to be used for apart from serving as a photo-op for ministers and government officials. What is the reason we want to give tablets to our students? What are they supposed to do with it? Students can use Aakash tablet to access learning content on the web, read e-books related to their courses and watch instructive videos.

Given these use cases, let's see if these use cases are practical or not. Do we have broadband internet in our villages? Will rural students have access to WiFi? Yes, 3G based internet access is an option but not only 3G connectivity limited, it also depletes battery life faster. With the power situation prevalent in the country, it is a

mistake to assume that users of these tablets will be able to charge their devices every day. Therefore not only the device specifications but also the use cases envisaged for these tablets should focus on longer battery life.

Let's first take the case of instructional videos. Do we have such content available? Unlikely. Though many good instructional videos and documentaries are available on YouTube, the government is definitely not looking at YouTube as a source of learning.

Moreover downloading such rich-media content would consume high amount of data (therefore high cost) and also deplete battery life faster. Playing downloaded video content again and again on the device will also drain battery. Also there is nothing to stop the students from downloading films and other videos of purely recreational value which would defeat the purpose of giving every child a heavily subsidized tablet. This is not to say that videos are not important learning tools but

since the goal of the Aakash tablet is not to replace schools, we should let the teacher use videos in the classroom to supplement the teaching. I remember we used to have an audio-visual room in our school for precisely this purpose.

Accessing learning content on the web is again a weak use case as it is not only dependent on internet connectivity but also on availability of such content optimized for viewing on a mobile device. Again I would like to clarify that this use case is a weak one only in the current scheme of things where broadband and power situation in rural areas of the country are not conducive to heavy usage of power sapping devices that tablets (all tablets, not just Aakash) are. I strongly believe that web resources like Wikipedia and Google Search are great tools for quick research on virtually anything under the sun but perhaps the focus should be more on offline learning till infrastructure issues in rural and semi-urban areas are sorted out.

Let us now concentrate on the third and perhaps the most important use case — e-books. This is an area where rapid progress can be made by converting books into e-books and making these available to the students both online and via offline channels such as making this material available to every rural school on CDs. Teachers can then transfer the e-books to the tablets of

the students without the need for internet. When I was in school, I remember that we used to use NCERT books for classroom learning. NCERT books are typically black and white (at least they used to be) and images included in the book are in grayscale. While the content is decent and books are very reasonably priced, the most common problem with these books is that they are frequently out of stock. Hence converting these to e-book format would do wonders for the availability of these books throughout the year.

So what is needed to read e-books? Sure it can be done on the Aakash tablet and even phones but I guess no device beats the e-reader. An e-reader will work fine for e-books and can also be produced or procured at a very very reasonable cost. The Amazon Kindle costs between

$69 (6″ e-ink display) and $119 (Paperwhite with built-in light). While this does not beat the Aakash tablet, imagine the price the government can negotiate from Amazon when it orders them for bulk purchase. The Kindle is just an example; any e-reader will do. In terms of screen size, we give up hardly anything with an e-reader. While Aakash tablet is a 7″ device, an e-reader with 6″ display will not really lose out. I think it will offer the following advantages over using a tablet:

Longer battery life and *less frequent* recharges

Less strain on eyes — Compared to backlit displays in tablets, e-ink readers do a better job

Lighter than a tablet. Probably more *durable* too.

Distraction free learning — No games, no music and no videos on the e-reader

Better control against porn as the e-reader browser will likely not work with porn sites

Safer — A tablet running an advanced and popular OS like Android will be more prone to viruses and malware.

In my opinion, tablets like Aakash have a space in the classroom but not at the school level. A tablet will perhaps be more of a learning device and less of a distraction for a college student who is grown up

enough to not let the device have a distracting influence. At school level, the focus should be on improving reading, writing and comprehension skills. While pen and paper cannot be totally eliminated when it comes to writing, and doing math, e-readers can play a crucial role in ensuring round-the-year availability of books & articles and promoting distraction-free learning.

WRITTEN BY

Abhinay Verma

Program Manager & Consultant. Indian School of Business (ISB) Alumni. Interests range from mobile, e-commerce, social media to tennis and cricket.

Published May 9, 2014