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THU: Digital Inclusion in Sub Saharan Africa (Janet Turner)

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The Conference presentation will introduce the topic of mobile access to academic journals in sub-Saharan Africa and will aim to address the subject under the theme of inclusion. The question for enquiry is whether students in some higher education establishments in Senegal (Thies), South Africa (Stellenbosch) and Tanzania (Dar-es-Salaam), can read contents of their university libraries on their smart and cell phones. Reading material on a smartphone is a realistic option in terms of time to download material and the available screen area, which can be as much as 20cm. Use of cell phones is unlikely to be significant learning tool, unless used for reading abstracts, short articles and e-mailing small amounts of material.

The ten-minute report will be delivered in two formats. One will be a spoken commentary and the other will be a background of slides. It is expected that the voiced presentation will be accessible to those with low vision, and those who are dyslexic. The slides will be presented as an audience prompt and particularly those with hearing difficulties or where there is a compromised audio connection. It will provide a short explanatory phrase or sentence and offer an element of the voiced commentary.

As it is likely that the research phase will not be completed by 9 February only available evidence will be presented at the conference. This will include statistical information that has not been presented in the poster but was published in the last eighteen months by the Pew Research Centre (2015). Pew's 2015 data includes accompanying analysis on internet use and ownership of smart and cell phones focusing on a range of African countries. As other data has been released that explores correlations between mobile phone ownership and education, among other factors, that will also be introduced (Pew Research Center, 2015).

While the ownership of cell phones in Africa is reported to be running at the same levels as that in the US at 89%, ownership of smartphones is far more modest, Senegal 15%, South Africa 34%, Tanzania 8% (Pew Research Center, 2015). The three sub Saharan countries each have the services of several commercial telecommunications operators and evidence suggests that the necessary infrastructure is now available, although it may not provide the same speed of use enjoyed for example in some north African countries. The universities libraries which are now the subject of further enquiries all have an internet presence, make journals available electronically and provide e-learning of some description to local populations.   Information about their libraries and a proportion of their holdings is available to view and can be compared with information from UK university libraries on resources readable

Cloud created by:

jan turner
8 January 2017

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on mobile systems. It is therefore possible to construct an outline of the information students might access electronically. What is not clear from the material and studies already consulted, is if their viewing experience is adequate and is related to their institutional learning.

Extra content

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Discussion (14)   Links (0)   Academic References (0)

Andy Brooks
10:05am 27 January 2017 Permalink

Sounds interesting Janet, will you introducing statistics on laptop and desktop usage also as way of comparison? I see you may have also run into the same issues as me as it is a huge topic you are tacking, which is really equality of educational opportunity isn't it. Really interesting area for me, it was whilst talking to an OU member of staff about this very topic that brought me to the MAODE, I was originally signing up for the MEd!

Julie Skeats
5:20pm 27 January 2017 Permalink

I agree with Andy that it looks a really interesting topic. Students here struggle with the cost of technology and we have competitive internet service providers. Are students managing to cover these costs to access the material?

Jude Toasland
11:22am 28 January 2017 Permalink

I'm looking forward to your presentation Janet as this is a fascinating and very innovative topic. I was particularly inspired by how you are structuring your presentation in an accessible format which has echoes for me around consideration of accessibility as a key topic in the project.

Mary Howell
2:45pm 28 January 2017 Permalink

Hi Janet

I am interested in something in your first paragraph - although you say downloading and

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reading papers is feasible on a smart phone you go on to say that it won't be a 'significant learning tool....' Is that becasue you don't think it is widespread enough or because you think learning requires some kind of interaction with or synthesis of the material?

Uffe Frandsen
2:47pm 1 February 2017 Permalink

Hi Janet. Very interesting and important subject. I am curious as to the concept of "digital inclusion". Do you for example mean access to smartphones or access to scientific journals online or both?

jan turner
6:53pm 1 February 2017 Permalink

Hello Uffe,   It's access to academic journals online using a smartphone - or indeed a cell phone as there are some capable models that can be used very well to search and read abstracts, and download full articles where wanted.

Material I have received so far from one of the universities I contacted suggests that phones are not greatly used to access academic material on the internet but the internal system is as well used as one might expect.

David Jenkins
10:44am 4 February 2017 Permalink

Great, stuff, Janet. As a university librarian and a student who is sometimes reduced to reading articles on my phone, I am particularly interested in this topic! We hear a lot anecdotally about how smart phones are becoming part of students' study and I will be interested to see whether there are any takeaways that I can apply/pass on re: our OU students.

jan turner
6:31pm 5 February 2017 Permalink

Hope you can 'make it David. I have found an 'almost smartphone' very useful for reading short notices and articles, and abstracts. A larger [smartphone] screen makes it easy to read full articles where there is also numerical data. One of the studies I read last year suggested that it's the shorter tasks, to do the early stage 'leg-work' that is particularly successful and even more so where the student can then follow up with a larger mobile device, like a tablet, for longer engagement with the text.

jan turner
6:55am 8 February 2017 Permalink

I had posted internally when I was unable to access the Cloud and have just realised that I had not added the material later. For Andy, Julie, Jude and Mary, here are the responses to your earlier questions - and thanks for the practice!

Andy Brooks

Sounds interesting Janet, will you introducing statistics on laptop and desktop usage also as way of comparison? I see you may have also run into the same issues as me as it is a huge topic you are tacking, which is really equality of educational opportunity isn't it. Really interesting area for me, it was whilst talking to an OU member of staff about this very topic that brought me to the MAODE, I was originally signing up for the MEd!

It is an equality/inclusion issue Andy and I have spent some time adjusting the scope of the work to make best use of the data and information I have been able to access. At present I am not expecting to introduce statistics on computer/laptop use but Pew Research Center data for 2015 shows a median of 2% for provision of domestic landlines in seven African countries (including the three I chose). With a lower level of physical connectivity, and in past years and in some areas a less reliably consistent supply of electricity, Africa appears to have opted for mobile phones, particularly the cell phone where in 2015 levels of ownership rivalled that of the US.

[Julie Skeats](#)

5:20pm 27 January 2017 [Permalink](#)

I agree with Andy that it looks a really interesting topic. Students here struggle with the cost of technology and we have competitive internet service providers. Are students managing to cover these costs to access the material?

This is a risky area to comment upon. I have found from one paper that provisions can be quite different within one country University to University, but the Universities I have looked at do provide WiFi and a fairly quick internet search around Dar es Salaam University has revealed free-access WiFi hotspots. It may be that the ability to spend more time within the confines of the University makes a difference in levels of actual use, and/or perhaps to have a part-time job in one of the business areas of the city where WiFi is available.

[Jude Toasland](#)

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I'm looking forward to your presentation Janet as this is a fascinating and very innovative topic. I was particularly inspired by how you are structuring your presentation in an accessible format which has echoes for me around consideration of accessibility as a key topic in the project.

I would certainly like it to be as accessible as possible Jude.

[Mary Howell](#)

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Hi Janet

I am interested in something in your first paragraph - although you say downloading and reading papers is feasible on a smart phone you go on to say that it won't be a 'significant learning tool....' Is that becasue you don't think it is widespread enough or because you think learning requires some kind of interaction with or synthesis of the material?

Use of the phones may reflect cultural use of mobiles by undergraduate age students Mary, which is often social according to academic review of international studies. This is mirrored in one recent study at a University in Tanzania, and Pew data. More comprehensive use may be affected by lack of knowledge of how to make best use of a mobile, a factor mentioned in some studies. It is tempting to speculate that knowledge would be better in those countries in sub Sahara where there is a good level of use for commerce and that would certainly be one point of enquiry.

[Dr Simon Ball](#)
4:23pm 9 February 2017 [Permalink](#)

Hi Janet
Please find below the main questions and comments from your live presentation. It's up to you how to answer them, whether you wish to group them, or whether you wish to point to an answer already given above, for example.
Best wishes
Simon

- UNICEF Global Innovation Centre http://unicefstories.org/about/ global-innovation-centre/ Khan Academy Lite is a case example of off-line free open learning accessed and downloaded on cellular mobile phones
- Connectivity is such a huge challenge in Africa
- So do you think the biggest hurdles are connectivity or change in practice/training etc.?
- Connectivity is my biggest issue - working in Malawi, which is not as 'developed' as other countries in the area
- 'WhatsApp' is a magic key to communication - it is very light on data use
- To what extent did you come across subscription levels as a barrier to online access to information?
- What, if any, role does gender play in use of technology?
- Small orgs working on education for women in Malawi - www.mamiemartin.org and www.thesokofund.org for those interested

jan turner
8:16am 10 February 2017 Permalink

> **UNICEF Global Innovation Centre** http://unicefstories.org/about/ **global-innovation-centre/ Khan Academy Lite is a case example of off-line free open learning accessed and downloaded on cellular mobile phones**

Useful to know. I've become something of a convert to using mobile phones. The Nokia, thanks Finland, has always been pretty capable but the 215 can handle finding, displaying and downloading very well, and at very reasonable initial cost. Something of a surprise I must admit.

> **Connectivity is such a huge challenge in Africa   and**

So do you think the biggest hurdles are connectivity or change in practice/training etc.?

I think the information on landlines alone indicates that there are indeed connectivity problems. But for example the indication of the 'jump' to mobile shows that some countries in sub Sahara (it is a continent after all) are or are able to take advantage of developments, solar power, sea cabling etc.

I'm not an engineer, however, though I find the subject fascinating. Now I have some understanding of the underpinnings of availability, I feel the time is right to take a longer and closer look at practice and training. Of interest, the most popular in-house guide in 2015 a jump of around 30% on any other guide, at Stellenbosch University, in 2015 was the 'how to find information online'.

> **Connectivity is my biggest issue - working in Malawi, which is not as 'developed' as other countries in the area.**

I found several articles that described some very inventive business ideas for charging mobile phones, small scale but effective, but clearly it's not ideal. No doubt there is a big city/country divide also, not completely unlike UK (rural broadband/Exmoor!).

> **'WhatsApp' is a magic key to communication - it is very light on data use'**
> That's really useful to know. From a check of Wikipedia it also seems they have overcome some of the privacy problems, following helpful persistance by someone in Holland.

> **To what extent did you come across subscription levels as a barrier to online**

access to information?

The Universities I was interested in all have a significant amount of library holding information on the open area of their website and appear to be bearing a good level of cost on behalf of their staff and students. Wiley provides a healthy amount of peer reviewed material online and open, and so does Cambridge and of course there are others. It was quite exciting to hear about EIFL as well as they work direct with countries/their libraries. Research Gate should be another source. I have certainly gone to them for copies of a couple of papers and, on supplying some information on why I wanted to see a copy, I got one from the researcher.

⯈ **What, if any, role does gender play in use of technology?**

Gender appears quite frequently in studies. Often in context of other factors as well, so gender – economic factors, gender – country, there are some fascinating variations including in such areas as preference for social networking sites. I note in some papers the reference to 'access to technology' - so is mobile sharing an aspect, and does that bear any relation to gender. I might also look for 'child occuption' as some agricultural tasks, watering, weeding, minding cattle could involve minors holding a mobile for a short while and the nature of the task might have a gender aspect.

⯈ **Small orgs working on education for women in Malawi**
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Useful to know, and thank you.

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Useful to know, and thank you.

[Pat Townshend](#)
2:55pm 10 February 2017 [Permalink](#)

I wonder if the lite data use of WhatsApp has contributed to the popularity of this with my England based students'. They live/work in a rural area and in my interviews some mentioned patchy service in places in the area. However no-one complained about not being able to access this media.

[jan turner](#)
4:38pm 11 February 2017 [Permalink](#)

Something I read this morning tempted me to make another comment, Pat. WhatsApp is interesting and could be a solution for some people around a 'not-spot'. Another possibility could be Dropbox.

Contribute to the discussion

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