



# Using Open Source Software in Education in Sudan

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## Introduction (1-3)

- Ever since the launch of the free software movement, the new models and practices of Open Source Software (OSS) have been gaining momentum.
- The philosophy behind open source software treats end-users as developers who have rights equal to the rights of the original developers of the software.
- Open Source License (OSL) overtakes proprietary software licenses in terms of promoting sharing and innovation in user and developer communities.

## Introduction (2-3)

- An increasing number of educational institutions in the developed world have been adopting open source software for teaching and other activities because:
  1. OSS has a tendency towards open standards.
  2. It can be completely tailored to the local needs.
  3. Open source licenses are almost free.
  4. Educators and students are not pressurized to use illegal software copies.

## **Introduction (3-3)**

- In Sudan, the educational scene has been characterized by rapidly growing numbers of learners and educational institutions.
- Such growing numbers necessitate the need to access resources and share knowledge.

## Open Source Software: Pros and Cons (1-2)

- A balanced view on the matter helps in terms of making the right decision and getting to see the full picture
- Cons:
  1. The development process based on open source software may not be well-defined, and some important stages may be ignored.
  2. Open source software revolves around the needs of developers not customers.
  3. Open source may allow hackers to know about the weaknesses or loopholes of the software.

## Open Source Software: Pros and Cons (2-2)

- Pros:
  1. Educators and learners can benefit greatly from the experiences accumulated in open source projects.
  2. New codes and functionalities can be added to the software and shared amongst educators and learners.
  3. Open source software perpetuates innovation in educational institutions since it is the product of collaboration among a large number of different programmers.

## **Suitability of Open Source Software for Education (1-3)**

- Open source software is no stranger to educational institutions.
- Certain applications used by educational organizations are particularly suited to open source. Specifically, these are learning management systems (LMS) and operating systems.

## **Suitability of Open Source Software for Education (2-3)**

- Some institutions believe that they get a higher return on investment (ROI) from OSS.
- Educational institutions which are already relying on proprietary software do not have to resort to drastic measures when implementing and adopting open source solutions.

## Suitability of Open Source Software for Education (3-3)

- Open source label does not imply no cost.
- Assessing the suitability of a certain open source software product to the institution should be based on a deep understanding of that institution's needs and capabilities.

## **Educational Facts about Sudan (1-2)**

- The education systems inherited by the government of Sudan after independence was designed to provide civil servants and professionals to serve the colonial administration.
- At independence in 1956, education accounted for only 15.5% of the Sudanese budget to support 1,778 primary schools (enrollment 208,688), 108 intermediate schools (enrollment 14,632), and 49 government secondary schools (enrollment 5,423).
- The adult literacy rate in 1956 was 22.9%, and, despite the efforts of successive governments, it is now estimated at around 59% .

## **Educational Facts about Sudan (2-2)**

- In the mid-1970s, there were four universities, eleven colleges, and twenty-three institutes in Sudan.
- 1980 two new universities had opened, namely, Al-Jazeera and Juba.
- By early 1991, the government had decreed that the number of university students be doubled. Many new universities were established and the focus was on states other than the capital .

# Problems Facing Education and Research in Sudan

- Lack of resources or the inefficiency in distributing them.
- The expansion in the educational system came at the expense of research.
- War and conflicts.
- Economic sanctions .

## **The Impact of OSS on Education in Sudan (1-2)**

- Open source software is not likely to burden the already burdened budgets of educational institutions. Institutions are free to develop and upgrade the software when they see fit. They should consider the costs of employing or having access to experienced personnel
- The use of open source tools is very likely to boost research in educational institutions in Sudan since it promotes and is based on values of innovation and sharing.
- The use of open source software in educational institutions in Sudan is a way to overcome economic sanctions imposed on the country.

## **The Impact of OSS on Education in Sudan (2-2)**

- The role of open source communities in Sudan should go beyond providing and training on open source software.
- Universities should work on spreading awareness about the benefits of OSS. Educators should lead by example. The concepts of open teaching should be adopted by teachers in educational institutions. A strongly related concept to open teaching is Open Educational Resources (OERs).

## Conclusion

- Open source communities should work towards standardization.
- Standards organizations are pretty much the only way to get a level playing field when it comes to new open source applications for learning, however, that will not happen unless the open source communities are active participants.