

'TREAT REFURBS AND AFRICA WITH RESPECT'

FRAMEWORK ON REFURBISHED COMPUTERS FOR AFRICAN SCHOOLS

A Research Report by SchoolNet Africa

EXECUTIVE SUMMARY

This study was commissioned by SchoolNet Africa (SNA) in partnership with the Commonwealth of Learning (COL) and the International Institute for Communication and Development (IICD). It marks the first examination into experiences with second-hand and refurbished computers among schoolnet organizations in Africa. Through documentary review, interviews and focus group discussions with both African schoolnet practitioners and others involved in the refurbished computers market, the pipeline of activities in sourcing and distributing second-hand and refurbished personal computers (PCs) to African schools has been ascertained. These different experiences have been drawn upon to develop a framework for schoolnet organisations operating throughout Africa, to follow in the future sourcing and installation of second-hand and refurbished PCs in African schools.

Participants at the *ICTs in African Schools Workshop for Practitioners and Policymakers*, held in Botswana in April 2003¹, discussed the potential that refurbished computers have to provide affordable access to ICTs in African schools. They agreed that the solution to Africa's digital divide is not as simple as excess supply of second-hand PCs in the developed world meeting excess demand in the developing world. Not every second-hand computer is suitable for re-use and, by sending un-usable second-hand PCs to Africa, the developed world is simply dumping its environmental problems (relating to the disposal of toxic substances in PCs) on Africa. Some practitioners have argued that the total cost of ownership of a refurbished PC could be higher than that of a new PC owing to its additional maintenance costs and shorter lifespan. Additionally, it is argued that nobody in Africa has yet imported or used refurbs at a scale large enough to start bridging the gap in terms of numbers of PCs required, and some people question whether this is even possible. However, the view from the Botswana workshop was nonetheless that African schoolnets should be encouraged to consider the use of second-hand and refurbished computers, as part of an educational technology solution on the basis that they make the

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http://www.schoolnet africa.net/fileadmin/resources/Workshop_Report.zip

provision of ICTs in schools more potentially more affordable. Until it can be proven beyond doubt that the total cost of ownership of a new PC is less than that of a refurb, most schoolnets are committed to continuing to use refurbs in schools, while continuing to figure out how to make them more effective. Workshop participants therefore highlighted the requirement to develop defined criteria and guidelines to improve the process of procuring and using refurbished computers in African schools going forward.

Although the scope of this research was insufficient to cover the subject of policy in much detail, the findings of this research indicate that procuring second-hand PCs on an ad hoc basis has done little to reduce the digital divide in Africa. The numbers of second-hand PCs arriving in Africa are still very low relative to demand. This research suggests that large-scale procurement of second-hand PCs for African schools will only be successful if procurement and distribution policies with respect to these PCs are integrated into national educational technology planning.

As far as process is concerned, this research has indicated that the supply of refurbished PCs to African schools is an ongoing process rather than a single event. It requires a system of interrelated activities and organizations to be in place in order to be successful. The basic pipeline of activities identified in this research that are required to source and use second-hand and refurbished computers in African schools includes:

- Donation of second-hand PCs,
- Procurement of second-hand PCs,
- Refurbishment of second-hand PCs,
- Distribution and installation of refurbished PCs,
- Maintenance and use of refurbished PCs, and
- Disposal at end-of-life of refurbished PCs.

While all these activities are currently being performed by various organizations in and outside Africa, general consensus amongst those interviewed for this research is that there is a lot of scope for improvement in the current pipeline of activities, including:

- Encouraging donors and NGOs in the developed world to commit more resources (financial and technical) beyond simply supplying PCs to African schools and towards ensuring that their donated PCs are installed in good working order for an affordable price.
- Developing refurbishing skills in Africa instead of relying on international NGOs to refurbish PCs before they ship them. Not only will this provide employment and income generating opportunities for African youth, it will also reduce Africa's dependency on foreign skills and support.
- Developing an official pipeline for how to dispose of end-of-life PCs in an environmentally appropriate manner. Current environmental policies in Africa are hopelessly inadequate to deal with large numbers of end-of-life PCs appropriately, so this is a priority.

Many African schoolnet practitioners acknowledge that their efforts to source and install refurbished PCs in African schools to date have been hampered by the lack of a coordinated support system for accessing funding, sourcing and installing PCs, and developing ICT capabilities (both technical and educational) in schools. Most of the projects undertaken by schoolnets to date have been ad hoc in nature and the general consensus seems to be that the process of sourcing and installing refurbished computers in African schools would be made significantly easier, more scaleable, and more sustainable if it happened as part of a national initiative like Computers for Schools Canada. However, the fact that experiences of local schoolnets with second hand and refurbished PCs vary from example to example would indicate that this is in part a reflection of the different contexts within which these schoolnets are working and not all a reflection of inadequate process. This study therefore suggests that distinguishing between those issues that are generic to refurbishes as a whole and those that are unique to particular situations will go a long way towards a better understanding about how and where refurbishes can be effectively used.

Furthermore, this study has attempted to develop a comparative total cost of ownership model for new versus refurbished PCs. While more work needs to be done on this model to refine assumptions, it provides a first step towards enabling schoolnets to be able to determine whether to obtain new or refurbished PCs on a case-by-case basis.

In conclusion, this research has indicated that an integrated strategy and effective management system is required in order to ensure that future projects to source and use second-hand and refurbished PCs in African schools are more consistent, scaleable and effective. Strong partnerships are a vital enabler to the implementation of these strategies and this study has indicated that the appointment of an industry-coordinating body to develop and expand partnerships would be extremely beneficial in Africa. SchoolNet Africa (SNA), with its network of local schoolnet organizations throughout Africa, is well positioned to take on this industry-coordinating role by taking the lead in:

1. Facilitating partnerships and cooperation amongst all players in this field (including international development agencies, private sector partners, and local schoolnets throughout Africa) to ensure greater effectiveness of all players and projects.
2. Facilitating the ongoing debate about whether or not to use refurbished computers in African schools, and how best to do so.
3. Identifying and encouraging sustainable sources for funding of refurbishment initiatives in Africa.
4. Developing and updating criteria and standard processes for second-hand and refurbished PCs to ensure improved quality and cost of the items received, and to ensure more efficient processes.
5. Adapting and improving the pipeline for sourcing and using second-hand and refurbished computers to improve efficiency and reduce costs.
6. Advising and supporting all the organizations involved in the second-hand and refurbished PCs pipeline as part of streamlining and improving this pipeline.

This is not to say that SNA should be solely responsible for undertaking these tasks. The preference would be for SNA to establish a network of partners who work together to accomplish these tasks under the coordination of SNA. It is nonetheless important that this coordinating role is recognised by all the players in this field and that SNA is supported and enabled to perform this function effectively. This will in turn support and enable the whole schools-related refurbished computer industry in Africa to be more effective at a much larger scale.

Finally, with regard to local schoolnets, the findings of this study suggest that schoolnets should continue to perform the activities that they are currently undertaking to source and install refurbished computers in schools, but that they should focus on doing this as part of a better coordinated effort, including:

1. Working with SNA to identify appropriate partners (including funders, donors, NGOs, governments, local refurbishment businesses) and to establish strong relationships with these partners.
2. Establishing a system (of processes and organizations) of getting refurbished computers into schools that is both scaleable and sustainable (including everything from sourcing funding to developing local refurbishing and maintenance capacity).
3. Developing and improving strategies to share implementation responsibilities with others, particularly with regard to developing internal skills and capabilities within the schools themselves.

