

3. What is ICT?

Information technology (IT) refers to the systems used to store and manage information through the use of technologies such as computers. Communications technology refers to the way we use technologies such as phones to communicate. Computer and telecommunications technologies have been converging over the past few decades. This coming together can be seen in the use of the PC for communication and the use of TVs and decoders for email. Because of this overlap and convergence, instead of talking about IT (Information Technology) and Communications Technology separately we put them together as ICT. Both these technologies are being used to enhance learning opportunities and access to educational resources.

The term 'information system' usually means a computer-based system to manage information. The system usually receives information, validates it, does some calculating or processing, stores the data and outputs information.

The role of information systems is important in society at large as well as in the context of educational organisations.

Information systems can play both an enabling and inhibiting role in society. Those of us who use ATMs and email will attest to the usefulness of these information systems and technology. On the other hand, many of us have had the experience of trying to do something and being told the computer will not allow you to do what you want to do, blocking you from carrying out that particular activity.

Information systems should serve the needs of their user community. The user community is not restricted to those who use it directly. In the case of an information system used to computerise an educational organisation's administration, the community includes administrative staff, providers and learners.

The 'invisible' nature of software systems makes them very opaque to most of us. Additionally, we tend to think of information systems as passive, but this is very seldom true. When information systems are developed, they are usually done so in a functionalist way where the purpose is to build systems that achieve given ends. What is mostly neglected is the fact that, when creating a system, the software developers are interacting with, changing and creating a socio-technical system. The system enforces rules through its interface, validation and storage capabilities. Some rules are sensible, some rules were once sensible but no longer apply and some rules restrict our ability to implement changes and to be flexible. Organisations must ensure that their information systems can be flexible and change to meet new requirements. This requires correct staffing, financing and attention from senior management.

Computer systems should serve the needs of our organisations and help us to deliver quality education. Resourced organizations generally use the following, to greater or lesser degrees.

- Personal computers (PCs) connected to each other so that staff can access shared information.
- The intranet, which is a messaging and communication service internal to an organization.
- E-mail, using the Internet connection to pass an email message from one server to another until it gets to its destination server and then the recipient.
- Access to the Internet for various categories of users.
- A website, which is a site or location on the World Wide Web owned and managed by the organization. This usually contains a Home Page, which is the first document users see when they enter the site. The site will usually also contain additional documents and files. An institution may have a Website that is used to provide information to the public and to learners and staff. Course material can be made available. Information from computer systems may be available through a website. The SAQA website currently makes qualifications and unit standards available from the NLRD through the SAQA website.

The computer systems in an institution may also be used to teach IT. This could include programming, databases, information systems, network management, systems design, etc. Vendor supported training where learners are taught the specifics of software (for example, Microsoft or Oracle) might also be offered.

You will find definitions of commonly used ICT terminology in the Useful Guidelines on the main NLRD page.

[Answer to FAQ 3 The NQF, Information Systems and the NLRD]