The challenge of the information society for South African teachers

Jyrki Pulkkinen and Trudi van Wyk

University of Oulu, Finland and the Department of Education, South Africa

Abstract: This paper is an analysis of the changes and challenges in the South African education system, especially in teacher development, caused by globalisation and information society development in South Africa. The paper is a part of the SCOPE Project (South African - Finnish co-operation programme in the Educational Sector) that aims to support national and provincial ICT teacher development. The latest development in educational policy in South Africa as in many other countries is essentially connected with the idea of supporting the development of an information society.

Key words: information society, teacher development

1. INTRODUCTION

Information society development is a problem for developing countries like South Africa because the technical infrastructure and access to services is improving rapidly in some areas but not in others, creating inequity among the people. Information and communication technology (ICT) is changing education systems in at least two different ways (Farrell, 1999). First, technology has been seen as an uncontrollable driving force for globalisation with the emergence of a few global providers dominating the educational market. Globalisation can have enormous influence on inequity and cultural dominance in education. Second, the development has been seen more explicitly as a policy-based approach at national and state levels, which is concerned with issues like equity of access, curriculum relevance and cultural sensitivity. These two trends are not necessarily influencing education and teacher education in the same direction, which is one of the most important factors in educational use of ICT in South Africa.

The original version of this chapter was revised: The copyright line was incorrect. This has been corrected. The Erratum to this chapter is available at DOI: [10.1007/978-0-387-35615-0_52](https://doi.org/10.1007/978-0-387-35615-0_52)

2. INFORMATION SOCIETY – A CHALLENGE

Generally speaking globalisation is the rapid increase in cross-border economic, social and technological exchange, which can be described as an emergence of altered global structures and is driven by *a skill revolution, an organisational explosion*, and a *continuous flow of ideas, money and goods* (Rosenau, 1999; Guillén, 2000). ICT is usually mentioned as one of the key processes enhancing the process of globalisation by shifting from the use of materials as the key economic input to the use of information; and the change from the use of passive information to the use of active knowledge or symbolic/analytical information skills in economic processes. This means that knowing and learning has become one of the key factors in the process of globalisation (May, 2000).

If we look at recent developments (Cleveland, 1999; Farrell, 1999; Rosenau, 1999; Guillén, 2000; HEFCE, 2000; May, 2000) in the formal education sector globally, we can summarise the challenges of the global information society for the education system as follows: 1. Demand for more flexible and general skills (for example, meta-skills such as problem-solving, searching information, learning skills, etc.). 2. Continuous life-long learning, (for example, fading the boundaries between preset and inset, formal education and working life). 3. Creation of new educational networked organisations (for example, global virtual universities, virtual schools, multinational educational consortiums, etc.). 4. Changing of educational management from hierarchical institutions to equal nodes of network organisations, from commanding to negotiating. These challenges and demands are addressed especially for teachers and school management, who are the key persons making the change at school level. In practice this will mean at least a sharing of resources in networked learning environments, opening up classrooms to communities as well as promoting collaborative learning and a general move towards greater learner autonomy (Wheeler, 2001). There is also a need for visionary leadership, which trusts and builds the capacity of teachers and leads the change for technology integration in school (Perry and Areglado, 2001).

The South African Information Technology Industry Strategy (SAITIS, 2000) a general policy paper in ICT, outlines some key issues concerning human resource development and ICT. According to this paper ICT literacy is not being addressed at schools and there is a need to define appropriate skills broader than ICT. There also seems to be a lack of defined school exit level ICT capability and a lack of teachers with ICT skills in South Africa.

At the beginning of the year 2002 the South African Department of Education together with the Department of Communication published a nation-wide, specific strategy for ICT in education in South Africa. The

strategy addresses the problem of equal access and the lack of capacity among learners and teachers by supporting ICT infrastructure development, offering basic competencies in ICT for teachers and learners, emphasising assessment and creating an educational portal. Prior to this strategy there were some policy papers at government level, but the implementation of these policies mainly depended on individual groups and institutions (Naidoo and Schutte, 1999). Although these ICT strategies and policy papers emphasise teacher development, there is no generally agreed framework for training teachers in ICT integration included in the strategies. The main framework guiding teacher development in South Africa is the Tirisano document. In connection with the Tirisano, the National Curriculum 2005 sets the national framework for pedagogical development in schools. Both of these documents are general, not ICT specific, but give a certain basis for teacher development in ICT integration.

Based on these general principles SchoolNet South Africa, having many training programmes for teachers, has developed an advanced framework for South African educators in ICT. Mainly based on the SchoolNet framework and with the support of the SCOPE project, some new learning materials and distance training modules have been developed and piloted among the South African teachers in the last two years (see <http://www.school.za/edict/SCOPE/Home.htm>). Based on this experience South Africa is able to formulate a new, more comprehensive framework for teacher development in ICT. According to Butcher (2001), the intention of the materials is to combine CD-based resources, e-mail, and an on-line educational portal to provide a thorough, rigorous learning experience. To date, the following modules have been developed: administrative and classroom use of ICT, use of the internet, teaching and learning strategies.

3. CONCLUSION

The South African experience in ICT in education is an interesting case study especially from the teacher development point of view. Teacher development is one of the key issues in developing the formal education system in the information society. If we evaluate the framework against the challenges mentioned at the beginning of this article, we can easily realise that this new framework still address only the problem of upgrading skills of an individual teacher and does not address the organisational implications of the information society following quite traditional ways of seeing ICT as an extra resource for education in a classroom-based setting. To enhance this teacher development framework to cover also the organisational and societal aspects of ICT in education, there could be some modules for educators and

managers concerning new virtual organisations, networking and managing ICT resources. There is also a need for more philosophical materials about globalisation, the information society and the cultural and economical impact of ICT to make the information society more understandable for educators.

REFERENCES

- Butcher, N. (2001) The Educators' Network: Building the IT Skills of South African Teachers. SAIDE
- Cleveland (1999) The Global Century. *Futures*, 31, 887–895
- Department of Education and Department of Communications (2002) Strategy for Information and Communication Technology in Education. Available at: <http://education.pwv.gov.za/teli2/ICT%20strategy.htm>
- Farrell, G.M. (ed.) (1999) *The Development of Virtual Education: A Global Perspective*. Vancouver, Canada: The Commonwealth of Learning
- Guillén, M.F. (2000) Is globalisation civilizing, destructive or feeble? A critique of five key debates in the social-science literature. *Annual Review of Sociology*, 27
- Hefce (2000) *The Business of Borderless education: UK Perspective*. London: Higher Education Council for England
- May, C. (2000) Information society, task mobility and the end of work. *Futures*, 32, 399–416
- Naidoo, V. and Schutte, C. (1999) Virtual Institutions on the African Continent. In G.M. Farrell (ed.) *The Development of Virtual Education: A Global Perspective*. London, UK: The Commonwealth of Learning
- Perry, G. and Areglado, R.J. (2001) The Computers are Here! Now What Does the Principal Do? In J.F. LeBaron and C. Collier (eds.) *Technology in its place*. San Francisco, USA: Jossey Bass
- Rosenau, J.N. (1999) The future of politics. *Futures*, 31, 1005–1016
- SAITIS (2000) Summarised Issues for the 3rd SAITIS Human Resources Working Group. Internal document.
- Wheeler, S. (2001) Information and Communication Technologies and the Changing Role of the Teacher. *Journal of Educational Media*, 26, 1

BIOGRAPHIES

Jyrki Pulkkinen is a senior researcher in the Research Unit for Educational Technology, University of Oulu, Finland, and senior advisor in the SCOPE project in South Africa. **Trudi van Wyk** is a chief educational specialist, Department of Education, South Africa.