Practice as policy in ICT for education: Catalysing communities of practice in education in South Africa

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ABSTRACT

The e-Education policy was introduced into schools with the intention of "transforming learning and teaching" ([14], p. 1). The policy places an obligation on education to use educational technology to deliver on expectations of quality education for economic growth and social development. Utilising a case study approach and backward mapping principles to policy implementation, this study sets out to explore how teachers appropriate[1] information and communication technology (ICT) policy to influence teaching and learning in South African schools. Qualitative methods were employed to capture data through classroom observations, interviews and document analysis. Data was analysed using grounded theory methods. Findings that are unique to the South African context were fivefold. First, the national e-Education policy existed as an invisible policy within the school context. Second, there was a lack of policy support and district presence in schools. Third, districts and schools had conflicting ideas of establishing collaborative support. Fourth, teachers' beliefs, attitudes and agency promoted ICT practice as policy. And fifth, the absence of district support catalysed the emergence of communities of practice. This study asserts the notion that for policy to be implemented teachers should be instrumental partners in the formulation of policy. Teachers should be encouraged to form ICT communities of practice to support their teaching practice and foster policy implementation.

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1. Introduction and background context

Within the South African context policy making is a competence of the national Department of Basic Education (DBE), thus all policy-making related to education is centralised. However, the hierarchy support system is decentralised through policy implementing structures at provincial and district levels. Although policy is made by central government, there is devolution of power that allows districts and provinces to make decisions about policy implementation. Recently the Policy on the Organisation Roles and Responsibilities of Education Districts further empowered local districts with significant delegated policy formulation and implementation functions [16]. As systemic intermediaries their core policy functions are the formulation, analysis, implementation, monitoring and evaluation of implementation, and providing guidance to schools on policy formulation and implementation.

ICT in the education arena has been on the policy agenda in South Africa since 1996 [13]. National focus on ICT as a catalyst for economic growth and social development has prompted provincial governments to respond by initiating ICT projects in education. The OECD's report on South Africa's policies found that the ICT revolution had a major impact on the way in which societies are organised and managed, resulting in "fundamental and far-reaching" changes that are key to wealth creation and social and economic development ([39], p. 330). In 2000, "Khanya" and "Gauteng-On-Line" were education initiatives of the

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Western Cape Province and Gauteng Province respectively in pursuit of provincial economic development. These projects may be considered as the first "education-centred" initiative not only in South Africa, but in Africa as a continent. However, there was no guiding policy on how the relevant stakeholders would implement ICT in education objectives. Finally, in 2004 the Department of Education responded with the e-Education policy and motif of "transforming learning and teaching through information and communication technologies" ([14], p. 3).

The e-Education policy [14] and the Guidelines for Teacher Training and Professional Development in ICT and Training [15] are two main policy documents that frame the ICT in education policy environment. The main principle of the e-Education policy is the achievement of national education goals by "providing modern technologies to schools in order to enhance the quality of learning and teaching" ([14]; p. 6). The second mentioned policy for Teacher Training and Professional Development in ICT and Training (2007) [15] identifies ICT knowledge, skills, values and attitudes required by teachers to implement the national curriculum effectively. Though this policy makes frequent reference to meeting the principles of the e-Education policy, it falls short of defining specific roles and responsibilities of provinces and district e-learning directorates to support schools. The e-Education policy also allocated specific roles and responsibilities at various systemic levels.

At national level the e-Education policy expects the Department of Basic Education (DBE) to develop a national framework for ICT competencies for teachers, school managers and administrators. The national DBE was also mandated: to revise the norms and standards for teachers, review in-service and pre-service training programmes as an enabling factor for teachers to use ICT, create appropriate teacher accreditation with an ICT focus and allocate a dedicated ICT trained teacher to support teaching and learning. The e-Education policy mandates provinces and districts to provide schools with both professional and technical support. In response to this policy directive, e-learning directorates were established at district and provincial levels to support schools in the implementation of the e-Education policy objectives. The policy tacitly expects that provinces, districts and schools would take up the challenge to drive the process beyond ICT planning and ICT experimentation. However, the policy does little to direct provincial and district officials to comply with policy mandates and strategies to change teachers' pedagogy.

At institution level the e-Education policy suggests that school managers and administrators promote the use of ICT, with the realisation that ICT is a 'transformative tool' for education. To date, the e-Education policy has made significant strides in developing and supporting ICT administrative systems in institutions, but falls short from achieving the main strategic target of influencing and changing classroom practice. Sadly, the e-Education goals that every learner will be ICT capable by 2013; that teachers will be qualified and competent to enhance teaching and learning; that schools will become e-schools fostering socio-economic growth is far from being achieved.

Despite policy implementation delays, the introduction of ICT into the South African education system has become common place in most schools. ICT as a 'new' teaching technology gradually made its entry into a broader range of schools, without schools being ready to exploit its usefulness to improve the quality of teaching and learning [11]. Recently principals, school governing bodies and communities are demanding a higher return on investment on ICT (other than for administrative purposes), that ICT needs to enhance teaching and learning. Accordingly this study asks: How do teachers use information and communication technology to mediate the e-Education policy in their practice?

The research is presented as follows: First, I begin with a brief review of existing empirical literature. Second, I describe the sociocultural approach to policy studies as a theoretical framework to guide this study. Third, I explain the research strategy of enquiry. Fourth I present the findings of this study. And fifth, I analyse and discuss the findings. I conclude with a presentation of new knowledge that was generated from this study.

2. The ICT policy in education landscape

A review of the voluminous literature reveals that there are significant issues that influence the integration of ICT into the practice of teachers [5,21,24,26,30,38,47,54,55]. Some of the critical issues are systemic (access, policy guidelines, policy overload, systemic support, national curricula, teacher training) and others are meso-micro level issues such as school leadership, institutional culture, teacher competence, teacher professionalism and teacher pedagogy.

At the systemic level, researchers [2,24,36,37,42] suggest that governments are often misguided by the focus they place in their ICT policy in education. ICT policy and the management of ICT policy seemed to be on provisioning of hardware and infrastructure, rather than on to inform *how* ICT might be used in classroom practice. The lack of policy guidelines to support schools seems to depict a familiar policy implementation problem that is apparent in most education systems in the international arena [12]. The lack of macro-micro level policy interaction is illustrative of the principle that though policy sets limits to practice, it is also the reality of practice that sets limits to policy [12].

The introduction of ICT into schools has created the need for most governments to revisit their national curriculum in order to integrate ICT into teaching and learning [24,53]. However, there is a lack of a common vision of what integration of ICT for learning really means in practice between relevant stakeholders [24,55]. Ref. [22], p. 3, presents a caveat to policy makers, that the implementation of ICT in schools is a phenomenon that is uniquely different to minor policy changes in curriculum content. He explains that it is not simply a question of re-organising the knowledge base of teachers but essentially getting "teachers to start from base zero". Accordingly Ref. [22], argues that ICT is an innovation that presents a major challenge for the professional growth of teachers. There is an identifiable gap between what policy legislation requires and what is actually happening in the school classroom [53,58]. This gap between the proposed ICT-curriculum policy