Policy intermediaries and the reform of e-Education in South Africa
"However much policy makers may have wished the districts to be able to perform what official policy aspired to, the reality is otherwise"

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Abstract

Utilising a case study approach and backward mapping principles to policy implementation, this study set out to explore how well district and province's e-learning officials are equipped for the task of implementing the national e-Education policy. Qualitative methods were employed to capture data through interviews and document analysis. Data was analysed using grounded theory methods. Analyses of e-learning official's constructions about information and communication technology (ICT) implementation in schools yielded patterns in their understandings of policy implementation. Findings were fourfold. First, district and provincial e-learning leaders superficially understood the e-Education policy, missing policy intent of their role as policy intermediaries. Second, they perceived their role mainly as policy conduits focussing on the dissemination of the policy to schools. Third, the compartmentalisation of directorates performing the same function lacked communication, interaction and coherence. Fourth, district's capacity and lack of competence impacted negatively on their ability to implement policy and support schools. This study suggests that for intermediaries to be effective implementers of policy they need to become teachers of policy. In order to achieve this it becomes necessary and crucial for them to participate in the process of policy formulation, appropriation, interpretation, and the learning of policy.

Policy intermediaries and the reform of e-Education in South Africa

What is already known about this topic

- Rhetoric, policies and practices advocated and mandated at central government may not be fully comprehended or appropriately acted upon at the various levels of education systems.
- Policy intermediaries seem to be at the core of policy implementation failure. Local educational authorities, who have to mediate with schools, support policy implementation and monitor compliance with national policy initiatives, do so without fully understanding the intentions and implications of the changes.
- The lack of knowledge and skills of policy intermediaries seems to be a problem within developing country contexts.

What this paper adds

- By taking the role of districts and provinces in policy implementation in South Africa as a case study, the paper shows that one of the problems can be that these intermediaries may only superficially understand policy directives and focus on policy dissemination rather than policy interpretation, implementation and support.
- The paper shows that the lack of knowledge and skills of personnel positioned as policy intermediaries impacts negatively on their ability to implement policy and support schools.
- Another problem that this paper explicates is that policy incoherence coupled with fragmented systemic structures impedes policy implementation and integrated support to schools.

Implications for practice and/or policy

- In a developing country context, policy-makers at national level must be aware of the need for more effective methods with regard to the dissemination and communication of policy intent at the intermediary level.
- Intermediaries need to rethink their roles and become teachers of policy rather than policy regulators.
- To build capacity and knowledge of policy intermediaries it is both necessary and crucial to develop their skills as appropriators, interpreters and learners of policy.
- Intermediary personnel should be integral to the policy formulation process, so that they function not only as policy drivers but as policy makers.
- Training of staff at the intermediary levels is critical to their understanding of the new policies and new practices; the ramifications of these and how to help schools and teachers overcome impediments in operationalizing policies.

1. Introduction and background context

The South African e-Education policy was introduced into schools with the intention of transforming learning and teaching (DoE, 2004). The basic tenet of the e-Education policy purports that through ICT; schools will improve their level of functioning, teachers will change their teaching practice, and students learning will improve (DoE, 2004). It would seem that policymakers assumed that computers in school coupled with an e-Education policy would change teachers practice and new pedagogical practices would unfold naturally. Present educational practice has culminated in a mismatch between what is desired by policymakers and what is practiced by district, provinces and schools as policy implementers.

Although teachers are uniquely situated at the point where policy meets practice, the successful implementation of the e-Education policy depends on the broader policy environment within which classrooms are situated. Policy reform is less likely to impact on pedagogy in environments that lack opportunity for teachers to learn, to revise and to change their practice. In this context provincial directorates and school districts should influence the conditions which promote policy understanding and implementation (OECD, 2008). According to the South African Schools Act (DoE, 1996, p.2) "nothing in this Act prevents a provincial legislature from enacting legislation for school education in a province in accordance with the Constitution". Numerous education acts gave provinces and district significant autonomy for policy implementation. Current legislation allows provinces and districts to make decisions about curriculum and assessment implementation, teacher employment and professional development, procurement of teaching and learning material, school governance and the deployment of staff. The e-Education policy provides a good site for research because numerous policy efforts namely; Curriculum 2005 (C2005), the Revised National Curriculum Statement (RNCS) and Curriculum and Assessment Policy Statement (CAPS), received significant resources at national, provincial and district levels. Furthermore, since 1998 these policies have been filtered into school environments in an attempt to change teaching and learning practices.

The expectations of the e-Education policy at national level are far from the realities at provincial, district and school level. The numerous national ICT initiatives that were implemented across South Africa did not directly align with the e-Education policy and has not yet reached every school and district (Blignaut & Howie, 2009; Holcroft, 2004). There

are huge gaps between national e-Education mandates and the actual practice at districts, provinces and schools. The e-Education policy intended to make significant changes to the teaching-learning environment in all schools. However, most of the Phase 3 strategic intended outcomes for 2013 have not been achieved, namely: that all learners and teachers are ICT competent; ICT is integrated into teaching and learning at school; teachers integrate ICT into the curriculum; schools have networked capabilities that are safe and designed to facilitate ICT integration into teaching and learning; high quality education software is used; access and use of the DoE's Educational Portal for teaching and learning; communities are integrally involved in e-institutions and ICT interventions are informed by research. Furthermore, principals and teachers are isolated from districts' e-learning units, having limited or no knowledge of the e-Education policy (Vandeyar, 2010).

Accordingly, this study asks, how well are district and province's e-learning officials equipped for the task of implementing the national e-Education policy? What are their roles in regard to the e-Education policy mandates? How well do they understand what is involved in supporting schools and teachers to implement the e-Education policy? And, what more needs to be done to help provinces and districts provide leadership and support for e-learning? In this study e-learning leaders refer to officials that are uniquely positioned at both district and provincial e-learning directorates and tasked with the implementation of the e-Education policy.

2. ICT in education policy

The literature review traces the South African 'ICT policy in education' landscape from the onset of a post-apartheid era. The analysis of the e-Education policy document contextualises the assumptions, benefits and challenges in transcending "the mere exchange of information" and transforming "e-education into a range of learning activities that meet educational activities" (DoE, 2004, p. 14). This review also analyses national policy that empowers and mandates provinces and districts in their performance of their duties as policy intermediaries. The literature then provokes an inquiry into the systemic legitimacy of districts as policy agencies and support structures to schools. Finally, the review considers arguments that augment local education authorities (districts) as vital policy intermediaries in respect of the relevant resource dimensions they provide.

The South African ICT in education context

The use of ICT in education has been on the policy agenda in South Africa since 1995 with a brief note in the South African Schools Act on the value of ICT in education (DoE, 1996). Political rhetoric favoured the optimum utilization of information and communication technology for economic growth and proactive provincial governments responded by initiating ICT projects in education such as "Khanya" and "Gauteng-On-Line". These projects may be considered as the first "education-centred" initiative not only in South Africa, but in Africa as a continent. In analysing the difference between rhetoric and policy reality it seems that the provincial commitment to place computers in schools was an act of placing the cart before the horse, since there was no guiding policy on how the relevant stakeholders would implement the optimistic provincial objectives. In 2001 the National ICT Strategy Policy was formulated and in 2004 the Department of Education responded with the e-Education policy and motif of "transforming learning and teaching through information and communication technologies" (DoE, 2004, p.3).

The e-Education policy (DoE, 2004) and the Guidelines for Teacher Training and Professional Development in ICT and Training (DoE, 2007) are the two main policy documents that framed the ICT in education policy environment. The main principle of the e-Education policy was the achievement of national education goals by "providing modern technologies to schools in order to enhance the quality of learning and teaching" (DoE, 2004, p. 6). The second mentioned policy for Teacher Training and Professional Development in ICT and Training (2007) identified 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 province and district e-learning directorates. The e-Education policy allocated duties and suggested policy for ICT to be integrated into the education system. In this regard the policy analysis focuses on systemic structures and their role functions.

At national level the Department of Basic Education (DBE) is expected to develop a national framework for ICT competencies for teachers, school managers and administrators. These teacher-based competencies should be additive in nature and should include entry level computer literacy, adoption, adaptation, appropriation and ultimately the innovative use of ICT. The anomaly is that policy expects that the competency level of district e-learning

officials' in the use of ICT, to be lower than that expected of teachers (DoE, 2007, p. 6). The national DBE is also mandated by this policy; 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 acknowledges a huge challenge at all levels of the education system in achieving its goals primarily because "educational leaders do not yet fully appreciate the benefits of e-Learning and e-Administration for institutions and for provincial and district offices" (DoE, 2004, p.21). In this regard the policy falls significantly short of achieving the most of its nine targets and the hope that every learner will be ICT capable by 2013.

At policy intermediary level the e-Education policy advocates for provincial and district structures to support institutions with both professional and technical support. At district and provincial level, this mandate was achieved by the formation of e-learning directorates and the recruitment of e-learning 'specialist'. The e-Education policy tacitly expected that provincial, district and schools would take up the challenge to drive the process beyond ICT planning and ICT experimentation. Seemingly, the e-Education policy did little to direct provincial and district officials to comply with the e-Education policy mandates and strategies to change teachers' pedagogy. In fact there are few directives emanating from the e-Education policy that drives national policy initiatives at the level of provincial and district education departments. However, an earlier policy, the Gauteng Provincial Education Policy Act (Act 12 of 1998) delegated specific policy responsibilities to the provincial education department, namely: to make and implement education policy; provide for co-ordination, monitoring and evaluation of policy; determine the areas in respect of which education policy may be made; specify guidelines for policy for education policy that is made and to ensure that policy is effectively monitored and evaluated. Recently, the Policy on the Organisation Roles and Responsibilities of Education Districts further empowered local districts with significant delegated policy formulation and implementation functions (DBE, 2012).

At school level the e-Education policy expected that planning should incorporate teacher development. The policy suggests that school educational managers and administrators will promote the use of ICT at their own institutions, in the realisation that ICT is a 'transformative tool' for education. The DoE makes several attempts through this policy document to bring on board (almost in a voluntary way) all educational stakeholders into the

realm of ICT implementation in education. To date, the e-Education policy has made significant strides in developing ICT administrative systems in institutions but fall short from achieving the strategic targets impacting on classroom practice.

There is a dearth of empirical literature that demonstrates the realities, opportunities and challenges that the e-Education policy negotiated from the time of its inception (Cross & Adam, 2006; Czerniewicz & Brown, 2005; Czerniewicz & Brown, 2009; Czerniewicz & Hodgkinson-Williams, 2005; Smith, 2005). Implementation studies on the e-Education policy seemed to have escaped the focus of academic researchers. Czerniewicz and Hodgkinson-Williams (2005, p. ix) argued that South African local research in ICT is "under theorised" and that a "paucity of research regarding relevant ICT policy", particularly how schools have taken up this challenge remains scarce. Evidently, there is limited research on how the e-Education policy influences teaching and learning in South African schools. Czerniewicz and Hodgkinson-Williams (2005, p. vii) suggested that the "uneven policy terrain" prior to the e-Education policy did not stop the advent of ICT in schools, but impeded the integration of ICT in schools. The uptake of ICT in schools continued regardless of the lack of policy and district support. However, ICT curriculum integration and effective management strategies for the successful implementation of ICT in all schools has yet to occur.

Local education authorities as policy intermediaries

Some researchers argued that districts are insignificant systemic entities as policy intermediaries (Doyle & Finn, 1984; Finn, 1991). Their rationale for this is based on the focus they place on the significant role of teachers and principals not only as agents of change, but as policy initiators and designers. Thus intermediaries like districts are viewed as inconsequential in the policy implementation processes – which is a disquieting viewpoint. Smith and O'Day (1991) also underplayed the role of school districts in education reforms, rather focussing on school principals and teachers as significant stakeholders. Honig (2006) on the other hand, suggested that policy intermediaries failed in their function because they did not put programs in place that reflected original policy designs or intent, thus contributing to policy implementation failure.

Successful implementation studies tell a different story by suggesting that district actors are important intermediaries for the implementation of government policy (Elmore &

McLaughlin, 1988; Spillane, 1996, 1998). Notable policy implementation researchers (Elmore, 1993; McLaughlin & Talbert, 2003; Spillane, Reiser & Reimer, 2002) recognised the pivotal role that districts or local education authorities (LEA) play in successful policy implementation in schools. Similarly, Rorrer, Skrla and Scheurich (2008) found that districts have a vital role to play in education systemic reform efforts. In this regard, Rorrer et al. (2008) identified four key role functions of districts as; providing instructional leadership, reorienting the organisation, establishing policy adherence and maintaining an equity focus. These key functions cannot be separated from each other but are integral features of policy implementation support to schools and practitioners.

Provinces and districts by virtue of their formal position of power within the system are pivotal as policy implementing agencies. Borrowing from Hamann and Lane (2004), there are several reasons for researching districts as powerful intermediary structures in a South African context. First, they occupy a dominant space in the general and further education band (grades 1-12). Second, they control educational physical and human resources to schools. Third, they regulate schools' adherence to reform mandates. Accordingly, this study explores how well district and province's e-learning officials are equipped for the task of implementing the national e-Education policy

3. Theoretical underpinning

The recent spate of curriculum reforms in education proposes that practitioners deviate from their traditional methods and use technology to enhance teaching and learning. The e-Education policy advocates that teachers use ambitious e-learning methods to change their pedagogy. To make this essential transition and apply policy, teachers require significant support from policy implementing agents at district and province. District leaders by virtue of their formal position are supposed to be actively engaged in implementing the e-Education policy for curriculum delivery. In this regard, the capacity of district leaders to implement policies that support a more challenging instruction method is instrumental to developing the capacity of teachers to undertake this pedagogical shift.

Spillane and Thompson (1997, p.186) promoted the idea that teachers will realise policy objectives and change their classroom practice based on the capacity of local education agencies to "foster such teaching". Spillane and Thompson (1997) argued that districts "capacity to support ambitious instruction consists to a large degree of LEA leaders' ability to

learn new ideas from external policy and professional sources and to help others within the district learn these ideas". Embedded in this argument is the notion of the components of district capacity. Spillane and Thomson (1997) advanced three dimensions of policy intermediaries' capacity for ambitious instructional reform.

First, is the concept of physical capital which constitutes financial resources and may also take the form of time and staffing that is available to district. Second, is the dimension of human capital, which identifies the knowledge and skills that policy intermediaries should have for effective policy implementation. Human capital also implies the commitment and disposition of the capacity of the district leader to promote ambitious reform efforts. Human capital is deemed as productive tools in the reform process. Third, is the dimension of social capital which is twofold: the component of the district leader's link to sources of knowledge *outside* the school system which promotes knowledge and skills, and the component of establishing professional networks, collaborations, trust and collegial relations with teachers *within* the district to facilitate e-Education policy mandate. Social capital elicits changes in the relations among persons that facilitate action to policy. Whilst physical capital may be addressed directly by resources allocated through policy, human and social capital are resources that are inherently vested in the intermediaries' will to act.

Cohen and Barnes (1993) suggested that for meaningful and complex policy to have an effect on teachers' practice, it is necessary for policy implementing agents to rethink their role as teaching and not regulating policy. In order to support new policy innovations district and provincial agents must be able to learn "new ideas from external policy and professional sources and to help others within the district learn these ideas" thus increasing their human capital (knowledge and skills).

4. Research methodology

The broader study examined teachers' *appropriation* of the e-Education policy and the influence of this policy on teaching and learning in South African schools (Vandeyar, 2010). Data garnered from the larger study was ripe for this sub-analysis focus on district and provincial directorates as policy intermediaries. The broader study focussed primarily on teachers' implementation of the e-Education policy in their classroom practice. The study then backtracked through the education system, using a backward mapping strategy (Elmore, 1979) and focussed on principals, district and provincial officials and their ability to change the behaviour of teachers that are the target of the policy.

The broader study used a case study (Silverman, 2006) approach that attempted to understand teachers' experiences as they respond to the national e-Education policy in their classroom practice. The case was defined by schools with teachers using ICT to teach the national curriculum, bounded by the process of teacher policy appropriation and thus conceptualised as an instrumental case study (Silverman, 2006). Using maximum variation sampling, schools were purposefully selected to explore policy implementation in socio-culturally diverse settings (Glesni, 2006). A qualitative research design was best suited to accurately represent the constructed realities of the participants as they perceived it to be (Creswell, 2009). The data reported in this article came from a broader study in which interviews, observations, field notes and documentary records related to teachers, principals, district and province's implementation of the e-Education policy was garnered.

This article focuses on the experiences of district and provincial officials and on an attempt to gain insight on how the e-Education policy affects their role as policy intermediaries (Stake, 2005). The experiential knowledge of participants was captured and analysed through rich and thick narratives. During the period 2004-2006 provinces and districts established e-learning directorates to facilitate the integration of ICT into schools as mandated by the national e-Education policy. This study of the implementation of the e-Education policy occurred some six years after promulgation of the e-Education policy (DoE, 2004).

At classroom level the main data collection methods were semi-structured face-to-face interviews, classroom observations and document analysis (Silverman, 2006). To triangulate data principals, a district e-learning official and provincial officials were interviewed (Stake, 2005). Document reviews (regulations, circulars, written policies, plans, posters, district's presentations to schools, mission and vision statements) was also used to supplement the data (Denzin & Lincoln, 2005). A researcher journal was used to record field notes and personal reflections at all research sites (Glesne, 2006). At district and provincial level face-to-face semi-structured interviews addressed participants' conception of the e-Education policy, e-learning job experiences, policy and support initiatives, and the perceived role functions of policy intermediaries (Fontana & Frey, 2005; Peräkylä, 2005).

Data analysis
Findings from the broader study revealed a number of pertinent issues: First, the e-Education policy was not communicated to all schools in this study. Second, the integration of ICT was

not driven by the e-Education policy mandates, but rather by teachers' professionalism. Third, teacher agency was crucial in formulating and implementing a school-based e-learning policy in practice. Fourth, teachers repositioned themselves not as recipients or reactors of the e-Education policy but as social and cultural actors of school-based policy appropriation and formulation. Fifth, the lack of systemic support from districts and province catalysed communities of practice between schools.

Subsequent to these findings, data was recoded in search for new codes that literature suggests that influences the capacity of policy intermediaries for ambitious instructional reform. This framework allowed me to *apriori* code specifically for instances district and provincial administrator's ability, initiatives and decision making in changing the behaviour of the target of the policy (Charmaz, 2005). Data was also coded for other activities, such as explicit and implicit policy utterances (through document analysis), resources required by district to enable policy implementation (interview transcripts).

According to Creswell (2009), qualitative analysis involves the process of making sense of data and is particularly useful in the exploratory stages of theory development. Though my intention was not to develop theory, inductive analysis was employed in a manner consistent with those recommended by qualitative researchers Charmaz (2001) and Strauss and Corbin (1994). A constructivist approach to grounded theory was employed as a systematic guideline for collecting, analysing and explaining the collated empirical data. Most data was converted into text, and the text constituted the primary source of interpretation (Schwandt, 1999). All the empirical data garnered through semi-structured interviews were coded and analysed through techniques adapted from grounded theory methods as espoused by Charmaz (2005). The data was initially coded and then focus-coded to sort, synthesise, integrate and organise large data sets. Focus coding led to sense making and analysis of emergent categories.

5. Findings

During the analysis process my focus was on confirmatory findings rather than on emergent themes. From the analysis of data, three categories emerged namely; the dichotomy between district capacity and district competence, districts as policy conduits and incoherent systemic structures at district and provincial levels.

The dichotomy of district capacity and district competency

> we are having this problem of capacity, a person to share himself with so many schools"; "the principal will just say 'tell me are we not going to waste our time there'... They need to know I'm an ICT co-ordinator who is knowledgeable

Findings from the broader study indicated that principals and teachers were convinced that district officials do not have the competence to support schools and teachers in their endeavour to integrate ICT into their teaching practice. Contrary to this, district and province officials however do feel they have the competence but lack the capacity to service all schools. While the dichotomy of competence versus capacity was evident in the experiences of the participants, both issues had a significant impact on the success of policy implementation. In response to competence, the district official indicated her dire need to prove to schools that she has ICT competence to support schools. The district leader explained that she is an e-learning official without any previous qualifications or teaching experience in ICT, however she is now enrolled for an honours' degree in computer integrated education. She reflected on her need to study further in order to be recognised as a knowledgeable person.

> I think first of all they need to look up to me as somebody who knows what she doing. I'm beginning to study, you know [laughs]. To me, you know. That is what I want to see happen. That is what is driving me. So, I think it is very important for people to know they are led by somebody who know what she seems to do. That's why I am very quick to say "I'm busy with my honours."

At provincial level the chief education specialist (CES) described her qualification and its impact on supporting teachers. She explained that a qualification of a basic computer literacy course was her attempt to become skilled in the use of ICT and as a means of support to teachers.

> In terms of the curriculum, I hold a BSc degree…But also to support their [meaning teachers] understanding of ICT, I have also done computer literacy…we have people who have expertise at the district level who will able to assist them [teachers].

In defense of criticism that teachers had against district's inability to competently support them. The province's e-learning CES shifted her discussion to illustrate how their unit was short staffed and did not have the *capacity* to service schools. This was evident in the experiences of both district and provinces e-learning directorates. The CES at provincial level explained that school "clustering" is the solution to incapacity:

> I have already indicated that we are having this problem of capacity, a person to share himself with so many schools. Hence we have the other strategies of clustering schools to promote collaboration, working and ja, ja, ja. When it comes to the expertise and all that, I don't think they [teachers] are being fair.

To overcome province's dilemma of the lack of *capacity* to reach all schools, the CES suggested their initiative of using a "cascade" model to disseminate the e-Education policy. She described the process of policy dissemination synonymous with "mediating" the policy intent. She gave a detailed account of how the cascading model is supposed to function through the formation of district and provincial clusters:

> But to ensure the proper implementation of the policy, what we have done from provincial that are cascaded down to school level. Where, clearly our policies are mediated, and all activities are geared toward achieving that policy goal. Now, at provincial level we have our structure known as the PELT which is the Provincial E-learning Team, which consist of all the e-learning district officials and Head Office. Now we usually have forums where we discuss e-learning activities and programmes which are directly in line with what we to achieve with the policy. The same thing is also cascaded down to schools, where the district they've got the CELTs (Cluster E-learning Teams), now from the CELTS they've representatives of each and every school in the whole province…

By the same token, the district official's experiences of the cascade model as a means for policy distribution have been very disappointing. Contrary to her provincial counterparts, she adamantly denied that the cascade system worked as a means to disseminate policy.

> That is for me…the question of clusters information doesn't filter through, the cascading mode it does not work [emphatic]. It does not work you see. I don't blame those teachers they haven't seen us, regardless of the memos that have gone to the schools, or the...the…these are policy documents [showing boxes of the e-Education policy on a cabinet] …I collected the post [policy documents] and distributed them, but up to now nobody has seen one of them [frustratingly referring to policy document].

The e-Education policy indicates that provinces are tasked with recruiting ICT specialists for professional and technical support to teachers (DoE, 2004). In reality new recruits, often teachers without relevant skills, expertise or qualifications were recruited to the district e-learning unit based merely on their interest in ICT. The district official described how through assisting other districts' establish their e-learning units, the recruitment of e-learning personnel actually occurred.

> Ja, even in terms of the operational plan, a lot of districts in Gauteng[1] came to me, and said please we want to, because we are the new division in the department.

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[1] Gauteng - One of nine provinces in South Africa

And people were just recruited from different backgrounds, some of them it was the first time they were going to talk with them.

District and province as policy conduits

"I must take it to the school, and show them how our policy document looks, touch it and get to know it."

Findings suggest that district and provincial e-learning officials did not fully comprehend their role function as policy intermediaries. Both district and provincial agencies assumed very superficial roles of what they understood as policy mandates. The policy intermediaries did not seem to interrogate policy intent and most of their policy implementation efforts were grounded on the physical dissemination of the policy document to schools. Evidently district and province did not seem to interpret the policy intent as mandatory for implementation but as a guideline for implementation. As a policy implementing agency mandated by the e-Education policy, neither the provincial nor the district were certain whether the e-Education policy was destined for implementation. At both district and provincial level the e-learning leaders elaborated on their respective interpretation of the e-learning mandate:

District Official: Ja, compulsory is not the language that I would like to use, I would rather say it's a guideline. And we've got to find a way of, you know, making the teachers' find sense in using it. It's my responsibility, as a co-ordinator, to make sure that schools buy in to it, I wouldn't say compulsory as such…I must take it to the school, and show them how our policy document looks, touch it and get to know it. I'm giving it to you please go to the other and peruse the document, here is a summary of what the document is saying [referring to her PowerPoint notes] .

Province (CES): It's a policy document, we are supposed to be implementing it, but at the same time we can say we having it as a guideline document from National.

At both provincial and district levels there was no documentary evidence that incremental policy development of the national e-Education policy had taken place. The provincial official explained that they had one circular that had been approved and another waiting for approval. However, these circulars were apparently audits of school's physical access to ICT. All discussion on policy development and implementation was re-directed by the respondents in terms of the physical dissemination of the policy document. The province's e-learning official eloquently explained the entire process of "developing policy" as a participatory approach, involving all stakeholders at various levels of the education system, but actually described the cascade mechanisms of transmitting the policy.

> So what we've done, we said this is our policy, the white paper [referring to the National e-Education policy], we need to mediate the policy, we then came up with all the structures [meaning PELTS and CELTS as cascades structures] to ensure the policy reaches the schools down there.

One of the provincial officials further explained how they planned to develop their own policy. He described the process of adhering to both provincial and national e-learning demands in creating a unique provincial e-Education policy.

> In developing our policy, ok we take the national we match the provincial document you know, because that's the province, we having the premiers office still coming with their own vision, coming with their own strategy, to make sure we align the provincial aims or objectives and goals with those of National's, and then we mix the two and come up with our own policy. So that the process that's been started, that's the policy that's going to ensure it's our policy.

On extensive probing about the exact progress and development of a provincial e-Education policy that would be used to guide schools, the province e-learning official finally acknowledged in a very subtle way that policy had yet to be developed. He describes the consultative provincial policy formulation process as "*we always sit at the ground stage.*"

However, the district e-learning official's response to the development of incremental e-learning policies or the formulation of the unit's own e-Education policy was more direct and transparent. She simply acknowledged the adoption of the national policy "*as is*". She described her affiliation and interpretation to the e-Education policy as the "*bible*". Contrary to a teachers' experience (in the broader study) that the e-Education policy is too complicated for interpretation "*look we've got that White paper, but something more better and more…that explains it better and more structured*" the district official described her feelings of the policy document:

> We just preaching the documents that we adopted from the department [National Department of Education]…the e-Education policy, obviously! Which is our bible, you know what ever we develop even in our operational plans. That's where we take all our operational objectives. The e-Education policy is actually is the bible. I love the document.

Seemingly, neither the district nor the provincial e-learning directorates developed any incremental policy. The focus at both systemic levels seemed to be on providing access to ICT and on the dissemination of the policy document. The provincial e-learning leaders distinctly viewed their role as teacher support and not policy developers. In this regard she

elaborated on the need for the e-learning directorate to be divided into two sub-units, one responsible for policy implementation and the other for policy development.

> At the moment we are having one unit, at some point we thinking we need at least a minimum of two units…ok, we should have the people who a focusing on development of policy and all that…ok. We should be having people who are looking at support of educators…so if we have two tiers and then…

Provincial e-learning leaders' were interrogated on developing ICT incremental policy or guidelines for schools to support ICT integration into the curriculum. They were also questioned on the formulation of ICT attainment levels for particular grades in the schooling system. At both systemic levels participants indicated that they do not have the skill to develop guidelines for schools. Seemingly, both policy implementing agencies are waiting for guidelines to be determined external to their unit, so that they may then implement policy. The response from both province and district levels was:

> CES: You see at the moment, we are seeking research in this regard; we need research, you know to guide us for some of the questions you are asking, so hopefully when we get a report we can implement it.
> Interviewer: so are you looking for help in this regard in identifying the standards that the schools can apply?
> CES: Exactly.

> District Official: Ja, not as yet. But I see that we are not going to be complete until we are able to do that [develop attainment standards], you know. We still haven't set those standards as a [District]…not even as a department [Province]….That is what is needed…but I haven't really come to a place where I have set standards to say this is what a grade 7 science learner has got to be able to do, even the department [Province] hasn't got that.

Most circulars to schools, which the e-learning officials loosely refer as policy guidelines, take the form of time-table planning, physical planning and checklist of ICT inventory and access to ICT. Seemingly, neither district nor province e-learning leaders were aware of the impact of the e-Education policy on teaching and learning in their schools. Their sense of measuring the policy implementation impact seems vague and uncertain. The provincial leader explained their inability to assess policy implementation effectiveness:

> You see, its… its quite difficult to measure that at the moment, we are hardly three years as a directorate. The amount of work that we have done, it's enough to say that some effects that's happening in schools, and fortunately there's some schools that far ahead of us, so we cannot say we determine on what we are doing, schools themselves have run ahead…schools are far above of what we are had actually expected, so you know…[laughs]

E-learning and curriculum directorates as incoherent system structures

"As far as I am concerned we actually not supposed to be a separate directorate from curriculum...my wish is that it would be all integrated"

The systemic organisational structure at district and provincial levels places the curriculum delivery directorate as a distinct and separate unit from the e-learning unit. Yet, the e-learning officials understand their core function as 'to support curriculum delivery through ICT integration'. Participants at both district and provincial levels were profoundly dissatisfied with the systemic structure of sub-directorates that separated the e-learning directorate from the curriculum implementation directorate. Their dissatisfaction emerged from the fact that these directorates operated as separate and unique entities yet they had the same purpose namely, to support schools with curriculum implementation. The e-learning units' lack of impact on schools seems to be based on two issues of contention. First, the e-learning directorates do not have sufficient financial resources to make a difference in schools. Second, they are aggrieved by being excluded from the curriculum implementation directorate.

Officials in the e-learning directorate experienced a dire shortage of financial means. They felt that they were limited by their own budget and also were not at liberty to allow schools to use curriculum resource funds for ICT procurement. Officials within the e-learning directorates at both district and provincial levels were despondent that they were a directorate without much influence in schools and the curriculum directorate. Reluctantly, the provincial and district e-learning officials gave vent to their frustrations:

> CES: Another thing is, I am not sure whether I should say it is the issue of the budget. We do not have a specific budget for so many Rands for e-learning to buy equipment or even for training educators, we rely on other directorates to supply us with the budget so that we can do what we are suppose to be doing. Which is kind of strange because you have to go and beg…and do what we suppose to be doing.

> District Official: So…you remember I said we don't have an allocation for ICT, but nationally busy with that process to get that… they are busy making a recommendation to treasury, to get us to a point to get us our own allocation…It's as if we are not legitimate, you know [flustered]

Not only are the e-learning directorates limited by financial constraints to function effectively, but their existence as a directorate outside curriculum directorate seems to diminish their status and effectiveness in curriculum implementation. Logically, both district

and provincial e-learning units yearn to be included in the same directorate as the curriculum delivery. E-learning officials were annoyed that officials in the curriculum directorates cannot support schools and teachers that made significant strides in using ICT to deliver the curriculum. The district official expresses the problem of two separate and unique directorates.

> As far as I am concerned we actually not supposed to be a separate directorate from curriculum. Because now I'm burning my own candle here, they are burning their own candle there. Although we try and do our training together …and then we tried to involve curriculum but it's not working, but we tried it out. But if we were in the same directorate, whenever anything from curriculum goes out, my wish is that it would be all integrated… So that's what we are doing it separately now [curriculum directorate and e-learning directorate]. And then it's a little embarrassing for the facilitators sometimes when they go to schools, and they find that teachers are far ahead…You find that curriculum people when they go to schools to monitor, they find teachers and learners that are quite far ahead in terms of implementation of these learning outcomes as so on, and it creates a bit of a friction...I mean you are a curriculum specialist from the district, coming to check if teachers are sticking to policy and doing the outcomes and so on. Now they show you an aspect of the curriculum that you have never even heard of, they show you high tech stuff that you can't even understand.

6. Discussion and analysis of findings

South Africa as an emerging democratic nation has a rich culture of policy development, particularly in the education arena. Numerous policies that were developed after 1994 during the "period of policy pronouncements" tended to be representative and inclusive both in its design and formulation (Jansen, 2003, p. 86). Yet, with our entire policy making prowess we somehow have fallen into the same abyss of poor policy implementation that characterises most developing countries especially those in Africa.

Why is the e-Education policy not implemented as planned? Hamann (2003) offers an explanation of "moments" of policy implementation which work best within a particular time and space, and these "moments" may be lost if not used effectively as opportune situations for effective policy implementation. At national level, an opportune moment for the e-Education policy to be implemented presented itself in 2004, when both the revised national curriculum policy (RNCS) and the e-Education policy were implemented. But, the window of opportunity closed, and the two policies still exist in isolation. Recently in 2012, another opportunity existed when the DBE introduced another curriculum (CAPS) policy, and once again the national DBE did not seize the moment. These ideal "moments" to dovetail the national curriculum policies with the e-Education policy as two complementary coherent

policies to achieve maximum impetus was lost. Districts and provincial e-learning leaders also did not seize the "moment" of time and space by making their presence felt in schools, thus giving impetus to the –e-Education policy mandates.

Another pertinent issue that surfaced in this study was the lack of policy coherence. It seems as though different sectors within the department of basic education (DBE) disjointedly developed the e-Education policy and the curriculum policies. Significantly, the lack of coherence between these two policies did not only occur at policy level but also seem to play out at systemic structure level. Both the curriculum directorate and the e-learning directorates act as separate and unique systemic units, both tasks with curriculum delivery in schools. Penuel et al. (2008, p. 658) posits that the lack of alignment of policies results in failure of the policy to change teachers' classroom practice. Policy studies by Jansen (2002) also found little policy coherence across different white papers and other national policy documents. Jansen's (2002, p. 199) argues that the South African government often produces policy as "political symbolism" without "implementation" as its primary commitment, seems to manifest itself in the 'symbolic' nature of the e-Education policy. This is a general failing with some governments globally (Jansen, 2002; Hess, 1999; Buchanan, 2011). So how can meaningful change ever occur when programs are poorly developed and implementation? Similarly, the lack of support to implement the e-Education policy in terms of district and provincial commitment, physical capital resources, incremental policy and implementation guidelines from national, provincial and district seems to suggest that the e-Education policy may not be destined for implementation.

According to Levinson, Sutton and Winstead (2009) policy seeks to define reality, orders behaviour and allocate appropriate resources. Adding to the notion of policy resources, Spillane and Thompson (1997) identify a local education authority's capacity in terms of three resource dimensions namely; physical capital, human capital, and social capital. The various iterations of curriculum reform innovations (C2005, NCS and CAPS) received significant resources of physical capital, human capital and social capital (district school visits for monitoring and support) creating change in the relations among teachers and district officials that facilitated action to policy. The lack of resources to support the e-Education policy across all three dimensions, seem to foster the idea that policy exists merely in symbolic form of policy formulation prowess.

Spillane and Thomson's (1997) posit that human capital characterised by district leaders' knowledge and skills is necessary gears for policy implementation. It seems that vital resources that address human capital of knowledge and skills as productive tools in the reform process are still ignored. The policymakers do not seem provide adequate resources to remedy the core problem with district officials and their incapacity to read, learn, interpret, and act as teachers of policy. How do districts formulate policy, analyse policy, implement policy, monitor and evaluate policy, and ultimately provide policy guidance to schools on policy formulation and implementation when district officials lack the essential skills to do this? This is exactly the problem, that until district and provincial officials "appropriate" education policy and act as "learners of policy" they will not be able to "teach policy" to teachers.

McLaughlin (2006) suggests that researchers have not paid much attention to site-based issues such as district capacity, norms or action and internal administrative structures that affect policy implementation at various systemic levels. Allocating significant policy making rights to district officials does not alleviate the policy implementation problem. Districts policy intermediaries must participate in policy formulation and implementation so that they facilitate their role function both as the target of the policy and policymaker. So "who can do policy?" requires a participatory and democratic response to policy formulation (Sutton & Levinson, 2001). The national Department of Basic Education should create institutional warranting (facilitating) conditions at district and provincial levels for intermediaries to do policy. This implies that "to do policy" is a learning process which encompasses the development of knowledge and skills (human capital); to decode policy intent, read for silences and interpretations, read for suggestions, develop incremental policy and guidelines, read for silences and interpretations, and becoming co-authors of policy that is practiced. Conditions that enable effective policy in practice demands that district officials are trained and included in the process of policy formulation. In this way district and provincial e-learning leaders will not be faced with making sense of policy "from above" but to be able to support the demands and aspirations from "those below" in schools.

7. Conclusion and implications

The findings suggest that district and province's e-learning officials were poorly equipped for the task of implementing the national e-Education policy. As incumbents in the e-learning directorates, their role function seems blurred in relation to the e-Education policy mandates

(or the lack thereof). Officials failed to understand policy intent, support schools and teachers and implement the e-Education policy. The findings were fourfold:

First, district and provincial e-learning leaders superficially understood the e-Education policy, missing policy intent of their role as policy intermediaries. Both provincial and district e-learning leaders seemed to lack the skill to de-contextualise policy intent and had even had different interpretations of the way in which policy should be "cascaded" down to schools. This is similar to McLaughlin's (2006) findings that district administrators in the USA did not "refuse, resist or retard reform policies - they simply didn't understand policy intent or strategies". The e-Education policy was communicated to some schools without making them explicit within the context of curriculum delivery. Furthermore, the e-Education policy intent was not supported by incremental policy, standards of attainment, or simple guidelines from district officials. In other words schools were implicitly informed by what the policy states and not inducted into how the policy should be implemented into teaching and learning.

Second, district and province officials perceived their role mainly as policy conduits focussing on the dissemination of the policy to schools. Yanow (1996) suggest that policy interpretation is embedded in the language of the policy and create ambiguity of meaning. The self-interpretations of policy text by district and province e-learning officials seemed to impede policy implementation, as they understood their roles as mere policy conduits and missed policy intent. Sadly, when most developed countries are challenged with sense-making of policy intent by recipients of policy, in this developing country context the challenge is still on the dissemination of policy.

Third, the compartmentalisation of directorates performing the same function lacked communication and interaction. This study found that the compartmentalisation of the e-learning and curriculum directorates as separate entities, yet both having the same curriculum delivery mandate, resulted in a lack of co-ordination and networking. Evidently, the e-learning directorate exists as an incoherent systemic structure that did not see itself as being an integral part of changing teacher's behaviour towards the implementation of the e-Education policy or curriculum implementation. The very structures that are mandated with the implementation of the e-Education policy seem to exist as mere symbolic structures as well, as the district official validates "I don't blame those teachers they haven't seen us".

Fourth, district's incapacity and lack of competence impacted negatively on their ability to implement policy and support schools. In response to empower districts as key agents to support schools at local level, the policy on the Organisation Roles and Responsibilities of Education Districts (DoE, 2012), attempts to improve the physical capital of districts in terms of time and staffing. Though districts are explicitly mandated by policy as authorised agencies to formulate policy they lack the actual *will to policy,* which may be provide through the democratic practice of power. Practical exigencies to develop districts as policy makers often fail due to inadequate supply of human capital resources as productive tools. Furthermore, the lack commitment of district and provincial officials and the lack of capacity to promote reform did not seem to create the "warranting conditions" for the reform process.

The lack of system support to schools and teachers has implications for practitioners, school administrators and policy intermediaries. Schools and teachers remain isolated from systemic structures and operate without guiding policy. Thus, principals and teachers lack support from district and provincial structures and are left to their own devices in the integration of ICT into their teaching and learning practices. Like minded forward looking schools may form communities of practice as an attempt to support each other in the absence of guiding policy. The lack of support between system structures and schools foster school-based ICT polices that does not translate nationally defined mandates. If within a developing country context, districts and provinces actually constrain and hinder policy implementation, the argument may prevail as to whether they serve as legitimate systemic structures. Thus principals and teachers may be skilled to receive and interpret policy makers' intent with intermediaries.

At systemic level the implication may be that intermediaries should be integral in the policy formulation process, thus they are not only policy drivers but policy makers. In order for policy implementing intermediaries to be effective teachers of policy it is both necessary and crucial to build their skills as appropriators, interpreters and learners of policy. Training of policy intermediaries as policy interpreters is essential to respond to impediments to operationalise policy. More effective methods for communication of policy mandates are required with an emphasis on the receiver of policy intent.

In this regard future research may investigate: how school-based ICT policies reflect the mandates of the national e-Education policy? Does the e-Education policy influence teaching

and learning in schools? What are the warranting conditions at district and provincial levels that promote or inhibit the formulation of e-Education policy guidelines? How can districts be supported in providing practical guidelines and support to schools in implementing ICT policy?

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