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The collision between international ICT policy and a deep rural Afrocentric community in South Africa: assumptions, interpretation, implementation and reality

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ABSTRACT

The purpose of this paper is to understand and learn from the collisions between the underlying assumptions embedded in UNESCO's ICT Competency Standards for Teachers policy framework and the realities that face a deep rural Afrocentric community in South Africa. A critical theoretical underpinning is put forward which also constitutes the departing values and thinking pursued by a team of academics who, in collaboration with local community visionaries, facilitates ongoing ICT initiatives in the community. The author aims to contribute to ongoing ICT for development discourses by representing an African voice for international ICT policy frameworks. Consequently, compelling issues for further research scrutiny are highlighted, including several examples and practical guidelines for international ICT policy formulation and implementation in deep rural Afrocentric context.

INTRODUCTION

This paper reflects on the difficulties of interpreting international Information Communication Technology (ICT) policy for deep rural communities in South Africa (SA). It specifically looks at the collisions between the underlying assumptions embedded in the United Nations Educational, Scientific and Cultural Organization's (UNESCO) Information Communication Technology Competency Standards for Teachers (ICT-CST) policy framework (UNESCO, 2008) and the realities that face a deep rural Afrocentric community in SA¹. The collision metaphor is used to draw attention to the critical stance of the paper and also to convey that the assumptions and values embedded in international ICT policy are often diametrically apposed to

¹ The information presented in this paper is a condensed compilation of a more detailed feedback document to UNESCO who funded the teacher training project in Happy Valley.

Afrocentrism and the views of reality of deep rural communities in SA (Asante, 1983). The paper presents, the observations and perspectives of a project team of four academics from the Department of Informatics, University of Pretoria (UP) and local community members from Happy Valley², in rural KwaZulu-Natal (KZN) as they collaborate in an ongoing ICT training project. Throughout this research, social activities such as gathering feedback, facilitating ICT training, intercultural communication and ad hoc interactions with Happy Valley community, focus on the understanding of meaning “from within the social context and lifeworld of actors” (Ngwenyama & Lee, 1997).

The paper commences by presenting the specific research questions. Following that, a synopsis of Happy Valley community is presented including a description of some of the things that cause tension in the region. A theoretical underpinning for understanding collisions between ICT policy and the deep rural Afrocentric community is put forward. The author then reflects on ongoing community engagement activities and concludes with a discussion of how the ICT-CST policy framework is interpreted for the Happy Valley community context. Throughout the paper, various case examples and informal and ad hoc dialogue with local community members are discussed.

RESEARCH OBJECTIVES

The author aims to contribute to ongoing ICT for development (ICT4D) discourses by representing an African voice for international ICT policy interpretation and implementation. Consequently, compelling issues for further research scrutiny by the broader ICT4D community are highlighted, including guidelines and perspectives for international ICT4D policy. A number of research questions are put forward:

- What is an appropriate theoretical underpinning and therefore appropriate departing values for understanding and learning from the collisions between international ICT policy and the

² Due to the extremely sensitive nature of the research and the tension caused by HIV and AIDS, TB and poverty in the Happy Valley community, actual names of individuals and places are withheld in this report.

realities and difficulties associated with deep rural Afrocentric communities in SA and how should international ICT policy be open to this?

- What are the difficulties associated with the intercultural understanding of meaning of development concepts and subsequent application of international ICT policy in deep rural communities in SA?
- How should international ICT policy facilitate an Afrocentric view of reality and what is the role of cultural interpreters in this endeavour?
- What is the value and importance of community entry in ICT4D efforts and how should community entry be represented in international ICT policy frameworks?
- How should international ICT policy and the outsider-practitioner identify and approach the needs, requests and emancipatory interests of the rural Afrocentric community and how is ongoing empowerment, development and community ownership established?

SYNOPSIS OF HAPPY VALLEY COMMUNITY

Happy Valley is the administrative and business centre of a small rural district in the KZN midlands. The community primarily speaks the Zulu language with a fairly large number of people also speaking English. The people practice three kinds of religions, namely, Christianity, Shembe and Ancestral worship. Herding animals is the primary economic activity as the area is mostly unsuitable for crop farming, except for some plots along the Happy Valley River. Government social grants and pensions are the only source of regular, cash-based income for many families. Being the centre of the local district, Happy Valley town enjoys a moderate basic infrastructure. The town has a tarmac road which connects it to the national road network. Very few houses have access to electricity and running water and there is limited access to fixed-line and mobile connectivity. The Happy Valley district is one of the most economically disadvantaged communities in SA as measured by per capita income and unemployment statistics.

In rural KZN, several issues and difficulties complicate community empowerment initiatives. These include high rates of HIV infections, a high occurrence of Tuberculosis (TB) including the emerging prevalence of Extreme Drug Resistant Tuberculosis (XDR-TB), high unemployment, extreme poverty, child-headed households, illiteracy and other complicating factors. The impact

of these factors has been profound, and is intensifying. Large numbers of children are left orphaned and destitute while malnutrition, sickness and death result in a general feeling of hopelessness, which impacts negatively on programs aimed at empowerment, social development and improving health. According to some community members most people are either infected or affected by HIV. Happy Valley is a community in tension caused mainly by deteriorating health and extreme poverty.

Happy Valley is a community of extremes. In contrast with the dire circumstances described above, several very successful community-owned initiatives have been established since the early 1990's. These include Happy Valley Private School, a child hospice for orphans and vulnerable children (OVC), several home-based care and day-care projects, a local hospice that delivers humanitarian support where the SA Department of Health's mandate ends, and a number of employment initiatives. Happy Valley Private School, where the ICT training project took place, was founded in 1994 by Christian missionaries from the Rock of Ages Church. Due to the realities that face the impoverished community of Happy Valley, the school cannot afford to pay market related salaries to teachers. As a result, the school's teachers are mostly volunteers or ex-learners that are mentored by senior staff. Despite these difficulties, Happy Valley School has since its first Matric class in 2001, maintained a 100% pass rate and is considered to be one of the best schools in KZN. The school's staff is a highly motivated and disciplined group of individuals. They do, however, experience an ongoing need for mentoring and support as qualified teachers understandably leave for better-paying opportunities.

Infrastructural and other difficulties in Happy Valley:

- The community in Happy Valley is plagued by continuous power outages and an inconsistent power supply. As a result electronic equipment generally has a fairly short life. Happy Valley School has recently lost a computer due to electrical malfunctioning.
- Currently there is no form of broadband, mobile or fixed-line, Internet access in the area. Internet access is limited to dialup modems for those who can afford it. Happy Valley School has no Internet access in their computer room which puts a limitation on the type of ICT training that can take place using their facilities. In addition, advanced infrastructure requires expert skills that community members do not necessarily have readily available.

- Computer classrooms need to be furnished with desks, electricity points, safety gates, burglar bars and an uninterrupted power supply. There is also a lack of funding to support and maintain computer facilities.
- Happy Valley School's vision is to bring ICT training to the broader community. Through a recent train-the-trainer initiative and the support of the Department of Informatics, UP this is now possible. The hospice ICT training for nurses is the first community owned course that has resulted from the teacher training course. The school's vision is being realised. Funding is, however, limited and the school is currently facilitating this course *free of charge*!
- There is a need to address the employment difficulties of school leavers. ICT training may assist with this. Several community members highlighted this concern. These include, Mrs Ndlovu, headmistress of Happy Valley School, Dr Smit from the hospice and Happiness, general manager at the mission. The community is ready, able and prepared to accept responsibility to take ICT training to rest of the community.

RESEARCH PARTICIPANTS AND METHODOLOGY

In an effort to learn to know Happy Valley community and build friendships, several ad hoc and informal interactions with local community members and experts took place. The purpose of these interactions was mainly to understand community members' thinking and perceptions about social phenomena in their context. Discussions were conducted totally unstructured and occurred mostly during community engagement where the researcher collaborated with the community at various levels. Due to the nature of the researcher-participator interactions, dialogue spontaneously covered various issues related to social development, community empowerment, ethics, the local community fibre, ICT training in developing context, health and education, Afrocentricity, and so forth. Table 1 presents the most prominent research participants and each individual's position.

The difficulty with regard to the paper's methodology is that it involves highly interpretive assumptions about stories told by community members and subjective observations. The reality is that this paper reflects on the diagnostic stages of a more encompassing project and the methodology for further research is developing as the "action" is developing. This implies that themes that are emerging will be scrutinised and refined more systematically in follow-up research. Therefore, with regard to the analysis of data and replicability, this paper lacks

structure which can be seen as a limitation as the researcher subjectively and interpretively reflects on observations and stories about social phenomena in Happy Valley community. However, the ultimate aim of Critical Social Theory is to emancipate and empower people and in rhetoric and the process of telling stories that represent tacit cultural knowledge (Pearlson & Saunders, 2009), the outsider-reader and community may be emancipated from “false and unwarranted beliefs, assumptions and constraints” (McGrath, 2005).

Name and title	Position
Mr Zulu	A Human Resources Manager, KwaZulu-Natal Department of Health.
Dr Smit	Chairman and medical doctor a local hospice in Happy Valley.
Ms Kramer	Project manager at a care unit for Orphans and Vulnerable Children (OVC) in rural KwaZulu-Natal.
Dr Reineth Prinsloo	Department of social development, UP.
Mrs Gernia van Niekerk	Community engagement practitioner, Department of Marketing, UP.
Bennie Stadler	Community social worker, previously at the Department of Welfare, Oudtshoorn.
Prof R. Kloppe	Professor in Informatics, Communication Science, and Cognitive Science at the University of KwaZulu-Natal and previously at the University of Zululand.
Prof Alta Kritzing	Communication Pathology, UP.
Ms Klein	Teacher at Happy Valley School.
Happiness	General manager at Happy Valley mission
S’bu	Teacher at Happy Valley School
Mrs Ndlovu	Headmistress at Happy Valley School
Pieter	A local pastor at Happy Valley
Baba Mtungwa	A prominent community leader at Happy Valley

Mni	An electrician, local community member and course participant
Ms Coetzer	Teacher at Happy Valley School
Princess	Teacher at Happy Valley School

Table 1: Expert research participants

THEORETICAL UNDERPINNING

Literature on ICT4D has scrutinised the potential role of ICTs in social development and community empowerment for a number of years (Chigona et al., 2009; Fong 2009; Avgerou & Walsham, 2000; Krishna & Madon, 2003; Avgerou, 2009). The general contention among these authors is that ICT has the potential to contribute to socio-economic development and quality of life, elevating the issues and concerns of social exclusion, the digital divide, poverty and lack of access to basic human needs. While foregrounding these ICT opportunities, literature also shows that ICT failures in developing countries continue to outnumber success stories (Avgerou & Walsham, 2000; Lunat, 2008). ICT alone do not guarantee success and development (Lewis, 1994; Chigona et al., 2009) and ongoing culturally sensitive and context specific technology rollouts and community participation is necessary to ensure sustainability and success (Krishna & Madon, 2003; Heeks, 2005). In the context of South African rural communities, poverty, social development and specifically health and education, the importance of socio-cultural context and intercultural communication and community empowerment are noted as pressing concerns in ICT4D research (Heeks, 2005; Krishna & Madon, 2003; Avgerou & Walsham, 2000; Asante, 1983; Mukerji, 2008; Lewis, 1994; Phahlamohlaka & Lotriet, 2003).

An aim that is consistently highlighted in ICT4D research is the need to establish viable and theoretical guidelines for ICT4D practice. A prominent criticism evident in the literature that highlights the importance of pursuing this aim, is that ICT theories, strategies and technologies established in developed countries cannot necessarily be transferred to developing contexts and assumptions about their applicability should be questioned (Lee et al., 2008; Avgerou, 2009; Avgerou & Walsham, 2000; Heeks, 2005). This implies a need to contextualise ICT4D, to test the impact of ICT implementation and to question the assumptions and value of ICT policy and guidelines in the specific cultural-context of individual developing communities (Avgerou, 2009; Heeks, 2005; Asante, 1983).

Critical Social Theory and ICT4D

Authors writing on Critical Social Theory (CST) often also work in the ICT4D context. For example, Avgerou (2005), Adam (2001), Čečez-Kecmanović (2001) and the *International Federation for Information Processing Working Group on Social Implications of Computers in Developing Countries* (IFIP WG 9.4), who are doing pioneering work in CST (Avison, Fitzgerald & Powell, 2005). In addition, Avgerou (2005) suggests that the unequal power evident in the discourse between industrialized and developing parts of the world is one of the most critical issues of contemporary society. In confirmation, Lewis (1994) states that in a developing context, there is a need to question the preconceived ideas of both the impoverished and the rich which makes a critical approach to community engagement essential.

CST takes a critical stance on what is observed about social phenomena (Neuman, 1997). It questions assumptions and theories in order to address the emancipatory interests of research subjects (Adam, 2001). Critical social theorists believe that they cannot merely be observers of social phenomena. They believe that by their presence in a social interaction, they influence and are influenced by the social and technological systems that they are studying (Ngwenyama & Lee, 1997). This implies that inquiry into social activity should focus on understanding of meaning “from within the social context and lifeworld of actors” (Ngwenyama & Lee, 1997). Critical social theorists extend the responsibility of the researcher beyond the development of explanations and understandings of social phenomena to a critique of “unjust and inequitable conditions of the situation from which people require emancipation” such as under-development, illiteracy or poverty. CST defines social science as a critical process of inquiry that goes beyond surface illusions to uncover the real structures in the material world in order to help people change conditions and build a better world for themselves (Neuman, 1997). The CST perspective requires the researcher not only to address mutual understanding (or intercultural communication) but also the emancipation from “false and unwarranted beliefs, assumptions and constraints” within both developed and the underdeveloped groups (Lewis, 1994; McGrath, 2005).

According to Avgerou (2005), “[T]he epistemology of critical theory – its way of developing knowledge – needs approaches that question the ends that IS innovation serves, sense objectors’ concerns, juxtapose the interests of different social groups and seek to foresee long-term

consequences on the social fabric”. The epistemology of CST assumes the use of feminist theories, postcolonial theories and other critical social theories as foundations for social research (Kvasny & Richardson, 2006). McGrath (2005) advocates that CST should draw inspiration from critical traditions such as Marxism, ethnography and symbolism, poststructuralism, hermeneutics, postmodernism and environmentalism. A feminist epistemology in CST challenges the traditional epistemology of ignoring the knowing subject and emphasizes pluralism in epistemology (Adam, 2001). It allows for a fine-grained contextualisation of emancipation in critical studies.

Applying a critical epistemology when conducting fieldwork, requires that the researcher, in addition to eliciting the participants subjective view of phenomena as is typical to the interpretive paradigm, also encourage reflexive accounts in both the researcher and research subjects (Kvasny & Richardson, 2006). It draws attention to assumed power relations in intercultural communication (Čečez-Kecmanović, 2001). Avgerou (2005) advocates the explicit examination of the researcher’s tacit knowledge, emotionally charged preconceptions, political convictions and moral values, and empathy with research subjects in building understanding and knowledge.

During our Happy Valley teacher training mission, we as a team of academics had to constantly question and be critical about the value of ICT and the way ICT is introduced to this community. We also had to explicitly examine (and therefore be critical about) our own attitudes, beliefs, intentions, and assumptions that might have emanated from our specific “outsider” cultural background. It was also necessary to be aware of how our different views of reality might possibly distort intercultural communication that has to take place during community engagement. We realise that a critical approach to ICT4D research and practice will assist us in this endeavour and ensure the sympathetic meeting of minds during intercultural endeavours.

Critical discourses in ICT4D literature

There are different but complementary views in ICT4D literature. It is often the case that authors working in this field are critical of Western (or developed country) value-driven approaches, where Western industrial life, consumerist logic, capitalist motives, and higher-standards-of-living dominated assumptions tend to guide development efforts and thinking (Heeks, 2005; Asante, 1983; Laughlin, 1987 in McGrath, 2005). Others seem to pursue a more practical approach to ICT4D where they critically address the role of language and meaning in societal

development rather than a critique of Western values per se. An example is the use of Habermas' theory of communicative action or the Habermasian approach (Čečez-Kecmanović, 2001, Ngwenyama & Lee, 1997; Laughlin, 1987 in McGrath, 2005). Adding to the Habermasian debate, other authors advocate addressing assumed power relations in intercultural communication (e.g. Asante, 1983; Flyvbjerg, 1998 in McGrath, 2005).

Other discourses focus on assumptions about the expected outcomes of ICT4D implementation and research. Ali and Bailur (2007), for example, discuss sustainability as a central concern in ICT4D initiatives and discuss five types of sustainability, namely financial, social, institutional, technological and environmental. They offer *bricolage* as a potential answer to the sustainability challenge, debating the realities of sustainability in the ICT4D context. They are critical about common assumptions about ICT4D implementation. They argue that sustainability may elude those researching and implementing ICT4D especially if outcomes are evaluated against a set of "known" benefits or expected success factors. Unexpected consequences and improvisations should be embraced as bricolage and "tinkering" rather than as a threat to sustainability. As a result, they suggest that less emphasis should be placed on sustainability as a measure of success for ICT4D projects but rather that an openness to bricolage as a form of justification of unexpected ICT4D project outcomes should be adopted. Supporting this idea, Avgerou (2009) alerts her readers that in the development context ICT implementation always implies novelty of experiences. She therefore puts forward the concept of "IS innovation" in this context. Her contention is that although ICT may be common elsewhere, the local experience of ICT implementation implies innovation for those doing the implementation.

In a recent keynote talk, Avgerou (2009) presented a framework that summarises four distinctive discourses currently evident in ICT4D research (see Figure 1). Avgerou's (2009) contention is that every study of ICT in developing context makes assumptions about how ICT should be implemented and about the notion and process of development to which ICT should contribute. The United Nations' Millennium Goals are put forward as an example of assumptions about how ICTs should contribute to poverty eradication and development (also see Heeks, 2005). These assumptions are often about the intercultural meaning of development concepts.

Figure 1 from Avgerou (2009) illustrates that ICT4D literature falls into four distinctive discourses with four different types of assumptions about ICT in developing context. Avgerou (2009) puts forward the assumptions of each of the four discourses as follows:

Transfer and diffusion perspective: This perspective assumes that the material/cognitive entities that comprise technology and practices are independent from the social circumstances, and which makes it possible to adapt and transfer them. This perspective endeavours to show the relevance of general IS knowledge to developing contexts and tries to work out adaptations appropriate to them. This perspective would typically view cultural differences or non-western cultural practice as obstacles to development and success (Avgerou, 2009).

Social embeddedness perspective: This perspective is critical of the transfer and diffusion perspective in that it views it as oversimplifying and misleading. This perspective has elaborate ways of explaining the interplay between actors and social contexts and views the application of ICTs as socially constructed, emerging from local social dynamics. This perspective nurtures the cognitive, emotional and political traits of individuals in their social context (Avgerou, 2009).

Progressive transformation perspective: This perspective assumes that ICT enables transformations in developing contexts. It sees ICT as an instrument for socio-economic gains and assumes that ICT investments are important for economic development and progress (Mann, 2004 cited in Avgerou, 2009). This perspective does not test the assumption that ICT contributes to economic growth and that ICT investments ensure empowerment and improved services in organisations (Avgerou, 2009).

Disruptive transformation perspective: This perspective is critical of the progressive transformation perspective in that it sees “ICT-enabled development as a contested endeavour” that affects different cultures differently (Avgerou, 2009). This perspective questions the intentions and assumptions of international development policies. In this perspective the researcher is not a neutral observer, but takes the position of a group of people or a culture which assumes a critical emancipatory stance. This perspective is critical in that it aims to uncover hidden intentions and power dynamics that might disadvantage the groups sided with (Avgerou, 2009).

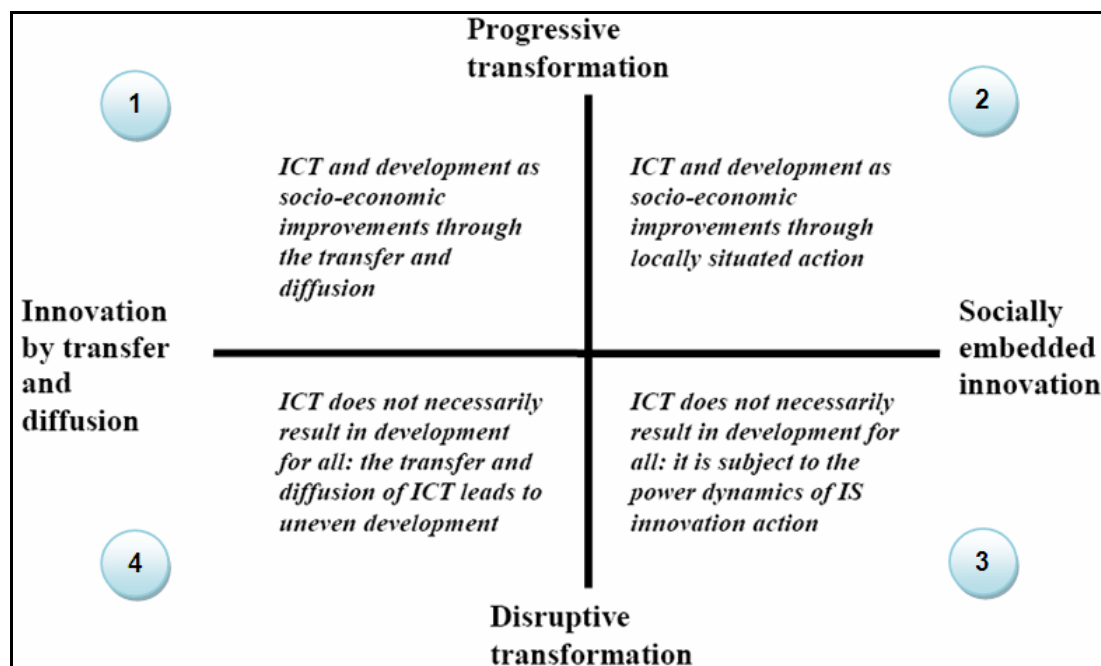


Figure 1 – Four distinctive discourses on ICTs and development (from Avgerou, 2009).

The four discourses put forward by Avgerou (2009) provide a valuable framework to help one examine one's own position with regard to assumptions regarding ICT4D policy, research and implementation. One should, however, not assume that thinking within any specific one of the four quadrants in Figure 1 should take precedence. Avgerou (2009) also didn't suggest a preference. There should, however, be an openness to all four types of assumptions put forward by Avgerou (2009) as it is still to be discovered how emerging communities in SA innovate and adopt ICT in their social fibre. A needs, situation and event analysis should take place during ongoing community entry phases and the guidance provided by cultural interpreters should reveal how one should pursue and think about the implementation of ICT.

The author suggests that in ICT4D endeavours, ethical research practice and appropriate and culturally sensitive community engagement approaches should be followed. This implies the need for appropriate community entry protocol, the need to build friendship relationships with key community gatekeepers, the need to identify and empower community visionaries and caregivers (often typified by teachers and health workers), the need for cultural interpreters and the need for tailored ICT such as pre-basic ICT literacy training to help people in the transition

from knowing absolutely nothing about ICT and ICT supported work to where they can realise ICT and build confidence and motivation.

Understanding poverty and hope

Discussing the role of technology in social development initiatives, several authors propose a holistic approach to community empowerment (e.g. Heeks, 2005; Lee et al., 2008; Lewis, 1994). Encouraging hope of new opportunities in communities before technology rollouts as well as motivating communities to take hold of the opportunities that are presented is often not given enough thought in development projects (Krishna & Madon, 2003; Lewis, 1994). According to Lewis (1994), a major challenge is to help the local people to see hope. After hope there is the need for communities to become motivated so that they may contribute to their own development and can adequately assess their own talents, abilities and resources (Lewis, 1994). According to one participant, Ms Kramer, the feeling of hopelessness often contributes significantly to poverty, social and moral deterioration and social development initiatives that fail in communities such as Happy Valley. Many development and upliftment programmes fail because poverty, alienation and hopelessness are so deeply rooted in a community that it is impossible for the people to believe that a hopeful future or anything better is possible. These beliefs have to be addressed through the continued commitment of community visionaries and primary stakeholders before development programmes can expand naturally and be sustainable (Lewis, 1994). A lack of such an insight has caused ICT4D initiatives to fail in the past (Heeks, 2005; Lewis, 1994).

Understanding Afrocentricity

Asante (1983) highlights the importance of understanding the impact of Afrocentricity on intercultural communication. According to Asante (1983), Afrocentricity is the frame of reference in which African social phenomena should be viewed in order to understand the perspectives of the African community. It is consequently the frame of reference within which this research is pursued. Asante (1983) argue that cultural differences are rooted in different views of reality. All definitions are contextual and grow out of a people's heritage. "While the European seeks to conquer nature, to subdue it, the Asian flees from the illusions of the world, and the African finds coexistence with nature and a harmonious relationship with all the

elements of the universe” (Asante, 1983). Eurocentrism is associated with Western culture and generally implies a critical view of concerns and values of non-Europeans. It is this view that often subconsciously manifests in supercilious ICT4D endeavours and international policy (Lewis, 1994). As a Eurocentric minded researcher, understanding Afrocentricity requires special effort, respect and openness to Afrocentricity in order to master its meaning and to enable intercultural interaction (Willoughby, 1928; Asante, 1983; Laughlin, 1987 cited in McGrath, 2005). Values, principles and protocol are the beginning of understanding meaning in intercultural communication context (Ndegwa, 1992; Asante, 1983; Lewis, 1994). Development efforts often carry with them a sense of compassion and a degree of superiority where less-developed countries are targeted in order to develop them (Lewis, 1994). Sources on social development and ICT4D consistently call for the study of local context, culture and customs in community projects (Avgerou & Walsham, 2000; Krishna & Madon, 2003; Heeks, 2005; Lee et al., 2008; Lewis, 1994). In deep rural SA this implies a sympathetic study of Afrocentricity and the social fibre of isolated communities.

Community entry and the value of cultural interpreters

When dealing with poverty and development issues, the misconceptions and internalisations of both the rich and poor need to be addressed which includes a sympathetic understanding of the poverty-sustaining environment people live in (Lewis, 1994). To deal just with rural Afrocentric communities requires a profound and sympathetic study of them (Willoughby, 1928). Respect for the way in which a community functions and acknowledging their social structures and protocol is extremely important for successful empowerment initiatives (Prinsloo, 2009). When entering into a community it is important to get to know their customs (or collaborate with someone who knows) and to act accordingly (Tlhagale, 2006, cited by Prinsloo, 2009). Weyers (2001) cited by Prinsloo (2009) suggests the “R.E.A.L.” approach to community participation:

- R = Respect the people and their customs, protocol, knowledge, values, views and standards
- E = Encourage them to share their knowledge and ideas by using appropriate techniques
- A = Ask questions and give feedback
- L = Listen carefully

In confirmation, Lewis (1994) states that most community development initiatives are a matter of building partnerships, inter-relationships and developing a common sense of differences in cultures. According to Prinsloo (2009), “the process for community development as utilised in the field of social work is simple, yet efficient. Development is a social condition and strategies used aim at enhancing the living conditions of a population. The idea that the stimulation of entrepreneurship of individuals will contribute to their own development as well as that of communities is supported”. Weyers (2001) cited by Prinsloo (2009) proposes an indirect route for negotiating entry into a community:

- Identify community leaders
- Visit the community leaders and explain the reasons for the involvement in the community
- Use the snowball technique to get new contacts
- Make more informal contact with ‘ordinary’ community members
- Give community leaders and members the opportunity to express any negative feelings
- Give the community leaders and members hope for a better future
- Help community leaders and members to realize that they should accept responsibility to deal with their own needs and to become involved in the process
- Work towards mutual trust and being accepted by the community
- Encourage and enable community leaders to start working towards a plan for future action

It is the author’s observation that it is very difficult for a culturally different outsider to judge the specific development needs that a community might have. Development concepts such as poverty, sustainability and empowerment might mean something different in the community. The outsider often does not understand the difficulties and social intricacies of the community and its culture. Different cultures and languages imply totally different views of reality and, therefore, a completely “foreign” or different value system and social fibre (Asante, 1983). It is, therefore, not fair towards the community if the outsider assumes that he or she has the understanding or necessary know-how to prescribe how new ICTs should be implemented and also which values the community should subscribe to when they use and implement new technologies. Ignoring this reality and enforcing “foreign” technology (foreign because Western culture is embedded in ICT) unto “unfamiliar” contexts may, according to some research

participants equate to abuse of that community and may have serious implications for sustainable empowerment.

In an attempt to follow a community consulting (where consulting means that the outsider-practitioner constantly consults prominent community members on how ICTs should be facilitated and implemented in their context) or ownership model in ICT4D initiatives, one should aim to identify cultural interpreters and community visionaries that will be able to receive and understand new technologies in context and who can then advise the “suppliers” of these technologies on the implementation thereof in their communities. These cultural interpreters will then be able to translate the technology and its potential for their own people.

In context of our engagement at Happy Valley, we define *community gatekeepers* as those individuals in a community who would facilitate entry to the community by introducing the outsider-researcher to key community members. A *community gatekeeper* would mostly also be someone who understands the outsider culture in some way and therefore would also fulfil the role of a *cultural interpreter*. A *community visionary, entrepreneur or champion* would typically be someone in the community who has a vision or motivation to empower other community members in some way which may include the facilitation of ICT4D rollouts. A *community visionary* would typically be the person that the outsider-practitioner would collaborate with in order to implement new technologies or any other “foreign” idea or policy. *Cultural interpreters* would typically explain and interpret to the outsider, the culture, customs, existential understanding, social structures or any cultural aspect that might be unique and that might help the outsider to understand and act appropriately in the community. A *cultural interpreter* could also be a gatekeeper and/or a visionary. In our project we experienced various levels and types of these cultural interpreters.

The role of the community outsider wanting to participate in community development should be first and foremost to identify capable community visionaries and cultural interpreters in the community. This requires basic but unique skills of relationship building. The second step in this very flexible and dynamic process is to introduce these potential visionaries to the new technologies or the development idea. The implementation and rollout of new technologies to the broader community should, however, be driven and owned by these community visionaries, because they understand their community context in terms of technology readiness levels and

also how these technologies should be translated for their own. From an outsider perspective it requires an openness to deviation, an openness to unexpected outcomes and results and good listening and waiting skills. Adopting this attitude to ICT4D rollouts is not easy or desirable if you have capitalist motives and deadlines!

FIELD TRIPS TO HAPPY VALLEY

During a fact-finding visit to Happy Valley (19-21 February 2009), staff members from both the Department of Informatics, UP and the Department of Information Systems and Technology, University KwaZulu-Natal (UKZN) visited the community. This fact-finding mission revealed a range of possible projects that may be started in the region. On the 5th and 6th of March 2009, a follow-up visit took place where the project leader and author met with the Human Resources Manager of the KZN Department of Health and Chairman of the local hospice, Dr Smit, to discuss the possibility of computer literacy courses for health workers. The following resulted from these field visits.

Grade 11 visit to UP

On the 30th of April 2009, the grade 11's from Happy Valley School visited UP to learn about study and funding opportunities at the university. The Department of Informatics played a prominent hospitality role in the school's campus trip. During this visit several representatives from a number of faculties at UP introduced the learners to study opportunities in their respective disciplines. The Departments/Faculties involved were Economic and Management Sciences, Health Sciences, Engineering, Social Work and Criminology and Information Technology. Throughout the presentations, we tried to emphasise how the various study areas could benefit the community these learners come from. The Marketing Department was also involved to speak about funding and bursary opportunities.

This campus trip proved very valuable for strengthening relationships and opening up further engagement opportunities in the community. In order to gain access to the community and the school, to establish and continue friendship relationships and ultimately to gain trust, motivate, encourage and dignify the impoverished community, those wanting to contribute to development should realise the importance of reacting to and "servicing" the perceived needs and requests of the community. In that way access to the community is gained and relationships based on trust

are established. These trust relationships form the basis of ongoing engagement and possible ICT rollouts. For the campus trip, Happy Valley School requested information on Engineering, IT, Accounting and Health. As a department we also took the initiative to include social work, bursary information and funding issues, as it might be useful to maximise on the opportunity we had with the learners. This additional effort with the community which may appear unrelated to ICT per se, illustrates the holistic approach to ICT4D that we as a department aspire to.

Teacher training course, train-the-trainer initiative and training of health workers

Three ICT literacy courses were presented at Happy Valley School during the June/July 2009 school holidays, i.e. two basic ICT literacy courses for teachers, certified by Continuing Education at UP (CE at UP, www.ceatup.ac.za) and a pre-basic course for semi-literate community members. These courses took place from 29 June 2009 until 10 July 2009 at Happy Valley School. During the second week of teacher training, six successful teachers were also taken through a train-the-trainer initiative so that Happy Valley School could facilitate ongoing ICT training in the region. During this time, further fact-finding and community interaction took place so as to determine how ICT might benefit the community on an ongoing basis.

As a result of the train-the-trainer initiative and suggestions by the team, a meeting between the school and the local hospice was arranged to discuss a possible ICT training course for their nurses. As outsiders, we suggested an accredited basic computer literacy course from CE at UP. However, the cultural interpreters from the school, after a number of meetings with the locals actually opted to rather start with a pre-basic computer literacy course as an introduction to the accredited course. They also suggested that we should not limited the time to the 30 contract hours but rather give the nurses enough time to acquire new IT skills. Our immediate reaction was that a recognised and certified training course would be much more “valuable” to these health workers and that more than 30 hours of training would be difficult to explain to potential funders and course administrators. We asked about their intentions and their response was that the nurses “are not ready for basic computer literacy. They need an appreciation course that will introduce them to the computer”. We realised that our “good” intentions to propose a fully accredited 30 hour “basic” computer course for the nurses was problematic. The course was not basic enough and we would not have realised that our plans are fruitless if it wasn’t for these cultural interpreters. The nurses need more time especially in the beginning to learn brand new

ICT concepts at their own pace and to gain “IT confidence” and motivation as apposed to potential “IT-trauma”.

These cultural interpreters have received the new technologies through a formal training course and have realised what it involves. Because they understand their community and the realities that they deal with, they could correctly judge that the proposed way ICT is introduced is not appropriate and that the receivers of these technologies are not ready for it. They consequently through their own initiative and analysis of the situation, devised a pre-basic computer training option that would take these ICT illiterate people from knowing absolutely nothing to knowing something. Had we not followed a community consulting approach and had we not been open to listening to community visionaries, we would have probably exposed a number of nurses to IT-trauma and dumped about R40000 down the drain. We would have followed a recipe for culturally insensitive, if not abusive ICT implementation.

This example firstly, illustrates the community consulting process of how cultural interpreters and community visionaries can advise the outsider-researcher on the implementation of ICTs in their context. It also reiterates the degree of IT illiteracy in the community as introductory lessons had to start off by addressing pre-basic issues such as practicing the difference between a mouse click and a double click.

The author visited the school on 25 and 26 August to assist in a comprehensive introduction for the nurses (see Figures 2 & 3) and to hand out certificates to those who completed the teachers training during the June/July holiday. Further guidance was given to the trainers and lessons were planned. The nurses from the hospice are now being trained on Tuesday and Wednesday afternoons for a number of weeks, until such time that all the course content has been covered. At the end of their training, the Department of Informatics will again visit Happy Valley to assist with tests, revision, final reinforcement of course content and the course exams.



Figure 2: Introduction, 25 Aug 09: S'bu explains the taskbar to the nurses



Figure 3: Trainers from Happy Valley School are introduced to the community



Figure 4: Mrs Ndlovu and the author explain Happy Valley School's ICT training to the community



Figure 5: Khambi receives her certificate



Figure 6: Happiness receives her certificate

Dr Smit, chairman and manager of the hospice, mentioned that from a health information management perspective there is a need to create a culture of statistics and record keeping among

nursing staff. We hope that through the training course that has started in August 2009, nurses will have the opportunity to realise the value of ICT in their life-work. According to one of the trainers, the head Matron said that, she cannot wait to learn how to do her IT things herself. Currently she has to write memos and letters by hand and then give it to the “IT expert” or data capturer to type it in Word or on an email. She and her colleagues now have the freedom to do ICT work themselves. During the introductory session, it became clear that nurses will have to practice ICT skills after-hours. We consequently arranged for two computers to be set up in a convenient place at the hospice premises so that nurses can practice ICT skills such as typing and exercises given to them. Most of them do not have access to electricity at their homes.

The vision for ICT training that started has caused a vibrant excitement in the community. On the 26th of August 09, the evening, the school parents and a number of community members attended a meeting where certificates were handed to the teachers (see Figures 4, 5 & 6). Mrs Ndlovu used the opportunity to explain the school’s vision and how the teachers have been empowered to further ICT knowledge in the area. Feedback from Mrs Ndlovu is that the “certificate ceremony” was a big event in the community and that the community now understands where the training course came from, why the school was selected and also the school’s vision to further the training to other community members. We believe that the ICT vision of the school has been accepted by the community.

IMPLEMENTING UNESCO’S ICT-CST POLICY FRAMEWORK IN HAPPY VALLEY

An brief overview of the ICT-CST policy framework

The following paragraphs briefly explain UNESCO’s ICT-CST policy framework (UNESCO, 2008). Figure 7 from the ICT-CST policy framework visualises the key knowledge areas:

“Through the ongoing and effective use of technology in the schooling process, students have the opportunity to acquire important technology capabilities. The key individual in helping students develop those capabilities is the classroom teacher. The teacher is responsible for establishing the classroom environment and preparing the learning opportunities that facilitate students’ use of technology to learn, and communicate. Consequently, it is critical that all classroom teachers are prepared to provide their students with these opportunities.

Both professional development programs for teachers currently in the classroom and programs for preparing future teachers should provide technology-rich experiences throughout all aspects of the training. Standards and resources within UNESCO's project 'ICT Competency Standards for Teachers' (ICT-CST) provide guidelines for all teachers, specifically for planning teacher education programs and training offerings that will prepare them to play an essential role in producing technology capable students.



Figure 7: ICT-CST policy framework knowledge areas from UNESCO (2008)

More specifically, the objectives of the UNESCO ICT Competency Standards for Teachers project are:

- *To constitute a common set of guidelines that professional development providers can use to identify, develop or evaluate learning materials or teacher training programs in the use of ICT in teaching and learning.*
- *To provide a basic set of qualifications that allows teachers to integrate ICT into their teaching and learning, to advance student learning, and to improve other professional duties.*
- *To extend teachers' professional development so as to advance their skills in pedagogy, collaboration, leadership and innovative school development using ICT.*
- *To harmonize different views and vocabulary regarding the uses of ICT in teacher education."*

Values for ICT in developing context

In accordance to the critical values put forward in the literature, we did not allow the ICT-CST policy framework to dictate our approach and thinking. We rather allowed the community to express their perceived needs and then serviced the needs in accordance with the guidance of cultural interpreters and our understanding of the situation and cultural-context. In doing so, we were able to be more open to unexpected outcomes as we endeavoured not to use a lens that could possibly distort our understanding of social phenomena in Happy Valley. The relevance and appropriateness of ICT-CST policy framework was therefore scrutinised retrospectively after we were able to embed ourselves in the context.

The project team generally supports the ICT-CST policy framework's knowledge areas. The purpose of this paper, however, is primarily to focus on how it should be interpreted for the community, including emphasising collisions that may occur between underlying values and assumptions embedded in the policy framework and the realities that face the Happy Valley community.

As a project team, we believe that access to information, knowledge skills, higher-level thinking and research skills as well as the underlying value of ICT as an information tool is a necessity for the emerging education and training milieu. However, we believe that the explicit and prominent focus of the policy should be on knowledge literacy and competence while ICTs should be highlighted as a supporting tool. Information is processed data and knowledge is applied information, hence the prominence of knowledge concepts as apposed to information. Knowledge literacy also has a sense of intelligence to it, it implies maturity of information literacy concepts and it shows awareness of the contextualised interdisciplinary nature of knowledge in the ICT-CST policy framework.

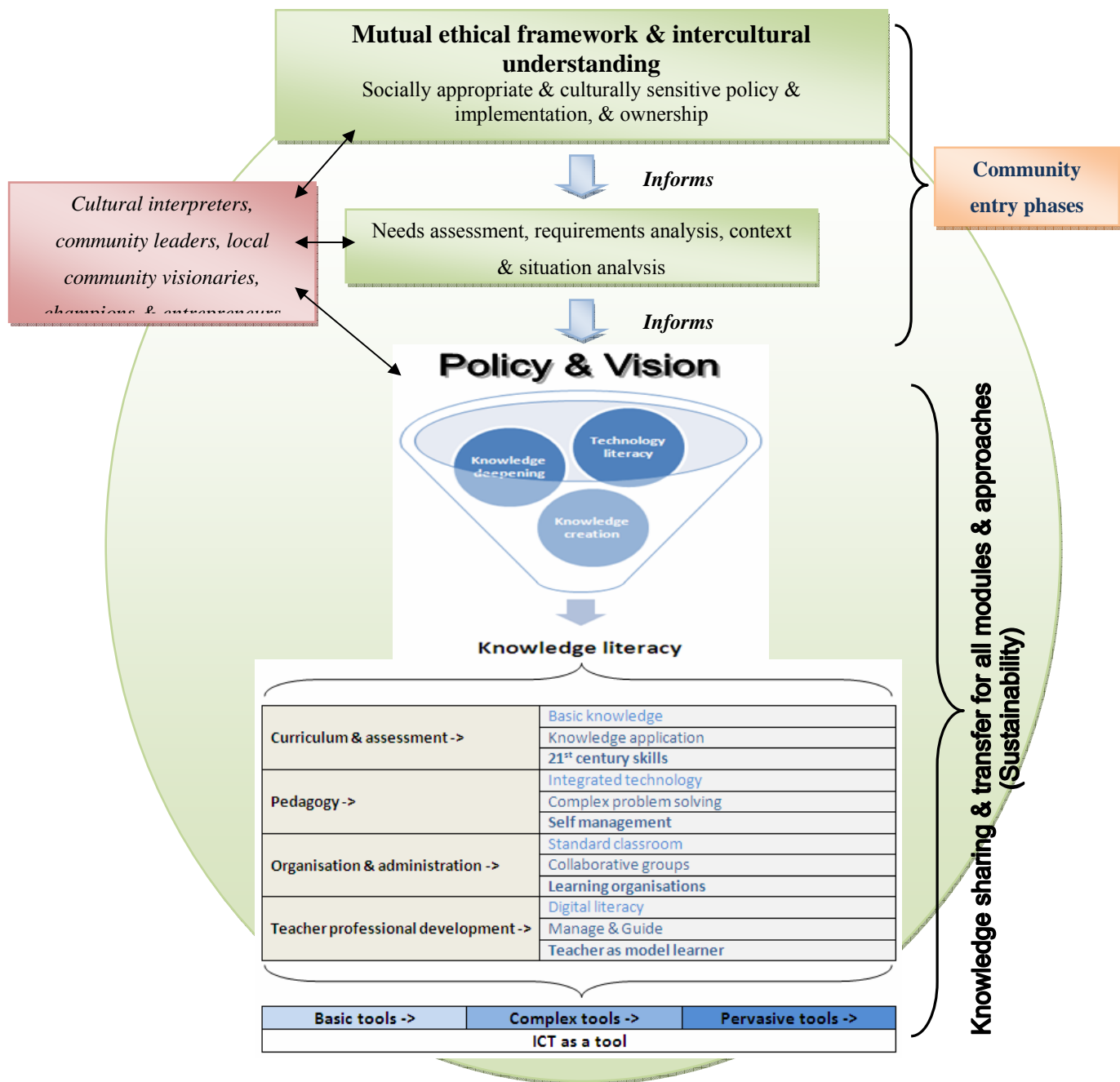


Figure 8: “ICT competency guidelines for knowledge literacy for teachers”: an adapted, integrated and interrelated approach to ICT policy implementation for teachers

Based on the theoretical underpinning, our experiences in Happy Valley and the background of the ICT-CST policy framework, we propose in Figure 8 how policy implementation could take place in deep rural communities in SA. Figure 8 visualises:

- the community entry phases of policy implementation in deep rural context,
- that every individual context should be examined and ownership nurtured through doing a needs analysis and following culturally sensitive implementation,
- that ICTs is seen explicitly as a supporting tool in policy implementation rather than as an end in itself,
- the prominence of knowledge literacy and competence as the end,
- the important role of cultural interpreters and community visionaries,
- that the three approaches (technology literacy, knowledge deepening and knowledge creation) are interrelated or complementary rather than linear or “if-then” as the current matrix-model visualises. For example, knowledge creation and deepening may be addressed even before technology literacy is possible.

The proposed title or naming for the policy framework reflects, firstly, the significance of knowledge literacy and, secondly, that policy implementation should pursue a “guidelines approach” to ICT implementation as apposed to putting forward “standards for ICT rollouts”. This reflects the need for non-standardised and “non neo-liberal” approaches (Heeks, 2005) to ICT4D rollouts (as explained in the theoretical underpinning), as well as the need to tailor ICT policy and implementation for the local community.

The introduction of new technologies foreign to the local community implies innovation for that community including a need to allow community entrepreneurs and visionaries to experience and play or “tinker and bricolage” with new technologies (Avgerou, 2009; Ali & Bailur, 2007). This will allow the community to contextualise and tailor new technologies in such a way that their unique social fabric stays intact. An openness to this way of thinking implies an openness to the unexpected outcomes of ICT implementation and an openness to the meaning of development concepts such as sustainability and empowerment in the community context. In deep rural, isolated, unexposed and culturally different communities, a personalised approach to ICT policy implementation should be followed to ensure tailored and culturally appropriate implementation of policy. In the theoretical underpinning, the importance of understanding poverty and hope has been explained. The reality is that sometimes hopelessness is so deeply rooted in impoverished communities that the outsider-practitioner and visionary needs to make use of basic motivational

tactics such as encouragement, acknowledgement, respect, dignity, patience and especially listening skills. To a great extent this highlights the value and importance of a holistic approach to ICT4D endeavours.

Community ownership means that ICT4D and related interventions, even though initiated from the outside, are guided and directed by appropriate community members throughout. The training of nurses explained earlier illustrates this. The community must be in control of the initiative, even at the times when they do not do the work. It must be based on their expressed needs, and pace, and values. Also, an energy transfer must be planned and executed from the beginning (hence knowledge sharing and transfer), so that entrepreneurs, community volunteers or other community members are not only trained in content, but also trained and assisted to take over and maintain the initiatives. This will ensure sustainability, reduce dependency and ensure an uptake tailored to the community's needs.

Given the realities that resource-poor and developing communities often face, we propose that the ICT-CST policy implementation guidelines should provide practical advice on sensitive ways in which to address knowledge deepening, creation, transfer, development of higher level thinking skills and relevant research even before access to ICT, funding and other resources are available. One could for example emphasise the value of using metaphors for developing knowledge in others. During the train-the-trainer initiative we demonstrated a number of metaphors for assisting in the introduction of new computer concepts. We, for example, related the Start-button on the Windows desktop to the menu button on the cell phone, emphasising the similarities and differences.

We suggest that the importance of knowledge skills should be given precedence over the value of ICT as such. That is, we suggest a knowledge-centered rather than a techno-centric approach to development. Through a knowledge-centered approach communities will be encouraged to work with what they have within the specific resource related constraints they might face. They will be able to think about, argue, debate, transfer and research new knowledge in such a way that it complements knowledge traditions and recognises indigenous decision making processes. Education and motivation is key in this.

Currently the introduction to the ICT-CST Policy framework seems somewhat techno-centric as it presents ICT and technology literacy as an end in itself rather than a tool. In communities such

as Happy Valley, ICT cannot be introduced without context or purpose as the value of ICT may not be realised and ICT knowledge may not be sustainable if people cannot continue practicing it.

Policy makers should also be careful of promoting values such as “advancing standards of living” (p.6 of the Implementation Guidelines, UNESCO, 2008). The project team is generally critical of promoting the advancing of standards of living and its meaning. The underlying meaning should be clear, because, among other things, the recent global recession and the implications of global warming have revealed that the standards of living of the Western world may be too high to be sustainable (see Heeks, 2005 and Jackson, 2008). The aim should rather be quality of living, where quality of living means integrated into the cultural traditions, protection of indigenous knowledge, health, basic education, basic human needs, and addressing social problems. In the same vein we suggest that social development should not be undervalued and economic development should not be overvalued in the definitions of socio-economic development. In fact, some may argue that social development should take precedence, because then there is a better chance to improve quality of living. Economic overdevelopment may simply lead to exchanging one set of difficulties and social problems for another.

Feedback from Happy Valley School

In an effort to structure the feedback from Happy Valley School regarding UNESCO’s ICT-CST policy framework we compiled a list of prominent statements from the policy documents so as to guide the feedback and formal meeting opportunities we had. We did, however, experience difficulties in getting useful feedback during structured sessions, mainly because of the generic nature of the policy framework and statements. In addition, we realised that the type of structured feedback sessions that we attempted is an unfamiliar “social activity” for the people and informal, ad hoc and spontaneous group discussions produced more useful information. We also realised that we should rather focus our discussions on ICT needs and training in the community and from that infer how the policy framework could be interpreted for the Happy Valley context. During the meetings and general community engagement, participants spontaneously engaged in discussions about the value of our community engagement and the potential role of ICT in the community. We consequently made our inferences on the value of ICT-CST policy framework based on the feedback from two structured meetings, our

experiences gained during the teacher training and through general ad hoc community engagement.

Because of the difficulties that the community faces, we recommend that ICT initiatives in the Happy Valley community should complement other pre-basic training initiatives (e.g. general language literacy, basic survival strategies, agriculture, sewing, etc) and general humanitarian efforts, particularly as the local hospice endeavours to do. We, therefore, reaffirm and will continue our holistic approach to ICT4D where ICT initiatives form part of a greater empowerment strategy that is owned and sustained by the community. Our small-step approach to ICT implementation will continue, since it has a good chance of resulting in community ownership and therefore sustainability of ICT skills. A generic “shotgun” approach to ICT rollouts seems to underestimate the value of community ownership, relationship building, and “after implementation service, maintenance and support”.

We have also realised that due to the dire need for employment in the Happy Valley region and the associated demand for training, people view ICT knowledge as the gateway to new opportunities almost up to the point where ICT knowledge is overvalued. In some circles in the community, individuals have expressed the concern that ICT training, such as that provided in our initiative, can potentially create a social divide that could possibly later translate into a digital divide in the community should knowledge sharing and knowledge transfer skills for sustainability not be addressed and encouraged, hence the prominence of this idea in Figure 8. The realisation of the potential social divide that ICT skills can bring within the Happy Valley community made us focus on knowledge transfer skills by giving the teachers additional skills through the train-the-trainer initiative. We also encouraged Happy Valley School to start with their own community empowerment initiatives to further ICT knowledge.

The value of ICT knowledge in Happy Valley community

According to Mrs Ndlovu, the headmistress of Happy Valley School, “technology is good for the community”. She, however, stated that funding and resources are some of the difficulties that they face to fully implement ICTs in the school. She said that they need more PCs and facilities to extend ICTs in the school and the rest of the community. Both Mrs Ndlovu and Dr Smit from the hospice expressed the need to empower school leavers with ICT knowledge, firstly to strengthen their chances for success in tertiary studies and secondly, to help them to be more

employment ready. Mrs Ndlovu is well aware that basic ICT training at school level enables learners to do better with university studies because much of their study material is presented to them through e-learning environments. Implementing the ICT-CST policy in a culturally appropriate way in Happy Valley may have a huge impact on the community and school.

Mrs Ndlovu explicitly requested, and this was confirmed by a number of people, that the ICT training we did should be taken to schools in the area. She said that “people are phoning us to also get the course”. In the meetings we had it was suggested that other schools should “come to Happy Valley School to learn and then take back the knowledge” to their own school. We believe that Happy Valley School, through the vision of Mrs Ndlovu and her staff, should be nurtured as a potential ICT training hub for the region.

Since Happy Valley School is a private school, we also see this as a potential income generation opportunity for them. Currently Happy Valley School has financial constraints, especially since the South African Department of Education had recently decided to cut funding to private schools by 30%. The fact that Happy Valley School has, by their own initiative, started extending their ICT knowledge to the nurses is evidence of their maturity in leadership and readiness to function as an ICT training hub for the region. Community ownership is crucial to the success ICT4D initiatives and we therefore believe that ownership should be nurtured. ICT-CST policy implementation should reflect this value.

Other comments from community members:

- Happiness, the operational manager from the mission, who had a lengthy discussion with the author on the value and need for ICT training and her dream to start a “computer school” in Happy Valley. She especially mentioned the need to empower school leavers and job creation.
- Mni, one of the successful course participants, also exclaimed that “when I see you I see hope”.
- A businessman and prominent community leader, Baba Mtungwa, came to thank the project leader personally for the ICT contribution and the efforts that UP made to empower the teachers and trainers. Given the social structures of the community, this really means a lot as he is highly respected in the community and speaks on behalf of many people.
- Princess, one of the trainers at the school, said that the ICT training has to be taken to the rest of the community so that the community does not see the school and mission as isolated and

hording newly acquired knowledge. It shows that the community realises the importance of not creating a new digital or social divide in the community between those who has ICT knowledge and those who don't. Pieter, a church pastor also highlighted this concern.

- Happiness said that the older people in the community welcome this training because now their children can get opportunities that they never had.

CONCLUSIONS

Our initial observation with regard to implementation is that the ICT-CST policy framework is very generic, sometimes a bit vague about the outcomes and mostly too advanced for the realities that face the Happy Valley community. This is because their ICT needs currently fall into very basic categories, such as, learning how to type, using a mouse, lack of funding, no internet connectivity, and with additional complicating factors such as poverty and illiteracy. There is a need for pre-basic computer literacy training where the computer is introduced as a tool. In addition, there are many things in the policy framework that might make its interpretation difficult in a rural South African context. For example, it assumes:

- knowledge of Western technologies (Western culture is embedded in ICTs which makes learning it difficult for deep rural African cultures),
- access to the Internet and software,
- access to human resources and funding,
- connectivity,
- knowledge of the English language (some active community members cannot speak English),
- general subject knowledge by teachers (e.g. English, Geography, Maths, etc), as well as
- knowledge of pre-basic ICT literacy.

It is our observation that considerable bridging (including cultural bridging) still has to take place before the ICT-CST policy framework can be implemented to its full extent in rural SA. In the general, intercultural understanding of policy concepts such as development, standards of living, illiteracy, and so forth need detailed research scrutiny. The researcher also proposes that policy documents should never be viewed as complete and final, but rather living in that they should be scrutinised on an ongoing basis.

It is, therefore, hoped that through this research an ongoing process will be started where further African voices may collaborate in ICT policy formulation. Openness to African voices will allow the rural African community to formulate and align their own visions and development goals more easily in their own way and for their own context. Empowering people from developing communities to pursue post-graduate research studies might be a simple and effective strategy to empower African voices to document their views of reality.

The role of cultural interpreters is fundamental to the implementation and translation of ICT. One should be open to ownership and guidance from community leaders and visionaries in the implementation of policy and the explanation of what policy should achieve, values that it should aspire to and guidelines for implementation. Policy establishment and implementation should take place within a mutual ethical framework where the “haves” and the “have-nots” are seen and respected as equal partners. Both parties should understand and address perceived power relation in intercultural activities. The rich and “developed” should not assume a higher or more sophisticated or empowered status than the poor and “under-developed” (this is mostly a subconscious assumptions of Eurocentric thinkers) so as to not abuse the dignity or threaten the unique social fabric of rural African communities.

How to get cultural interpreters and specifically African voices involved in policy formation is a concern that still needs considerable research scrutiny. It also requires the educating of both the “developed” and “under-developed” in understanding issues such as the intricacies of intercultural communication, power relations, different views of reality, differing value systems, as well as establishing mutual understanding of meaning of development concepts.

The establishment of ethical community entry protocol and guidelines should also consider the inequalities and historic assumptions that the both “the developed” and “the underdeveloped” might have internalised. The misconceptions of both the impoverished and the rich or the “developed” and those in need of development should be addressed (Lewis, 1994). Some authors argue that the under-development of Africa is partly due to the historic oppression of the Europeans for many centuries (e.g. Asante, 1983). This belief system should be acknowledged in policy implementation. The reasons for poverty should be understood and the social implications of capitalism, overdevelopment and high standards of living should be clear. For many centuries, European development and capitalism in Africa has caused the deterioration of local community

disciplinary structures and moral fibre. For example, husbands and fathers went to cities to earn money to “send home” and respect for the wisdom of elders has diminished (Asante, 1983; Willoughby, 1928). In addition, the social isolation of many city dwellers may be difficult to comprehend for those who come from rural areas where people still function in community context. This implies that social development, especially health, education and employment for school-leavers, should have the same importance if not a higher value than economic development; and knowledge literacy or education should support social development.

In the following section, the author briefly shows to what extent the research questions are answered:

- **What is an appropriate theoretical underpinning and therefore appropriate departing values for understanding and learning from the collisions between international ICT policy and the realities and difficulties associated with deep rural Afrocentric communities in SA and how should international ICT policy be open to this?** A detailed theoretical underpinning and critical epistemology for scrutinising the research questions and context are put forward. The critical theoretical underpinning represents the departing values for community engagement and also an appropriate critical stance for questioning international ICT policy and the outsider-researcher’s attitudes, values and assumptions. The realities that face deep rural communities in SA have been described and an Afrocentric view of reality is explained as it assists in critical enquiry. Based on theoretical underpinning and data, an adaptation to the ICT-CST policy framework is put forward. This adaptation, which could possibly be relevant to other ICT4D policies, accommodates for a mutual ethical framework and intercultural understanding, the role of cultural interpreters and ownership, ongoing needs assessment and situation analysis phases, knowledge transfer and sustainability concerns, community entry phases and flexibility and openness to innovation in ICT policy implementation.
- **What are the difficulties associated with the intercultural understanding of meaning of development concepts and subsequent application of international ICT policy in deep rural communities in SA?** The difficulties associated with the intercultural understanding of meaning relates to two general aspects. Firstly, Afrocentricity represents a different view of reality from Eurocentricity or Western culture. Due to the historic Western domination of the

global development and ICT policy formulation, Western thinking, values and assumptions are often embedded in ICT policy which potentially creates contentious issues. Secondly, the impact of poverty, sickness and death evident in Happy Valley requires a unique and specialised approach in development initiatives. Both these aspects represent potential tension in communication and intercultural understanding and therefore a collision between assumptions embedded in international ICT policy and the view of reality of deep rural Afrocentric communities in SA. This implies that the meaning of development concepts such as poverty, development, ownership, sustainability and so forth should be clarified in ICT policy implementation.

- **How should international ICT policy facilitate an Afrocentric view of reality and what is the role of cultural interpreters in this endeavour?** The paper highlights examples where Western thinking and values are embedded in the ICT-CST policy framework. The paper also highlights some aspects of the Afrocentric view of reality and how the tension and realities that face deep rural communities in SA could affect ICT policy implementation. The critical importance of cultural interpreters for two-way interpretation of meaning and assumptions as well as the need for a mutual ethical framework of intercultural understanding is discussed.
- **What is the value and importance of community entry in ICT4D efforts and how should community entry be represented in international ICT policy frameworks?** Based on the observations that it is very difficult for a culturally different outsider to judge the specific development needs that a community might have and that community outsiders often do not understand the difficulties and social intricacies of the community and its culture, the paper describes community entry as an essential and ongoing aspect of ICT policy implementation. The importance of building relationships and trust and not assuming higher status or power in intercultural endeavours is highlighted. The prominent role of cultural interpreters in community entry is explained.
- **How should international ICT policy and the outsider-practitioner identify and approach the needs, requests and emancipatory interests of the rural Afrocentric community and how is ongoing empowerment, development and community ownership established?** The paper discusses a community consulting approach where community ownership is established and the guidance of cultural interpreters is sought in understanding the needs, requests and

emancipatory interests of the local Afrocentric community. The paper also reflects on examples and stories of how needs, requests and emancipatory interests are addressed in Happy Valley and how ongoing empowerment and therefore sustainability may be ensured. Two general areas of empowerment are put forward, namely, the empowering of people through ICT knowledge and the empowering of people through motivation, dignity, recognition and a holistic approach to ICT4D. In the process the outsider is also empowered to appropriately and critically engage with a local African community as tacit cultural knowledge, understanding and stories are documented.

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