

Community Informatics – the Purpose of Research and Practice: An applied interpretation

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Abstract: This paper considers the purpose of community informatics and reflects critically on key questions relating to community informatics research and practice. The paper then proceeds by relating communications and, by association, community informatics to community development. This leads to a discussion to the relationship of community informatics with community voice and empowerment and how these can be supported through community learning. A model of community learning partnerships is presented before being applied to current community informatics research and practices in Kenya.

Key words: Community development; community communications; community voice; community learning; community learning partnerships

Introduction

In the early days of the Community Informatics Research Network (CIRN), one of its founder members defined community informatics as “the application of information and communication technologies (ICTs) to enable community processes and the achievement of community objectives” (Gurstein, 2003a. p. 77). Several years later the following description – “the theory and practice of empowering communities with information and communication technologies” – is offered by the organisers as a means of contextualising the deliberations of this year’s conference (CIRN, 2011). As the focus of these deliberations is to reflect critically on the nature of community informatics research it is useful to first consider what the purpose of that research is. That is to say why do we engage in such investigations?

Of course whilst community informatics, as an academic construct, is relatively new (Day, 2010), the practical application of communication media and technologies in community environments have been instrumental in developing and sustaining the social infrastructures of community life throughout history. Indeed, as White argues, communication is the bedrock upon which community ecologies (Hearn and Foth, 2007) are formed, developed and sustained.

The kind of communication that creates community must be that of active interpersonal communication, leading to a common sense of purpose and solidarity. It seems sufficient for our purposes to view the art of community-building as that of creating effective communication linkages. These enable people to define their own problems, set their own goals, come up with their own solutions, and optimise individual and group abilities to learn, resolve their differences, and to act on their own behalf. (White, 2000, p. 29)

Understanding the complex challenges facing community informatics researchers

This paper is founded on the proposition that within a community informatics research context the purpose of knowledge creation should be to assist communities in understanding their social environments so that they might appropriate communication technologies/media to support and sustain community building activities and realise community goals. In my opinion, the significant question is not whether we can attract funding by finding ways to measure ICT use by our community partners but which methodological approaches and research methods

are appropriate for creating knowledge of benefit to, and that can be used by, communities in a given context? As I explain to my undergraduate students – research methodologies and methods are not right or wrong, they are simply more or less appropriate in a given context.

This might mean researchers adopting quantitative approaches to research, e.g. measuring the number of people on a public access training programme or how many times a piece of equipment is used and by which demographic but it might also mean developing community-based research partnerships that seek to identify and interpret community needs and assets through the use of qualitative or even mixed methodologies.

Whether we adopt methodological approaches that measure, interpret or mix both are matters of appropriateness related to the research questions being posed. Because policy-makers and/or funding agencies have a tendency to fund projects that generalise research problems and promote replicable solutions does not mean that we as a network should develop a research agenda that pursues such an approach. In my opinion, the overriding goal of CIRN should be to generate knowledge that presents policy, funders and academe with irrefutable evidence of the rigour and social significance of our research rather than seek ways to chase funding and reputation. As Kuhn suggests, paradigms shift (Kuhn, 1962) and any quest that seeks to justify the existence of community informatics solely through measurement is, in my opinion, to miss the point of why we choose to engage in community informatics.

Of course, I am aware that such an approach places community informatics researchers at odds with the current trends of business models in academe. However, there is a difference between research as an agency for social change and research as an agency for reputation advancement be that individual or institutional. The former need not preclude the latter but the latter should never subordinate the former. I believe that we have a responsibility to take a moral and ethical stand, if CIRN seeks to facilitate the type of social change referred to by Gurstein (2003) and others, then community informatics research and practice should be shaped by community visions of how ICT might be utilised to underpin community practices and support the plans and activities of community groups, organizations, networks and institutions in order to build and sustain community networks. (Day & Schuler, 2004; Schuler & Day, 2004).

Community informatics as effective research

Successful community research is based on collaboration between the community and the researcher.

One of the best ways to make sure that the research will be useful, and that the research methods will fit the culture of the group or community, is for the people affected by the research to guide it. (Stoecker, 2005, p.33)

Of course, words such as ‘partnership’ and ‘collaboration’ are used frequently these days – almost to the extent that they have become policy clichés. However, it is not always clear that policy makers and funding agencies understand the true nature of partnership collaboration when considering policy priorities and objectives. There appears to be a working assumption that partnering automatically produces socially useful outcomes and is always mutually beneficial. Whilst this might be the aim, the truth is that partnerships vary in their nature and are often problematic.

Ostrower suggests that collaborating in partnerships requires time, patience and effort to be successful (2005) – research funders take heed, this is something that is all too often overlooked in funding programmes. Gaining community commitment to research is crucial and reinforces the importance of dialogue between community and researcher. Illustrating the need for building what Stoecker calls ‘participatory relationships’ between community and researcher (2005, pp. 39-44). Of course, academics need to be prepared to commit to such an ethos of partnering every bit as much as the community participants.

Developing participatory relationships is no easy task, especially as the cultures of community and academic sectors are usually very different. This does not mean that they cannot be built, simply that they require careful planning. Across the world there are glowing

examples that highlight how collaboration can and does work. Successful partnering entails an understanding of why partners have decided to join the partnership and what they hope to gain, as well as what they might contribute. Partnerships require acceptance of weaknesses as well as strengths. They demand respect for each other's knowledge and skills, and a great deal of patience and flexibility. This can only be achieved through open and sustained dialogue that enables actions to be planned, implemented, monitored and evaluated among equal partners.

Grounded in relationships of mutuality and reciprocity, the community research approach provides researchers with insights and data that traditional social science approaches could never hope to elicit. The know-how and skills of community practitioners combined with the local knowledge (often tacit) – developed through the 'lived experiences' – of local community citizens contributes to an impressive knowledgebase from which an understanding of the social environment of community can be developed. The community knowledgebase is an indispensable resource for community research and a central resource in the community network.

It is important to understand in any consideration of the selection of community informatics research methods that no single approach, e.g. measurement, is correct. In just the same way as no one type of community exists, community informatics theoretical and methodological approaches are diverse and complex. It must be understood that community informatics, regardless of pressures exerted by external agencies, presents a range of perspectives rather than a single set of scientific statements or principles. The contribution of community informatics to the universal body of knowledge should be made through the adoption of diverse, multi-level, multi-method approaches to investigation and practice. Community informatics research and practice should: 1) identify the goals, needs and assets of participating partners, 2) develop an understanding of the social, economic and cultural contexts in which the research/practice is grounded, 3) create and sustain open and transparent communication processes, and 4) disseminate and share knowledge prior to, during and after the design and implementation of research/technological applications. The important issue here is the approach to community engagement and dialogic action – the selection of methodological approach is secondary.

In short, community informatics should require researchers and technologists¹ to connect with the communities they plan to work with, in order to design and build community technology initiatives that are both relevant and useful to community life. Active and inclusive dialogue is a prerequisite to the facilitation of mutual understanding of partners' needs and limitations – important if false or unrealistic expectations are to be avoided. As Keeble and Loader argue, "a grassroots perspective whereby community members are centrally involved in the application of ICTs for community development" (2001, p.4), is required if CI is to contribute to the distinctive research and practice agenda necessary for affecting the social appropriation of communication technologies and building effective community networks.

Community informatics – practice and practitioners

If the research component of community informatics concerns itself with generating knowledge relevant to community ICT practices then community informatics researchers are advised to familiarise themselves with the theory of community practice. Community practice is a method for promoting policies that encourage the planning, building and sustainability of healthy communities and usually involves some or all of the following components:

1) The sustained involvement of paid community workers; 2) A broad range of professionals who are increasingly using community work methods in their work; 3) The efforts of self-managed community groups themselves, and 4) Managerial attempts at reviving, restructuring and relocating services to encourage community access and involvement in the planning and delivery of services. (Glen, 1993: 22).

¹ I use the term technologist as an inclusive term for those with the ICT skills required for building community informatics systems and applications.

Describing the symbiotic relationship between community practice and community policies, where each is related to and promotes the other, Glen identifies three community practice approaches. 1) Community services approach, 2) Community development, and 3) Community action.

Community action comprises planning, mobilisation and campaigning in pursuit and realisation of community interests and goals. This sometimes involves the employment of conflict tactics in the community interest, usually within the community policy environment. The community service approach on the other hand focuses on the development of community-oriented organisations and services. It involves both philanthropic and compulsory forms of assistance to people in need and is often provided by statutory and voluntary services through the local community infrastructure. Community development fills the space between community service and community action on the community practice continuum. It concerns itself with facilitating processes by which communities become empowered to define and meet their own needs.

The agencies, organisations, groups and partnerships involved in community practice can be diverse and many in number. Community practice approaches therefore can be 'top-down' - i.e. promoted and/or provided by statutory authorities, charities and voluntary bodies – in a 'doing to' manner. Or they can emanate from within local communities, i.e. 'bottom-up' in a 'being done by' manner. Usually, top-down initiatives tend to be associated with the community services approach. As community practices move toward a more action-oriented approach, so they tend to adopt a more bottom-up approach.

No matter what the composition of local partnerships or the complexion of the approach being employed, community practice should be viewed as a framework of 3 interrelated elements that assist in identifying, understanding and fulfilling community need. Within a community informatics context, community practice requires the subordination of ICT systems, artefacts and services to the needs of the community in order to build healthy, empowered and active community.

What is interesting about much of the community informatics discourse is its bias toward community service at the expense of community development and action. Coverage of the emancipatory and ameliorative potential of ICT can be found but tends to be rhetorical, providing few examples of its practices or analysis of the experiences. Information Society and Network Society policy makers have, for over a decade, failed to engage people, or engage with people, at community level. Ignorance of digital technologies and a dependency, by statutory agencies and research funders, on self-selecting, self-serving 'experts' – who usually take the form of technology companies, network consultants armed with business models, and academics who have never set foot in a community – created a myth around ICT. The myth suggested that access to ICT were a panacea for any number of social ailments. Unrealistic expectations of public-access computing in policy and research circles, together with a lack of understanding about sustainable community driven ICT initiatives in community development circles, together with 'technology first' and *measuring* rather than *understanding* community fixations among academic 'experts' and institutions, go some way to explaining the absence of any meaningful theoretical base in community informatics.

Another contributing factor to the somewhat singular trajectory of community informatics has been an assumption that ICT practitioners are synonymous with community practitioners. Whilst the activities of some ICT practitioners in the community do contribute to community development, this is not always the case – far from it in fact. Public-access initiatives often focus on developing computer skills in individuals, rather than supporting community development goals through contextualised community learning courses.

Community informatics design and development strategies need to focus on the role of ICT in addressing community need and building healthy communities rather than the fixation with the 'look what technology can do' approach found all too often in much of the literature. If community ICT initiatives are to support, sustain and empower community networks, the involvement and participation of local people throughout the initiative life-cycle is essential. This can only be achieved if community ICT are grounded in community development strategies and activities.

Community development through community communications

Despite a rhetorical fulsomeness in the policy and academic literature historically, there is little evidence of strategic thinking about how ICT might contribute to policies and practices promoting both *digital* and *social* inclusion. Just as there appears to be little evidence of how community development and development practitioners might be engaged in a dialogue on these matters. Yet, as Heeks advocates (2008), if spaces for dialogue can be created at the knowledge confluences of different fields of practice and theory then much can be learnt from the interaction and sharing of experiences and ideas that results.

In a critical reflection on the effectiveness of the contribution of community informatics to community development we are encouraged to consider the effectiveness of community informatics through a community development lens. Pitkin urges us to be critical in, and reflect on, our activities whilst exhorting us to “collaborate in constructing truly participatory, transformative and ethical community informatics applications that support community development (Pitkin, 2006, p.95). So as to ensure collective understanding of the term, community development is described as facilitating “efforts to build local capacity, educate and organise community residents and increase their access to local policy making that affects their lives” (Pitkin, 2006, p78).

This then is the first challenge facing this conference – identify the stakeholders and find ways and means of stimulating and facilitating dialogue between them. Such a challenge should be undertaken with purpose and intent rather than as an exercise in academic rhetoric.

Of course collaboration and partnerships of this nature require input from external agencies as well those from community and academic². Policy makers, commercial enterprises, higher education institutions, community development agencies and even community practitioners bring all manner of power and influence (funding, resources, expertise, etc.) to the community partnerships table. However, power is a moveable feast that is dependent on people’s acceptance of its existence and dynamic nature. Power exists in a constant state of flux. It is often exchanged between groups of people and within the context of community organising and partnership development it is often based on cooperative interaction (Biklen, 1983). For community partnerships, such as those being considered here, to be both effective and sustainable, the power to determine and control community processes and decision making must rest within the communities themselves.

If community informatics practices are to be guided by a community development ethos, it follows that changes to the community resulting from community informatics interventions should be agreed by and be acceptable to the communities involved. This includes the design, implementation and development of technological artefacts and systems.

Such a partnership approach to community informatics interventions will see community informatics practices shaped by community needs and community voice rather than the other way round. Community development involves processes “of strengthening individuals, groups and organizations to gain the knowledge and power to work towards change in their communities (Banks, 2003 p. 12) and community informatics should do likewise.

Community voice

In much the same way as community development is motivated by the rationale to build capacity and empower people to shape their own community environments, so community informatics and community media – focusing as they do on tools and processes of community information and communications – should be driven by the need to create platforms and spaces for community voice and communications. For example, a treatise on community photography techniques, reflected that “community use of photography can be used to give voice to and make visible, otherwise hidden groups and community based issues” (Purcell, 2007, p2).

² In the context of this paper, when the word academic is used as a noun it assumes the scholarly knowledge and practices of teaching & learning; research; & ICT design, implementation and development.

Purcell's observations not only highlight the significance of community voice as an articulation of community needs, feelings, aspirations and wants but they also reminds us that within the communicative ecologies (Hearn & Foth, 2007) that comprise community life there exists a richness and diversity of cultures, values, beliefs and goals. Community voice can in one moment be harmonious – expressing itself as one on issues and events affecting community life – whilst in the next can appear chaotic, contested and competing. Such is the nature of community voice, indeed, such is the nature of community – the main challenge facing community informatics is whether or not we are capable of working in such environments; whether or not we can engage and form partnerships to create digital tools, spaces and processes that support community learning and sustain community development without imposing our own values, cultures and knowledge through the power of expertise (Day, Khan & Hewetson, 2009) rather than how we might measure such activities.

It is my contention that stimulating, supporting and sustaining community voice is a central facet of effective community informatics. This resonates with the work of Stoecker who reasons that community-based research should focus on being useful to the community; employ diverse methods; emphasise collaboration and above all be participatory (2005), i.e. engage and involve the community, wherever and however practicable, in all stages of research. A central element of effective community informatics research/practice partnerships should be that they encourage local people to become “the subject of their own investigation, rather than the object of an external agency's concern” (Wang & Burris, 1997). Contextualizing community informatics as a potential transformative agent for community development focuses attention on what Gurstein terms *effective use*, i.e. “the capacity and opportunity to successfully integrate ICTs into the accomplishment of self or collaboratively identified goals.” (2003b).

Gurstein's *effective use* thesis suggests that communities need access to ICT in order to assist community development and empowerment in a digital age, but emphasises that access in and of itself is inadequate in achieving this end. Knowledge of how to use ICT is also required. As is the capacity and capability to apply that knowledge to the contextualized processes, interactions and activities found in the social, economic, ethnic, cultural, religious, family and friendship ties (Prethuis, 1970) of community life. In my experience as a community informatics academic engaging in partnerships with communities in the UK and Kenya, requisite to community empowerment are the informal education practices (Packham, 2008) of community learning (Nielsen, 2002).

Empowering community voice through community learning

Historically, *bridging the digital divide* has meant public access to computers and ICT training in order to equip people as consumers in digital age marketplaces – where retail therapy, employment, entertainment and e-government services are seen as the drivers of human existence. This worldview fails to cater for the full range of human needs and capabilities required for citizenship in the *digital age*. It also presents a very limited interpretation of the *digital divide*. The approaches suggested for achieving digital inclusion in the dominant *digital age* paradigm are indicative of the priorities of a specific techno-economic agenda. In truth, despite technological advancements, very little has changed in the milieu that is *network society* policy. Visions of an alternative paradigm do exist however. A paradigm based on inclusion, empowerment and voice, in which policy, through community informatics research and practice, seeks to empower people to engage in democratic and transformative dialogue from which active and healthy community environments can be built, developed and sustained (Day, Khan & Hewetson, 2009).

Working in partnership with communities to build individual and collective capacities and capabilities – so that ICT may be utilised and appropriated in ways that meet community need, support community organisation and affect social change – is *the big challenge* before community informatics academics. Not whether we measure or interpret.

However, when focusing on community empowerment through the use of ICT it is important to acknowledge the distinction “between empowerment as *capacity building to cope*

with the requirements of life more efficiently versus *capacity building to transform the conditions of life*" (Huyer and Sikoska, 2003. p4). A distinction that throws down a gauntlet to community informatics academics, because it forces us to consider why and how we carry ourselves in the field we have chosen to engage in.

Community Learning

A significant discussion about *good participatory practices guidelines* identifies a number of core principles that we would do well to heed: *shared ownership; transparency; accessibility; accountability and participatory management* (UNAIDS, 2007). The same holds true for community informatics, which "should benefit all parties it helps....build community capacity to understand and inform the research process" (UNAIDS, 2007). The growing body of evidence that *community voice* makes a significant contribution to effective community research and development is supported by the Executive Director of *The Communication Initiative*, who argues that, "When major development successes are assessed, there is a clear correlation between the prominence of the voices of those most affected by the issues in questions and the effectiveness of the action" (Feeks, 2009. p.13).

Whilst not putting words into practice as effectively as might have been the case, community involvement has been a guiding principle of community work in the UK, since the emergence of community development in the 1960s (Chanan, et al, 2000). Focussing on enabling people to become active, organise and engage in community action. This type of community involvement is often described as *active citizenship* and has been defined as "being involved in your community, having your say and taking part in decisions that affect you. Above all it is about people making things happen" (Packham, 2008. p.149). Or put another way it "is about the active participation of people in their own transformation" (Ledwith, 1997. p.13).

Active citizenship is presented here as an indicator of community empowerment. It is considered alongside community learning because the voices of many communities, especially disadvantaged and marginalised communities, often go unheard in modern society and community learning is a process which, when grounded in everyday community life, enables the capacities of people to be built in an informal but relevant manner (Day, 2011).

Of course, as previously mentioned, Academe is increasingly influenced by market driven management thinking and the application of business models to research and learning. It would be blinkered to suggest that community informatics academics are excluded from the pressures of Higher Education today. However, there are agencies and bodies of policy and funding influence interested in supporting and facilitating research and practice that support knowledge generation and action in support of community and social empowerment. Admittedly, such opportunities are not as widespread as those found in the dominant Network Society research paradigm but this only serves to present opportunities to counter commonly accepted scientific 'truths' through rigorous, creative, innovative and socially inclusive research design and implementation. Needless to say, when conducted through community informatics lenses, both inquiry and practice should be driven by the goal of community empowerment through learning.

Applications of Community Learning Partnerships

During the past few years, since funding for the Community Network Analysis (CNA) projects (e.g. Day & Farenden, 2007) ran out, I have been pursuing a community informatics research and practice agenda with communities in the UK and Kenya without any formal funding stream. Space precludes a full discussion of these activities, although an introduction to the community learning partnership (CLP) model as well as some discussion of the UK based activities is provided in Day, 2011. Future publications are currently planned which will deal with the theoretical, research, practice and policy issues of the CLP model.

The remainder of the paper discusses an innovative community informatics/media partnership between myself and students from the University of Brighton;

ITSkills4RuralKenya (ITS4RK is a UK based charity started by former University of Brighton students – Kenyan & UK); NGOs representing rural communities, urban townships, excluded communities and youth in Kenya; the Mtandao Viganjani network of rural ICT Centres; the village of Kibugata and various national government offices and politicians in Nairobi. The CLP model, which is undergoing an ongoing process of development and refinement, comprises five iterative, dialogic action stages: **community engagement; problem assessment; solution planning; solution creation and critical reflection.**

All CLP stages are interlinked and although the processes are iterative the circular representation is intended as a visual device aimed to assist conceptual understanding rather than establishing a schedule of activities to be followed by rote. It is also worth noting that as partnership activities the stages of community learning take place at various levels, within and between partners, so any accurate visual representation really needs to be modelled as a 3D network, which was problematic to reproduce in the available 2D space. Please bear this in mind when evaluating the model and narrative that follows.



Figure 1: Stages of the community learning partnership (CLP) process

The following narrative provides a brief insight into the early stages of the evolving CLP between stakeholders at the University of Brighton, ITS4RK and Kenya.

Engage

Of course, the first stage in partnership development is to meet and establish what, if any, common ground exists. In this instance the relationship has been several years maturing and the partnership activities are constantly evolving.

ITSkills4RuralKenya is a UK based charity that recycles and refurbishes ICT equipment in the UK and ships them to Kenya with a view to supporting the establishment of rural ICT centres. ITS4RK also facilitates capacity and capability building through advocacy and awareness raising activities – networking partners in Kenya and the UK. Three of the founders of ITS4RK studied with me at the University of Brighton. Two took my post-graduate community informatics module whilst the third was a dissertation tutee of mine studying community radio in Africa. One of these former students, ITS4RK Director Edward Kibosek, who came up with the idea for ITS4RK during a community profiling exercise in Brighton Kemptown, invited me to present the Keynote speech to the charity’s 1st ICT4Development conference held in Kibugata last year.

It was during my conversations with community members, volunteers and various government officials and academics that the idea for CLPs in Kenya started to evolve. As illustrated elsewhere (Day, 2011; Day & Farenden, 2007) students from my modules have been engaged in community informatics/media partnership projects, as part of their curricular

learning, for some years now. However, it is one thing to set up community-based learning activities in the communities of one's home town, it is another thing all together to establish them in communities some 6,000 miles away – where all manners of cultural differences and potential dangers exist – especially when one is starting from a position of zero budget and just a few weeks to make things happen. However, these challenges also presented opportunities to see if we could make a reality of the dream. Starting with little more than student support and enthusiasm we started our journey.

Assessment

At this early stage of partnership, assessing what needed to be done took place through a two prong approach. In the first, the students and I were brainstormed with ITS4RK, who, secondly, communicated with Kibugat ICT centre volunteers and the emerging network of ICT Centres – Mtandao Viganjani. As a result two possible initiatives to stimulate capacity and capability building were identified:

- 1) A prototype content management system (CMS) for Kibugat with related training and knowledge sharing workshops for volunteers; and
- 2) Community reporting and content generation training through various participatory learning workshop approaches (Day & Farenden, 2007).

A flavour of these PLWs will be presented during the conference and the CLP experiences will be written up in subsequent publications, including a methodological paper. It is also anticipated that I will co-author an applied theory paper focussing on media literacy and capacity/capability building – the call for paper permitting.

Planning

Perhaps the most serious challenge facing us came in the form of the planning stage which required students to realise means of funding the trip – as we were starting with a zero budget. They established a schedule of regular (online and face2face) funding raising meetings and activities. A 'Just Giving' online donation webpage was established and friends, families, university staff and students, together with other potential supporters were encouraged to contribute via regular online announcements and email updates. Other activities included: a Kenya Day on campus with African music, cake stalls, face painting, raffles, etc; a fashion show in a city centre nightclub; a comedy night; and awareness raising activities among local businesses and shops.

Proposals for university funding written by the students were applauded by the various committees but were ultimately unsuccessful. However, we were able to elicit some limited funding through the Community University Partnership Project (CUPP) and a couple of small donations from the Faculty and School, who, rather oddly, were able to support my engagement but not that of the students. However, through dedication, hard work and running on a very tight budget 4 students and I were able to make the trip to Kenya.

I would add a pedagogical rider to this section of the model. As much of this experience was experimental in nature and my longer term goal is to find a way of incorporating CLP activities into the curriculum formally, I wish to retain at least some of the goal oriented, self-financing aspect of the module (course). Without a shadow of a doubt that by working collaboratively to support each other in funding the trip (even those who knew they would not be going) an effective learning community was formed among students. The online engagement (an assessed part of the module) showed more engagement, more discussion, more organisation and willingness to share ideas and resources than ever before.

Creation

After an initial sensitisation workshop, in which ICT Centre managers, young volunteers, villagers, ITS4RK and I brainstormed the purpose of the planned workshops and training sessions, my students got together with the young volunteers from the village for a more informal chat session. This was important because many of the young volunteers, especially

the young men, lacked confidence and often deferred to other villagers, especially the elders, and were unwilling to engage in dialogic knowledge exchange. This hampered their chances of sharing their voices and building their capacities/capabilities. Once a rapport started to emerge the students introduced the young volunteers to the Flip cameras that we planned to leave in the village. After sensitisation with the technology (although they possess mobile phone – some with cameras) the young villagers had never seen a Flip camera before let alone used a digital video camera. So some preliminary time was spent simply familiarising themselves with the technology.

This then led to them being introduced to the concept of community journalism and some reflection by the young people on the hitherto unexplored notion of them becoming community reporters. All of these sessions were conducted in a friendly and informal manner. Once the volunteers felt comfortable, the students split them into groups and asked them to accompany them and introduce them to the community environment – all the while looking out for community interest stories that could be reported on. Of course, the purpose wasn't to produce professional standard video stories. The intended outputs were to build confidence and capacities, which might in turn lead to the development in capabilities, as well as raising awareness of the activities within the community.

It was also hoped that these mobile PLWs (Day & Farenden, 2007) would be facilitated by and that participation was among peers – subsequent friendships established on Facebook, would appear to attest to the success of this style of approach, as would the resultant community video presented to the recent 2nd ICT4Development conference by these same deferent and unconfident youth.

Kibugat ICT Centre now has 50 PCs on a local area network and it is worth noting that the village was only recently linked into the electricity grid as a direct result of the ICT Centre development. In fact, the village's communications infrastructure is restricted, especially as roads in and out are deeply rutted mud roads (despite the local MP being Mister for Roads and Transport). In rainy periods making the 40 minute trip to Litein (the nearest town), even if a matatu is available, is probably not worth the effort just to get to an Internet Cafe.

So although the planning stage included making preparations for the project activities, e.g. designing the prototype village CMS³ by using content created during the previous year's visit. Using the site for community training during that visit was problematic due to the virtual absence of Internet access in the village. Internet access takes the form of telecoms provider dongles. Orange connectivity is poor and Safari.com is only a little better. Connectivity was slow at best and very temperamental. It was possible to connect to the internet and run a reasonable but limited training workshop for the Mtandao Viganjani ICT Centre managers using an android mobile one of the managers had. Unfortunately, the manager couldn't stay, so subsequent training was run using the dongles albeit very slowly and for small numbers. However, this was incredibly frustrating and we needed to show the young volunteer community reporters how to join the site, create a profile and post content. This meant a major shift in plans. Leaving two students behind to help facilitate workshops, I and the other students took our transport to Litein and hired an Internet cafe for the morning.

Reflection

It is hoped that a longer term solution to these problems is on the cards. The local tea company, which also experiences internet access problems, has expressed an interest in engaging in a partnership with the ICT centre, the local schools and medical centre to bring broadband to the village. Discussions are ongoing but there are some promising signs. I have also heard from someone in the Kenyan government that rural broadband access is a policy priority for next year but I'll believe that when I see it!

Space precludes detailed coverage of the participatory learning workshops and those that followed a few weeks ago at a truly inspirational 2nd ICT4Development conference but the collaborative work of my students who partnered with the local youth volunteers warrants

³ <http://kibugatvillage.net>

acknowledgement because it was these activities that acted as the catalyst for the young volunteers to continue community reporting once the students had returned to the UK. Inspired by their new found role as community reporters, they set about recording the delivery of several hundred PCs and equipment from the UK to be distributed among the Mtandao Viganjani ICT centres network. Working with volunteers from the UK (George & Geraldine) to set up and network the PCs and troubleshoot the distribution, the young people shot hours and hours of footage. Since then, they have worked with another volunteer (Gill), over to project manage the ICT Centre development, to edit the video. The result is a video, with some editorial glitches and overly loud music, that is heavy on vision and community purpose and value but beyond that in those few months the young people have been helping to transform the ICT Centre and now look as if they may well be the ones who will manage and run the Centre. Who would have thought so much could be achieved with two Flip cameras?

Conclusion

If the purpose of research is inquiry that creates knowledge and understanding; and if we synthesise the definitions presented in the introduction to this paper and apply the result to the focus of this conference then it is reasonable to assert the following. Community informatics research is a form of social inquiry designed to promote understanding of: 1) community empowerment through the appropriation of ICT; and 2) how and in what way such appropriation enables community processes and the realisation of community objectives.

From this it follows that the primary purpose of community informatics research is the creation of knowledge for community benefit – all else is, whilst important, is secondary. This paper has sought to lay out the conceptual elements of this argument and then present an application of community informatics practices that illustrate the points made.

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