EMPATHETIC CONSULTANCY: A REFLECTIVE APPROACH TO ICTD

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Abstract: Empathetic Consulting articulates positive characteristics of long-term ICT capacity building engagements using external advisors. Consultants need to demonstrate commitment to capacity building rather than service delivery, flexibility in adaptation of technical skills to local contexts and resilience in the face of crises. Partner organisations must harness and sustain resources to ensure capacity building takes place. Counterpart team members should be committed to learning, prioritising their own personal and professional development. A case study comprising six education institution ICT installation projects is used to identify factors influencing achievement of project objectives. Projects that do not align with strategic priorities of organisations and personal priorities of counterpart team members are not likely to succeed. New skills must be nurtured with confidence building increments over time. For example, a web presence project did not succeed because senior management commitment was not sufficient to overcome a skills gap and lack of an organisational process for content generation. Three projects that had support from senior management and coincided with technical interests of team members met their objectives and are currently in use. These projects demonstrated a growth of counterpart team skills and confidence, encouraged by declining levels of technical supervision.

Keywords: ICT Capacity Building, ICT for Development, Development Informatics

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1. INTRODUCTION

Globalisation (Freidman, 2007) (Stiglitz, 2003) and the "Information Age" are creating profound social, cultural and economic changes of historic proportions (Castells, 2000). ICTs have become a fundamental and essential need for any society during the information age. If IT projects are to achieve their objectives, in a development context, they must move from being supply-driven serving passive consumers to being demand-driven by active producers and innovators (Heeks, 2008). This paper introduces the novel notion of Empathetic Consultancy which characterises factors that positively enhance the achievement of IT capacity building project outcomes. Empathetic Consultancy arises from personal reflections on two years spent on ICT for Development placements with the international NGO Voluntary Services Overseas[1] at two educational institutions in Ethiopia.

The rest of this introductory section describes some features of the educational context in Ethiopia, factors influencing capacity building outcomes and a brief overview of commercial consulting. A case study comprising six education institution ICT capacity building projects is presented in Section 2. The six case study projects are discussed to show how organisational, social and technical factors explain different outcomes. The lessons and reflection presented in Section 3 introduce Empathetic Consulting and describe factors influencing case study project outcomes. There is a discussion of the findings and some concluding remarks in Section 4.

1.2 EDUCATIONAL CONTEXT

The Government of the Federal Democratic Republic of Ethiopia (FDRE) has established Capacity Building Strategies and Programs that are designed to achieve the country's broad development goals (FDRE, 2002). The strategic priorities of the FDRE Ministry of Education (MoE, 2005) highlight expanding access and establishing new universities. The chronic shortage of skilled professionals (Commission for Africa, 2005) and increased demand for secondary school teachers are factors that have precipitated a dramatic higher education expansion plan in the country (Saint, 2004). In 2006-07 a further 13 universities were opened. It has recently been announced that a further 10 universities will be constructed (making a total of 31 universities in Ethiopia). The total number of students enrolled has gone from 54,285 in 2002-03 to 203,399 in 2006-07 (MoE, 2008). This rapidly expanding student population, and as one colleague described it an "environment of constant change" is not without considerable pressure on staff (Assefa, 2009).

The educational culture in Ethiopia has inadvertently tended to promote shallow learning. This has been due to the overwhelming focus on lectures followed by terminal examinations. This educational culture is symptomatic of a "banking" conception of education critiqued in (Friere, 1970). Education is seen largely in terms of a transfer of knowledge from teacher to student.

[1] This paper presents the personal reflections of the author and is not intended to represent any official policies of VSO or the Higher Education Strategy Centre.

1.3 CAPACITY BUILDING

Development informatics is essentially about the use of technology to achieve some social or economic development goal, such as poverty alleviation or acquisition of basic literacy skills. Technology diffusion requires adoption of a range of new skills, practices and processes. Thus, lasting change is achieved by changing individuals; new organisational structures and processes will consequentially follow (Black, 2003).

The need to consider both technical and social issues has long been understood in the information systems field, for example see (Bostrom, 1977). More recent research recognises that technology diffusion brings with it the need to develop new trust relations between stakeholders (Barrett, 2001) and identifies seven project success dimensions (Heeks, 2002a):-

- Information (data stores, data flows)
- Technology (hardware and software)
- Processes (user activities)
- Objectives and values (culture, politics)
- Staffing and skills (quantitative and qualitative aspects of competencies)
- Management systems and structures
- Other resources (time and money)

The seven dimensions include two that have a strong information systems flavour: information and processes. The other five dimensions can readily be applied to hardware infrastructure projects. Differences are highlighted between hard and soft models in each dimension (Heeks, 2002a). The case studies presented in Section 2 below are interpreted using soft models. Technology is seen as complex and value laden. Objectives are seen as potentially differing between management and counterpart team members and between organisations and individuals. Staff members are seen as being political, sometimes prioritising short term self-interested behaviour above longer term personal or professional development. Management systems are observed to be informal and subjective. Resources, such as time, are sometimes seen to be used to further personal objectives. More recent research has used the concept of maturity to model both the skill set of the development team and the organisational project management (Joubert, 2007).

2 CASE STUDY PROJECTS

Six information technology capacity building projects have been chosen to illustrate selection factors that affect outcomes. The projects were conducted over a two year period in the town of Debre Birhan, 130km north east of the Ethiopian capital Addis Ababa. These were not the only projects conducted, but they are representative and illustrate the contrasting outcomes of ICT in Development. Three of the selected projects were completed, while three were not. Completed, as used here, means handed over to users in a working condition. A completed project is a weaker measure of success than a sustainable project (Ali, 2007). Completion is used here since insufficient time has passed in some of the projects to know if any required changes or technical problems can be locally managed.

2.1 Case Study Context

The projects were undertaken in two different institutions, Debre Birhan Teacher Education and Vocational Training College (DBTEVT College) and Debre Birhan University (DBU). The college is administered by the Amhara State Regional Education Bureau and trains primary teachers and vocational students. The college celebrated its 50th Anniversary in 2008. The University is a Federal Government funded institution, one of 13 new universities currently being established in the country. The University started teaching classes, accommodated in classrooms on the college campus, in February 2007. The University campus was inaugurated in June 2007. I spent one year each in DBTEVT College and DBU on placements with Voluntary Service Overseas (VSO).

The counterpart team comprised University instructors working with instructors and the technician from the college. Subsequently, the University hired its own technicians who joined the team. Local volunteers from the nearby Health Science and Vocational Colleges contributed to several weekend installation activities.
Some senior officers in the university had been recruited from the college, so several management team members from both institutions had worked together for some years. They share a common outlook, sense of purpose and commitment to education in Ethiopia. Both institutions were prioritising IT, using a variety of techniques to raise funds: from within existing budgets, by reallocating from other budgets and by attracting external funding.

2.2 Case Study Projects

Project A - DBTEVT College Computer Classroom Installation
This project involved moving the college's main computer teaching classroom into a new building. The room was selected in November 2006. The project involved distribution of electrical power and installation of a 50 seat computer classroom. The capacity was designed to be large enough to accommodate a class of students without the need for computer sharing. Electrical power was supplied to the new site by the Ethiopian Electrical Power Company. I arranged purchasing of equipment and worked with the counterpart team to install power regulation, UPS units and computers (some new, some moved from previous classroom). The first classes, with one student per computer, were run at the new location in April 2007.

Project B - DBTEVT College User Account and File Server Installation
This project was intended to establish a campus intranet including a file server to manage user accounts and provide centralised file storage. This was in order to subsequently provide a data back-up and restore service. A proposal was developed in October 2006 and the team were notified of funding approval, from the Amhara Regional Education Bureau, in March 2007. Procurement started in June but equipment was not obtained until July 2007. The team started work on installation of Ethernet UTP cabling and network sockets for each classroom computer location. The project established provision of dial-up Internet access to computers in a newly established teaching resource centre for staff. However, the placement came to an end before the team was able to install network connections in offices or establish user accounts and storage space on the server. Installation of enterprise anti-virus software solution was also an intended goal of this project which has not yet been completed.

Project C - DBU Internet Service Installation
This project involved installation of an Internet server providing shared access to a dial-up connection. The project followed two computer classroom installation projects completed in early December 2007. An overhead Ethernet UTP cable was installed from the server-room to the remote classroom block where the computer classroom was located. A wooden pole was installed to lift the cable over a track for vehicle traffic on campus. Ethernet switches were installed, both in the server room and computer classroom. There were problems with telephone line installation. Initially the monopoly telephone company installed the line to the wrong building. The Internet Service was launched during early March 2008.

Project D - DBU Student Registration System
This project was to design, implement and deploy an information system to support staff working in the registrar's department. The information system was to provide features for student registration, collation of examination results and preparation of transcripts. The system was to be secure, with six to eight users and a student population of about 10,000, including distance, part-time and full-time students. Counterpart team members conducted a requirements gathering workshop with staff from the Registrar's department. A work plan was developed and work tasks allocated. Some prototype user interfaces, class diagrams and database tables were developed. However, the project team were unable to develop an overall design for the system. This project has not yet been completed.

Project E - DBU Campus Network Extension, Library
Staff Internet access was initially provided in one of the student computer classrooms. Subsequently a small room in one of the buildings designated for use as a library was identified to provide staff Internet access. A wooden pole was installed outside the server room to carry an overhead Ethernet UTP cable linking to the Registrar's department and on to the library. Internet client computers were installed the library block, with an Ethernet switch. This work was completed by local staff during July 2008.

Project F - DBU Web Presence
This project was to gather and edit relevant information from departments and faculties for a brochure web site. A domain name needs to be purchased from the Government-owned monopoly telecommunications provider. The web server is located in the campus server room. This project involves establishing a process for gathering, editing and publishing information. Counterpart team members have not had an opportunity to acquire experience of web server technology. This project has not yet been completed.

3. LESSONS AND REFLECTION

Empathetic consultancy is a novel philosophy[2] that seeks to characterise the best practices of consulting in a development context. Engagement of external consultants is one way to build capacity. Empathetic Consultancy recognises that social as well as

[2] Philosophy is defined here as the general principles or laws of a field of knowledge or activity Garrity (2001).

technical arenas must be managed in order to achieve capacity building project objectives.
Empathetic Consulting is organised around three cooperating communities:-

- Partner organisation,
- Counterpart team, and
- Advisors/consultants.

The partner organisation is the host organisation both for the counterpart team and advisors/consultants. The partner organisation is typically a college, university or other institution that seeks enhanced capacity through an external advisor.
The counterpart team comprises technical and/or teaching staff of the institution. They undertake infrastructure development projects, usually on a part-time basis and seek enhanced skills through knowledge transfer. They are often burdened with considerable teaching loads and work in a resource constrained environment.
The advisors/consultants in this study are international volunteers placed with the partner organisation through the NGO Voluntary Service Overseas. It is assumed here that the consultants bring technical skills which are lacking in the partner organisation. It is also assumed that the partner organisation finds these skills or capabilities desirable, usually because they will help with the achievement of some other institutional goals or objectives. The advisors/consultants typically project manage capacity building interventions.

Empathetic Consulting assumes a long-lived relationship between consultant and partner organisation. The initial period of apprenticeship, which in Ethiopia seems to require six months, builds trust and enables sensitivity to local culture and work practices. The six selected case study projects above reveal several modest successes but also unresolved challenges. The organisational, cultural and political contexts for the projects remained constant and yet the outcomes clearly varied. This confirms the arguments of (Orlikowski01) that technological solutions emerge from socio-economic contexts and become interdependent with them. The need to understand in detail the interaction between contexts, including coercive, mimetic and normative organisational factors has been elaborated elsewhere (Avgerou, 2001).

The college server, student registration and Web presence projects did not achieve their objectives because of the large skills gap among counterpart team members in the areas of software development and Web server technologies. The team members had no prior experience of developing anything more than simple software.
The college server was adversely affected by procurement delays, including equipment and internal construction server room in part of the newly established computer classroom. These delays reduced time available to commission the client-server network and conduct staff training on server configuration and management.
For the student registration software project, there was also a problem of organisational commitment. The information system implementation would have been desirable to management in the registrar's department. However, there was little or no commitment to the project from senior university management. The project would have required significant investment in staff time to learn the necessary skills to build a prototype, never mind a production system. The consultant and the counterpart team were not successful in ring-fencing sufficient time to progress the project.

The Web presence project has enjoyed organisational support and commitment from partner organisation senior management. However, none of the counterpart team members have previously used web hosting software. There was considerable interest in learning about web server software, although it was difficult to set aside sufficient time. The need to establish a process to gather relevant information from middle management officials, such as Deans and department heads, presents a major challenge for relatively low status staff such as IT technicians. Senior management remain unaware of the need for such a process, imagining that the whole web site can be built by the technical team.

The large (by local standards) project budgets revealed challenges to the purchasing capabilities of both organisations. Purchasing must comply with a legal framework to minimise the risk of corruption. Procurement (even for small items) is conducted by a process of sealed tenders reviewed by a committee. Detailed specifications must be prepared for each item, suppliers identified, tenders obtained, tenders reviewed and approved by a committee before any purchasing can take place. The time taken to negotiate the purchasing process introduced considerable delays between project approval and work starting. Furthermore a lack of detailed planning meant that missing items were discovered during project implementation which imposed significant procurement challenges while work was in progress.

The three successful projects showed an evolution in skills acquisition by counterpart team members. There was a reducing level of technical supervision from one project to the next. In this way, counterpart team members gained experience and confidence, eventually taking responsibility for conducting some of their own network installation work without the consultant.

These projects successfully combined organisational and personal interests. Provision of computer classroom facilities and staff Internet access was a high priority for management at both institutions. Instructors were enthusiastic to enhance their networking skills in order to more successfully teach courses. Thus it was possible to achieve project objectives and provide technical solutions that are in use at the time of writing.

4. DISCUSION AND CONCLUDING REMARKS

The novel concept of Empathetic Consultancy has been developed to encapsulate positive characteristics of IT capacity building projects using external consultants on long-term, full-time placements with partner organisations. Partner organisations in this study were: a well-established teacher education college and a new university under construction in Debre Birhan in Ethiopia. Core counterpart team members comprised instructors and technicians from the University and college. In addition, local volunteers from nearby colleges contributed to several of the projects.

Senior management in partner organisations need to galvanize and sustain commitment to IT capacity building. Only if the commitment of external stakeholders, decision-makers and middle management is maintained can organisations attract and deploy the resources needed to achieve project objectives. Detailed strategic plans are required to ensure targets are resilient to abrupt changes of priorities due to turn-over of key staff.

Counterpart team members must be able to spare the time to learn new skills and gain experience. This requires a commitment to learning that overcomes short term temptations for personal income generation.
Consultants using Empathetic Consulting undergo a period of apprenticeship, which in Ethiopia seems to require about six months, to build relationships of trust with counterpart team members. The apprenticeship allows consultants to gain understanding of local culture and work practices. Consultant empathy with organisational goals and personal aspirations of counterpart team members helps develop commitment from the partner organisation and counterpart team. Consultant flexibility enables technical skills acquired elsewhere to be adapted to a local context. Resilience is required to ensure that plans are adapted, or if necessary rewritten, in response to abrupt changes in fragile, and sadly sometimes dysfunctional, partner organisations.

Project selection, within the context of a long-term consulting engagement, is critical. Over ambitious projects may not succeed in attracting sufficient resources and may not be sustainable with the skill-base available in the partner organisation.

Six case study projects were selected for inclusion in this study to demonstrate contrasting outcomes. The college server, University student registration and web presence projects were all over ambitious. There was insufficient time and commitment to undertake both network installation and learn about server configuration. The placement finished before it was possible to obtain financial approval, conduct procurement and develop the necessary counterpart team member skills.

The University student registration project required the counterpart team to learn too many new skills without gaining sufficient support or encouragement from partner organisation management. The project was not a high priority for university senior management, although the information system would have been attractive for the registrar's department.

The Web presence project was supported by senior University management, but progress has been hampered by a lack of organisational processes to develop content. The counterpart team were also unable to commit sufficient time to learn new skills in the area of web hosting software.

Three of the projects, involving computer classroom and Ethernet network installation, achieved their objectives and are still in use at the time of writing. The projects showed an evolution in the acquisition of new skills and experience in the counterpart team. The level and detail of technical supervision was decreased from one project to the next.

The study shows that project selection, within an Empathetic Consulting context, needs to be given greater attention by practitioners. Projects must align with both the strategic aspirations of partner organisations and personal aspirations of counterpart team members to achieve their objectives. Technologies requiring skills outside the current knowledge base take considerable time and resources to develop.

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