

The Performance of Foreign Aid-Funded Distance Education Projects in  
Sub-Saharan Africa: A Qualitative Analysis

Jean-Marie K. Muhirwa

A Thesis

in

The Department of Education

Presented in Partial Fulfillment of the  
Requirements for the Degree of  
Doctor of Philosophy  
(Educational Technology)  
Concordia University  
Montreal, Quebec, Canada

March 2008

© Jean-Marie K. Muhirwa, 2008



Library and  
Archives Canada

Bibliothèque et  
Archives Canada

Published Heritage  
Branch

Direction du  
Patrimoine de l'édition

395 Wellington Street  
Ottawa ON K1A 0N4  
Canada

395, rue Wellington  
Ottawa ON K1A 0N4  
Canada

*Your file* *Votre référence*

*ISBN: 978-0-494-37728-4*

*Our file* *Notre référence*

*ISBN: 978-0-494-37728-4*

**NOTICE:**

The author has granted a non-exclusive license allowing Library and Archives Canada to reproduce, publish, archive, preserve, conserve, communicate to the public by telecommunication or on the Internet, loan, distribute and sell theses worldwide, for commercial or non-commercial purposes, in microform, paper, electronic and/or any other formats.

The author retains copyright ownership and moral rights in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

**AVIS:**

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, publier, archiver, sauvegarder, conserver, transmettre au public par télécommunication ou par l'Internet, prêter, distribuer et vendre des thèses partout dans le monde, à des fins commerciales ou autres, sur support microforme, papier, électronique et/ou autres formats.

L'auteur conserve la propriété du droit d'auteur et des droits moraux qui protègent cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

---

In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.

  
**Canada**

## **ABSTRACT**

The performance of Foreign Aid-Funded Distance Education Projects in Sub-Saharan Africa: A Qualitative Analysis.

Jean-Marie K. Muhirwa, Ph.D.  
Concordia University, 2008

During the heydays of the Internet bubble, “bridging the digital divide” became something of a buzz phrase that triggered substantial funding effort in international development circles. Distance education (DE) was deemed the most cost-effective and cost-efficient way to improve poor countries’ capacity building and development efforts. Using Grounded Theory methodology, this study analyzes the performance of three major foreign aid-funded projects: the African Virtual University (AVU), the Formation Ouverte et à distance (FOAD) and the Université numérique francophone mondiale (UNFM).

This study set out to explore whether these foreign aid-funded DE projects comply with principles of Instructional Design (ID) and Results-Based Management (RBM) and if they have the potential to live up to their promise of cost-effectiveness, cost-efficiency and economy of scale. Thirty-two in-depth interviews and non participant observations were conducted in the field in two higher education institutions in Mali and in Burkina Faso, the content recipients, and in one Canadian HE institution, the content provider.

Findings suggest that the performance of these projects suffered from the lack of Needs Analysis. It follows that current DE projects in SSA may not be sustainable. It is argued that an ecological (Bronfenbrenner) and systems (Banathy) approach of project design and management will help to improve the effectiveness of development projects in general in developing countries and DE projects in particular both in developed and in developing countries.

## **ACKNOWLEDGEMENTS**

It is an honor and pleasure to express my sincere gratitude to the many people I relied upon for support and guidance throughout the writing of this text. First things first, I am heavily indebted to Dr Dennis Dicks and Dr Ailie Cleghorn who patiently and trustfully guided me to its completion. My gratitude goes also to Dr Robert Bernard and Dr Steven Shaw, the other members of my doctoral committee, for their insightful feedback on this project's earlier successive drafts. Thank you to my good friends for their encouragements and moral support throughout this project.

My gratitude goes also to the many participants from Mali, Burkina Faso and Canada. Last but certainly not least, I owe an historical debt of gratitude to Lazare Ntawurishira, my undergraduate thesis supervisor in Educational Psychology at the Université du Burundi. Eighteen years later and worlds away, the note expressing his confidence in my future academic potential he slit in my "Mémoire de licence" encouraged me to push thus far into the academic forays.

## **DEDICATION**

To Salim-Raphaël, my son and my inspiration

To my parents who taught me the value of hard work, honesty,  
caring for and sharing with the needy

With deep love, sincere gratitude  
and a firm belief that another world is possible

## Contents

<b>Chapter 1: Introduction</b> .....	1
<i>Problem Statement and Research Questions</i> .....	4
<i>Contribution to knowledge</i> .....	10
<i>Contribution to practice</i> .....	11
<b>Chapter 2: Literature review</b>	
Section 1: The DE, media and technology debate.....	14
<i>Moving from technology to learner and context centeredness</i> .....	16
<i>Implications of learners' and context's centeredness for DE</i> .....	17
<i>The gender issue</i> .....	18
<i>Technology and infrastructure in SSA</i> .....	19
Section 2: Learning theories, ID and RBM	
<i>Learning theories</i> .....	22
<i>Postmodern theories</i> .....	25
<i>Instructional Design</i> .....	26
<i>Human Performance Technology</i> .....	28
<i>Results-Based Management</i> .....	31
Section 3: Development theory .....	36
<b>Chapter 3: Methodology</b>	
Section 1: Participants and sites .....	38
<i>The DE projects in francophone SSA</i> .....	39
<i>The DE projects in Mali</i> .....	46
<i>The DE projects in Burkina Faso</i> .....	50
<i>The DE content providers</i> .....	53

Section 2: Conceptual framework	
<i>Grounded theory</i> .....	54
<i>Grounding the study in the field's realities</i> .....	57
<i>Purposeful sampling</i> .....	58
<i>Preliminary contacts with participants</i> .....	59
<i>Recruitment of the participants</i> .....	62
<i>Equipment and materials</i> .....	64
<i>Data collection procedure</i> .....	65
Section 3: Data analysis	
<i>The coding process using HyperResearch 2.5</i> .....	69
<i>Audit check</i> .....	70
<i>Coding scheme</i> .....	70
<i>Categories, subcategories and properties</i> .....	73
<i>Analysis: Open coding</i> .....	74
<i>Axial coding</i> .....	77
<i>Selective coding</i> .....	78
<i>Standards of rigor</i> .....	80
<i>Ethical considerations</i> .....	83
<b>Chapter 4: Findings</b>	
<i>Chapter overview</i> .....	84
<i>Introduction</i> .....	85
Section 1: Phenomenon, causal conditions and strategy	
<i>DE performance: Cost-effectiveness, cost-efficiency and economy of scale</i> .....	87
<i>Positive expectations from administrators</i> .....	87
<i>Positive expectations from learners</i> .....	89

<i>DE ineluctability</i> .....	91
--------------------------------	----

## Section 2: Strategy

<i>The fear of the unknown</i> .....	95
<i>Poor infrastructure and equipment</i> .....	99
<i>A formidable learning task</i> .....	102
<i>The overlooked students' prerequisites</i> .....	103
<i>The financial and political admission criteria</i> .....	105
<i>A poorly trained and motivated teaching personnel</i> .....	108
<i>Poor planning</i> .....	111
<i>Financial planning</i> .....	116
<i>The cost</i> .....	117
<i>Tuition fees</i> .....	118
<i>Photocopy fees and documents shipping</i> .....	121
<i>Tutors' salary</i> .....	122
<i>Design and delivery</i> .....	123
<i>Disharmonious synchronous lecture delivery</i> .....	125
<i>Poor interactivity and students' support</i> .....	127
<i>Delivery in a high-speed mode</i> .....	129
<i>The lack of content contextualization</i> .....	131
<i>Tests and examinations: one size fits all or free for all</i> .....	134
<i>Project monitoring and evaluation (M-E)</i> .....	136
<i>Prestige vs. pedagogical value</i> .....	140
<i>Summary of the section</i> .....	141

## Section 3: Intervening and contextual conditions

<i>The dominant ideology</i> .....	144
<i>Colonial legacy</i> .....	145
<i>Competition between funding agencies</i> .....	148
<i>Careerism and opportunism</i> .....	149
<i>A disguised form of corruption</i> .....	151
<i>Donors' national interest</i> .....	152

<i>The obsession of visibility</i> .....	153
<i>The dependency mentality</i> .....	154
<i>Summary of the section</i> .....	155

**Section 4: Consequences**

<i>An unbearable workload</i> .....	159
<i>The lack of local ownership</i> 162 <i>Skepticism, resignation and surrender</i> .....	164
<i>More efficient PR than results</i> .....	167
<i>Perpetuating Low self-esteem</i> .....	168
<i>Summary of the section</i> .....	169

**Chapter 5: Discussion and conclusion**

<i>Chapter overview and study's limitations</i> .....	172
<i>Needs analysis as a springboard for the performance of DE projects</i> .....	173
<i>Secondary factors of the performance of DE in SSA</i> .....	174
<i>The 'one-eye approach' vs self-flagellation</i> .....	176
<i>From "new techniques" to ICTs: when history repeats itself in SSA</i> .....	178
<i>Looking to the future: A systems approach to DE and development projects</i> .....	181

<i>Bibliography</i> .....	186
---------------------------	-----

<i>Appendixes</i> .....	197
-------------------------	-----

**List of tables**

<i>Table 1. Cohort 1 of the AVU Computer Science program</i> .....	13
<i>Table 2.1. Some of the learning theories most used in Instructional Design</i> .....	22
<i>Table 2.2. Steps of instructional design and their properties</i> .....	27
<i>Table 2.3. Traditional focus vs. performance focus</i> .....	30
<i>Table 2.4. Terminologies used by different funding agencies for RBM and LFA</i> .....	33
<i>Table 2.5. Comparison between Operational and Strategic planning</i> .....	34
<i>Table 2.6. HPT standards vs. ID and LFA processes</i> .....	35

Table 3.1. Selected research sites.....	59
Table 3.2. Participants' demographics by projects, sites, profession and gender.....	63
Table 4.1. Benefits expected by participants from SSA .....	90
Table 4.2. DE Contribution assumed by Canadian participants .....	93

### **List of Figures**

Figure 1. Excerpt of an Open Coding report generated by HyperResearch 2.5.....	75
Figure 2. Partial theoretical model: Causal conditions and strategy .....	142
Figure 3. Partial theoretical model: intervening and contextual conditions .....	157
Figure 4. Full theoretical model of the performance of DE in SSA .....	171
Figure 5. Zucker's framework for I:I computing .....	183

### **Photographs**

Photograph 1. VSAT dishes at the BF HE institution .....	158
Photograph 2. DE students at the BF HE institution .....	158

## CHAPTER ONE

### INTRODUCTION

Paul Fournier<sup>1</sup> is a busy young professional. A recent graduate in computer science, he works for a software company in one Canadian City. He also lectures in the department from which he graduated. On Tuesdays and Thursdays he is one of the earliest birds on the campus. Around six in the morning, it is still dark outside when his car pulls into the department's empty parking lot. He climbs the stairs in pairs to a small room located on the fourth floor of the computer science building. He catches his breath, has a sip of coffee, turns on his computer, puts his headset on, and clears his voice while checking if the ten smiley-like icons on his 19-inch computer screen are green. For three hours, thanks to the magic of technology, Fournier will be teaching Algorithm and C++ programming to two hundred and twenty unknown university students scattered in ten university centres, worlds away throughout sub-Saharan Africa (SSA).

Like their colleagues enrolled in the undergraduate computer science program offered by one Canadian HE institution<sup>2</sup> during Winter 2006, Traoré, Karim, Tagadi and Namnande have either walked, ridden a bike or taken one of those tiny, smokey and crowded buses that add to the pollution of most of African capital cities to attend Fournier's class. The luckiest of the students will have ridden a small motorcycle. The braising sun is high in the sky. Everybody is on standby in the classroom. It is eleven-thirty when the icon of a microphone appears beside the distant, unknown teacher's

---

<sup>1</sup> In order to protect confidentiality, participants' actual names are replaced by fictional names

<sup>2</sup> For similar confidentiality reasons, participant institutions' actual names are equally replaced by fictitious names. Only countries' and DE projects' names are mentioned.

name on the big screen on the classroom's front wall. A pair of small speakers situated on each side of the screen begins to crackle. Fournier's voice comes through: "Bamako, vous êtes là? Ouagadougou, m'entendez-vous? Dakar aussi? Douala? Cotonou? Bujumbura? Nouakchot?" Checkmarks spring up almost instantaneously next to the centre's name. The smiley-like icons turn green. Except for one centre whose icon remains red, all the centres are connected to the Canadian HE institution. Let the show begin. For three hours, interrupted by a 15-minute break, the young distant teacher will work wholeheartedly to share his science with young Africans.

At 3 pm when students in Bamako and Ouagadougou come back to class after their afternoon break for their second course of the day, there are, in a class next to theirs, dozens of professional nurses taking online training in tropical medicine offered by a hospital in France. All day long, the 'Campus numériques francophones' scattered throughout francophone SSA are haunted by dozens of learners enrolled in various distance education (DE) programs offered by different French universities. An even more intense activity is going on in Anglophone countries.

On the one hand, "bridging the digital gap" between developed and poor countries has become something of a buzz-phrase. It has attracted substantial funding from international organizations since the mid 90s, at the paroxysm of the Internet bubble. Just like anywhere else, DE has benefited from considerable promotion campaigns in international development circles and has attracted sizeable multilateral, bilateral and private funding from developed countries.

On the other hand, the reality of poor infrastructure and many other technological constraints plaguing most of the countries in SSA has improved very little, if at all. For example, many learners have no electricity at home. Owning a computer

with an Internet connection is close to a chimera to the majority of people in SSA. Many students had never used a computer before they enrolled in these DE programs. Yet, their promoters convincingly argued that African learners would benefit from quality programs from some of the most reputable universities in the world. Learners who could afford it accepted to pay between \$300 and \$1,000 — a fortune in these poorest countries in the world, where most people live on \$1 a day!— in tuition to enrol in these DE programs. Some students had to raise the money among extended family members.

Many university administrators and education officials on the national level were convinced that DE could be a potential solution to the severe crisis their institutions have been facing for decades. It was assumed to be cost-efficient and cost-effective because it was supposed to allow economy of scale. It was considered to be a viable option to speed up the recovery of the education sector left exsanguine by the rigorous “financial discipline” imposed by international funding institutions (IFIs) to poor countries during the previous two decades.

The purpose of this study is to explore the performance of selected DE projects in SSA through the experience of teachers like Fournier and his colleagues, students like Traoré, Karim, Tagadi and Namnande; tutors, technical assistants and managers in Mali, in Burkina Faso and in Canada. The selected DE projects under scrutiny in this study are: 1) Le Virtuel pour l’Afrique francophone (VISAF) under the banner of the World Bank-initiated African Virtual University-Université virtuelle africaine (AVU-UVA); 2) The Université numérique francophone mondiale (UNFM); and 3) Various ‘Formations ouvertes et à distance’ (FOAD) programs offered by Canadian and French universities.

These projects are funded respectively by the Canadian International Development Agency (CIDA), a partnership between the African-based Pathfinder Foundation for Education and Development and the French Fondation pour l'innovation politique (Fondapol) and by the Agence universitaire de la francophonie (AUF).

### **Problem Statement and Research Questions**

During the past three decades sub-Saharan Africa's population has grown far faster than any other region in the world. It doubled between 1975 and 2000. It is currently growing at the rate of 2.5 percent a year. Even after taking into account the devastating ongoing effects of the HIV/AIDS pandemic, the United Nations Population Division (2003) forecasts that sub-Saharan Africa's population will reach about 1.1 billion by 2025. Today over 47 per cent of Africa's population is aged between 5 and 24 with countries like South Africa with 50 per cent of its population under 20 years old. According to Huntingdon's projections (as cited in Spring, 1996), the population in SSA will have increased from 0.4% of the world population in 1900 to 14.2% in 2025, making it the second largest growing population in the world after 'populations under Islamic control' (from 4.2 to 19.2% during the same period). Under these demographic circumstances, educating these young people becomes an imperative for world security. Otherwise, Daniel (1996) warns that: "Without a vigorous action, many of these young people will grow up to be unemployed, unconnected and unstable" (p. 5).

When one considers that more than one half of humanity lives in poverty with less than two dollars a day, the consequences of an increasingly pauperized, uneducated

and therefore unsettled youth relative to sensitive global issues like threat to world security, temptation of massive emigration and environmental destruction, can hardly be overstated.

Many social scientists agree that the severe poverty marring the otherwise rich African continent is a direct consequence of its lack of a well-organized and productive educational system in general, and a dynamic higher education sector in particular. The huge African human capital potential remains untrained, thus unexploited. Numbers speak for themselves: since the 1990s, less than 4% of young sub-Saharan Africans were enrolled in higher education institutions<sup>3</sup>. Paradoxically, despite this low enrolment rate, UNESCO and the World Bank (2000) estimate that: “The number of higher education students in sub-Saharan Africa has increased almost ten-fold over two decades, from 181,000 in 1975 to 1,750,000 in 1995.”(p. 3).

Even the fortunate few graduates are, most of the time, inappropriately trained in antiquated educational systems inherited from the colonization era and incapable to respond to the needs of modern globalized economies. The vicious “poverty trap” closes off on the Dark Continent when its crippled economy fails to create jobs for their few brightest graduates who end up unemployed and succumb to the sirens of emigration to rich countries depriving the continent of its brightest minds and thus, its hope for a better future.

Yet, the picture of higher education in SSA has not always looked so grim (Akilagpa, 2002). In the wake of the independence era, at the beginning of the 1960s,

---

<sup>3</sup> For comparison purposes, the enrolment rates in developing and industrialized nations are 10% and 60% respectively

only 18 of the 48 sub-Saharan African countries had a higher education institution. Although they were still heavily dependent on the former colonial educational systems, the young African higher education institutions showed a far more promising face than they do nowadays. Enrolment rates were low but these institutions were well funded by newly independent and nationalistic African leaders who proudly considered their higher education institutions as vanguards of nation-building efforts.

But this state of grace did not last. In the early 1980s sub-Saharan African higher education decline was precipitated by a number of concurrent factors. One of the major factors was a harsh “financial discipline” measure imposed by International Financial Institutions (IFIs): The World Bank and the International Monetary Fund (IMF). During the oil crisis of the 70s, financial institutions in rich countries were flush with money, mostly from members of the Organization of the Petroleum Exporting Countries (OPEC). Newly independent countries in SSA were lured by low interest rates to borrow heavily, most of the time without any other spending plans but military, prestige or other caprices of ruling autocrats.

The 80s, the years of payback, coincided with the strengthening of conservative ideology in the USA and in the UK under the tandem of Reagan administration in the USA and Thatcher in the UK. Although debt had swollen in SSA, bilateral and multilateral funding agencies continued to funnel large sums of aid money under certain conditions imposed by IFIs. These aid “conditionalities” were supposed to ensure “financial discipline” in order to impulse economic growth. These financial measures were edicted by the IFIs under the Structural Adjustment Program (SAP) framework.

These measures took a big toll on the social sector all over SSA, particularly on higher education. They forced governments to cut funding for higher education and

redirect the funds to elementary education. The stated rationale of this move was the preoccupation to achieve the “Education for All” goals, which were set for 2015. In addition, the collapse of communism at the end of the 80s deprived thousands of young Africans the opportunity to enrol, as usual, in higher education institutions throughout the communist block. Last but certainly not least, the new breed of military dictators who seized power in most African countries considered higher education institutions as hotbeds of political contestation.

A dramatic decline of higher education funding followed. As reported by Bollag (2004), from 1985 to 1989, about 17% of the World Bank’s loans to SSA were directed to higher education, as compared to 29% directed to primary education. From 1995 to 1999, the corresponding figures sharply regressed to 7% for higher education and 46% for primary education. This funding policy had negative consequences on all levels of the educational spectrum in SSA, including the very elementary education level that it was meant to give precedence. The anaemic university systems could no longer provide teaching graduates in sufficient numbers to train primary school teachers. As a consequence, untrained or inadequately trained teachers were in charge of elementary education all over SSA. Even The World Bank (1998) came to acknowledge that it was an “unmitigated failure”.

*DE the efficiency, the effectiveness and the economy of scale*

In 1995, the World Bank initiated the first technology-based DE project in SSA. Originally based in Washington, D.C., the AVU-UVA delivered its first courses to Anglophone universities in SSA in 1997. American, British, Canadian and Australian

universities provided the course content. The CIDA-funded VISAF project targeting francophone countries under the banner of UVA started 6 years later in 2003. The 'Formations ouvertes et à distance' (FOAD), the DE projects under the banner of AUF started in 2004 and the UNFM started only in 2005. These were worthwhile and long overdue initiatives. Higher education in SSA was crumbling. Promoters marketed these DE initiatives to learners, parents, university administrators and policy makers to be cost-effective and cost-efficient. Their potential to allow the achievement of substantial economy of scale and rescue educational systems in SSA was highlighted.

But there is a large gap between stated intentions and outcomes that make a difference. If teaching and learning are complex endeavors in face-to-face situations, they become intricate in situations of cross-cultural communication. Socio-cultural, linguistic, economic and political differences translate into differences in worldviews and understandings that are even more difficult to bridge from a distance than in face-to-face teaching and learning situations. In addition, from time immemorial, education has always been tailored to the needs of local communities, societies, countries and regions. In order to be credible and useful, DE needs to be sensitive to local needs and realities in SSA.

Fortunately, there is a body of scientific knowledge that could help disentangle the intricacies of this situation in order to provide quality DE in SSA. Principles of Instructional Design (ID) and Human Performance Technology (HPT) will be called upon in this study in order to analyze the performance of DE projects in SSA. These two frameworks are comparable in many respects to Results-Based Management (RBM) and Logical Framework Analysis (LFA), which constitute the guiding principles of most foreign aid-funded projects. They all consist of five main steps: 1) Analysis; 2) Planning; 3)

Design; 4) Implementation/Delivery; 5) Monitoring/Evaluation. For DE programs to be successful, these steps should be carefully attended to.

Based on the experience of a variety of stakeholders of DE in higher education in SSA, including students, administrators, lecturers, tutors, instructional designers and technical assistants, this study pursued the following research questions:

- 1) Do foreign aid-funded DE projects in SSA comply with principles of ID, HPT and RBM?
- 2) Given the answer to the foregoing question, do conditions permit DE projects in SSA to live up to their promises of cost-efficiency, cost-effectiveness, sustainability and economy of scale while delivering quality DE?

As discussed in further detail later in this study (see chapters 2 & 3), ID, HPT and RBM processes are clearly defined and are similar in many respects. Therefore, Grounded Theory (GT) was considered as the most appropriate methodology to the exploratory and processual nature of this study. As Charmaz (2006) puts it: "Studying a process fosters your efforts to construct a theory because you define and conceptualize relationships between experiences and events." (p.136)

This is the methodological approach I used for the exploration of participants' experience with DE in SSA. Well planned and managed, DE could represent an interesting opportunity that could help the recovery of the embattled educational systems in SSA provided that it finds ways to mitigate the numerous hurdles it has to overcome. Theorizing from the participants' experience with DE, so remote from their day-to-day lives, this study will provide some useful insight for improving the provision of DE materials adapted to the users' needs and capabilities in SSA. Fournier and his

colleagues in other participating Canadian and French higher education and training institutions seem to be passionate and committed professionals. They may believe in these DE projects and work hard to make DE a success in the shared interest of people in SSA and their own content provider universities.

At the receiving end of the DE programs in SSA, everyone works even harder to make the DE dream come true. But at both ends of the DE communication, stakeholders experience a great deal of difficulty, which could seem at times insurmountable. There is a sense of deep frustration and discouragement that results in suspicion, mutual accusations and mistrust. Therefore, this study hypothesized that any gap between stated intentions and apparent results may be attributed to inadequate preparation in accordance with the principles of ID, HPT and RBM regarding the stages of needs analysis, planning and design.

### **Contribution to knowledge**

The practical purpose of this study is to build a theory of the performance of DE in SSA, grounded in the data collected from a wide variety of DE stakeholders in SSA. In this study, I used grounded theory from a privileged insider's perspective. I conducted this study while working on a foreign aid-funded development project for a large international non-governmental organization (INGO). It gave me a fine-grained understanding of foreign aid-funded projects, their underlying assumptions, their political and bureaucratic strengths and limitations. I use this understanding to explore DE projects in SSA both from an ID/HPT and RBM/LFA standpoint.

This study spanned 20 months of observation, discussion and interviews from different stakeholders. I was fortunate to be in the field in West Africa during the

earliest implementation stages of two out of the three DE projects this study explores. I witnessed the numerous hesitations, trials and errors during the projects' implementation stage. I had enough time to establish excellent rapport with participants. This privileged insider's look provided me with the opportunity to obtain a fine-grained and very detailed understanding of the multifaceted aspects of foreign aid-funded DE projects in SSA, including their real opportunities and challenges.

### **Contribution to practice**

One of the most challenging hurdles facing DE is the lack of appropriate instructional design models to suit higher education (Cyrus, T.E., 1997a; Cyrus, T.E., 1997b). If this is the case in affluent developed countries, it is even more so in SSA, the poorest region in the world. A good understanding of the real opportunities offered and the challenges faced by DE in SSA will be invaluable to inform both policy and practice. Hopefully, this will result in policies and instructional design practices consistent with the cultural, political, economic and technological environment in SSA.

Research-based evidence is rendered even more necessary by systemic and historical problems that have remained unsolved since the independence era. For example, for political and ideological reasons, the use of English, French, Portuguese or Spanish as official languages and languages of instruction in SSA has always been preferred to the use of local languages (Cleghorn, 2004). In addition, the lack of labs and other equipment for science classes has always been a big educational problem in SSA. It forces students to spend impressive amounts of time and mental effort to learn, most of the time by rote memorization, abstract notions that would have been easier to

understand if students were given the opportunity to actually use a microscope, for example.

Bateman (2004) characterizes the current practice of DE in SSA as a “digital dumping ground”. In his words:

There is an unfortunate and ultimately damaging perception that the process of developing e-Learning simply requires that existing teaching materials (usually antiquated lecture notes) be digitized and put online. This ‘digital dumping ground’ will result in the development of extremely poor quality online teaching and learning and will contribute nothing to higher education in Africa nor to the AVU’s mission (footnote p. 5).

In these circumstances, it does not come as a surprise that the success rate of the first AVU cohort was as low as 37% and the attrition rate as high as 32% as table I below shows.

Table I.

Cohort I (2003-2004) of the AVU Computer Science program

Country	Admission	Enrolment	Attrition	Continuing	Failures	Success	Success rate
Senegal	60	43	15	28	8	20	71.4%
Burundi	28	25	7	18	6	12	66.6%
Benin	32	30	12	18	9	9	50.0%
Mauritania	30	30	6	24	16	8	33.3%
Niger	14	11	4	7	5	2	28.6%
<b>TOTAL</b>	<b>164</b>	<b>139</b>	<b>44</b>	<b>95</b>	<b>44</b>	<b>51</b>	<b>53.7%</b>
			<i>Attrition rate</i> 31.7%				<i>Success rate</i> 36.7%

**Note.** From "VISAF I: Le Virtuel au service de l'Afrique francophone (UVA/AUCC//ACDI" by J.G. Latulippe (2004). Evaluation du projet VISAF, p. 20

**Note.** The success and attrition rates after the first examination

Results from this study will thus provide insight on the real strengths and weaknesses of DE in the context of SSA and will contribute to orient further research on how to adapt educational practice to local needs and realities.

## CHAPTER TWO

### LITERATURE REVIEW

This chapter comprises three main sections. The first section presents a sample of both sides of the heated debate that has accompanied the development of DE over the last half-century. An overview of the main features of this debate opens on its implications on DE in SSA with respect to issues of context, gender and technological environment. The second section concerns itself with learning theories and similarities between ID and RBM theoretical underpinnings. Finally, the third section is a glimpse at development theory as an attempt to shade some light on the context of foreign aid-funded DE practices in SSA.

#### **Section One: The DE, media and technology debate**

Successive advances in communication technologies have attempted to induce concomitant paradigmatic shifts in education (Frick, 1991). The history of DE is a clear manifestation of these successive attempts. After many centuries of unchallenged reign since 1450, print faced a serious threat to its supremacy at the turn of century. Within a few decades, new technologies such as photography, radio, motion picture and television became widespread in developed world. The last half-century has witnessed the convergence of these technologies thanks to the unprecedented development of new information and communication technologies (ICTs).

Each of these media and technologies came with its own claims of improving educational outcomes. Some over-enthusiastic high-profile advocates of technology went

as far as to predict that successive advances of communication technologies were poised to trigger radical revolutions in education. For example, Thomas Edison (Conseil des ministres de l'éducation du Canada, 1972) has emphatically argued that the motion picture was destined to "revolutionize education" by replacing both books and teachers. Decades later, Seymour Papert (1984) contended that the introduction of computer technology in schools was poised to blow away the school system as we know it. Along the rapid development of ICTs, many educators have echoed their illustrious predecessors with various levels of enthusiasm (Bransford & Cocking, 2000; Laurillard, 2002; Papert, 1980; Rumelhart, 1986; Siemens, 2005).

On the opposite end of the instructional technology zeal continuum, an increasing number of educators and social scientists have voiced their scepticism about some of the most hyperbolic promises of technology in educational and training settings. They insisted on the fact that technology-based instruction can deliver quality instruction, provided that it resists the damaging temptation consisting in technology availability to dictate the learning content (Apple, 1991; Bowers, 2000; 2005; Cuban, 1986; 2001; Greenagel, 2002; Noble, 2001; Peppi & Sheurman, 1996; Postman, 1993). According to them, a productive use of technology in learning settings should attend first and foremost to the general processes of how people learn, the particular environment of the targeted group of learners and its particular learning or training needs.

## **Moving from technology to learner and context centeredness**

One of the most enduring debates in the field of Educational Technology is one that came to be known as the Clark-Kozma debate. It dealt with whether or not the use of particular media in education influences learning outcomes. Clark (1983, 1985, 1994 a, 1994b) argued that this influence was insignificant. Fleming and Levie (1993) agreed. Seven years after the publication of the initial article that triggered the debate, Kozma (1991, 1994a, 1994 b) published a series of articles defending the opposite position. He argued that media do, indeed, influence learning and, therefore, the choice of instructional media and technology is significant.

In an attempt to settle this long debate, Jonassen, Campbell and Davidson (1994) offered a middle ground between the two protagonists. While they agreed with some of the views on each side of the debate, their most important contribution was to advocate for a beneficial shift of the debate from media and technology-centeredness to a learner and learning context-centered conception of learning. Regardless of the media and technology used, the authors emphasized the primacy of the role played by the environment in the learning process:

The environment in which learning occurs affects the experiences of the learner and therefore defines the content of the knowledge constructed. These environments may be enhanced by the inclusion of various kinds of media, but realistically the effect on knowledge construction is modified very little as the perceptual systems continue to take and use information from each and every sense in an effort to contextualize the input. (p. 31)

During the last few decades, a growing number of educators worldwide have expressed concerns because they see technology considerations instead of sound pedagogical and sound instructional design dictating DE content (Cuban, 1986; Cupp, 2001; Douglas, 1985; Greenagel, 2002; Wiley, 2002). Many contend that this is one of the main reasons behind the very high dropout and attrition rate in online courses, estimated between 50-80% (Flood, 2002; Martinez, 2003). These numbers seem to be consistent with the UVA dropout rate mentioned earlier in this study.

### **Implications of learners and context centeredness for DE**

This constructivist view has important implications in the case of the introduction of foreign aid-funded DE in SSA. DE learners in SSA are from one of the most oral cultures in the world. Direct contact with reality is their natural way of knowing. Most importantly, culture and worldviews determine what people learn and how they grasp reality around them (Moodie: 2003; Shujaa: 1997). In their promotional literature and policy papers foreign aid-funded DE projects promised programs that are relevant to the learners' cultural, educational and socio-economic environment. Yet, in the case of the AVU-UVA for example, most of these good intentions were never translated into action. Ngimwa and Bayala (2004), two of the project's early insiders, estimate that of the \$13 million US that the World Bank granted to the AVU-UVA upon its inception in 1997, only 17% was allocated to the design of academic programs. They observe that:

If the core business was to develop academic programs, someone could note clearly that 17% is far less sufficient to achieve the objective of increasing access.

Conversely, technology and capacity building activities represented a significant amount of the grant (p. 5).

### **The gender issue**

Although upon its inception online learning was deemed equitable because it reduces, among other inequities, gender imbalance in education, Juma (1998) argued that, to the contrary, the AVU enrolment figures showcase a deeper gender inequity, worse than that in traditional face-to-face learning settings. The subsequent enrolment figures at the AVU for the academic year 2003-2004 show that only 240 (36%) of the 665-student population were women. To the noticeable exception of the computer science program at the AAU-Ethiopia (60 out of its 94 students i.e. 63.8% were women) no other university among the 10 AVU partner institutions managed to achieve gender parity in any of their DE programs. For comparison purposes, Sehoole and Moja (2004) report that female participation of online learning is 60-70% in Canada, 50% at the British Open University and 61% at the University of Pretoria.

Given the importance of psychological, socio-cultural and environmental factors, it follows that to be efficient, learning in general and DE in particular needs to start with a thorough analysis of the environment in which the learners are expected to learn (Ragan & Smith, 2000). Needs analysis (NA) has to provide answers to questions such as: Who are the learners? What are their entry abilities? What is the learning task to be carried out? What is the learning context? In addition, Matthewson (1994) argues that:

When distance education is the mode of transmission and when the separation of the teacher and learner is more than one of physical distance (lying also in

different ethnic, linguistic, economic and historical traditions), then education for development raises even more serious issues (p. 3).

It is the role of careful needs analysis to document these issues in order to take them into consideration during the subsequent phases of design, development, production and delivery of DE instruction.

### **Technology infrastructure and equipment in SSA**

Technology-related problems are one of the most overarching issues facing DE in SSA. Africa remains the most unwired part of the world. Most of its internal communications (video, voice, data) have to transit through Western countries, rendering the cost of communications more expensive than anywhere else in the world. Alternative satellite data transmission facilities like VSATs are even more expensive (Gakio, 2006). This makes it unaffordable for sub-Saharan educational and training institutions to provide these necessary transmission capacities to their online learners. Even when they manage to be connected, bandwidth is too narrow to allow for continuous data flow. Steiner, Nyaska, Jensen, and Karanja (2004) summarize the situation of Internet connectivity in sub-Saharan higher education in three characteristics: too little, too expensive and poorly managed. In these authors' words:

The average African university has bandwidth capacity equivalent to a broadband residential connection available in Europe, pays 50 times more for their bandwidth than their educational counterparts in the rest of the world, and fails to monitor, let alone manage, the existing bandwidth for educational purposes.

As a result, what little bandwidth that is available becomes even less useful for research and education purposes (p. iii).

According to Hamilton and Southwood (2005), the need for international data transmission capacity increased by 137% from 2002 to 2005. They forecast a further increase to 81% from 2005 to 2008. Moreover, Africa has approximately 12% of the world's population, but only 2% of the global telephone network (Darkwa & Mazibuko, 2000).

Although the needs for transmission and communication capacity are massive, experts predict that substantial progress might be made faster than expected. International communication companies are partnering with local companies and governments to get their share of this lucrative African market. During the last three years, submarine cables for data transmission have increasingly belted the African continent. The price of data transmission is expected to decrease dramatically in coming years due to competition.

If technological perspectives can be hoped to improve in the near future, individual online learners' prospects of acquiring technology equipment seem bleaker. By and large, learners from SSA have no electricity, no telephone, let alone a computer and an Internet connection at home (see some Mali's and Burkina Faso's socio-economic indicators in next chapter). This unsustainable situation echoes Assié-Lumumba's (2004) scepticism about the promises of the quality of the programs, their cost-effectiveness, cost-efficiency and economy of scale in SSA. She aptly observes that:

Even if so much emphasis has been on access, there is no evidence that in the case of Africa distance education has been conceptualized and organized to deal with it effectively, systematically and productively aside from the general expectation of general increase of enrolment (p. 5).

Looking back in the 60s and the 70s, Sy (2004) recalls how these very problems have caused the failure of the first generation of technology-based DE projects in SSA. He argues that these projects have failed:

Either because they were ill-conceived or as a result of foreign experts' lack of understanding of African cultures and their interplay with several other factors, including inadequate training of educators at the primary school level, poor infrastructure, embryonic telecommunication equipment and the inadequacy of a programme entirely based on foreign languages. (p. 63)

By the same token, Head (1974) deplores the fact that the high educational potential of educational radio in SSA was wasted during the 60s and the 70s despite its fit with oral African tradition because costly technology preoccupations took precedence over research and content. Heydenrych, Higgs and Van Niekerk (2004) summarize the situation described in this section by observing that DE projects directed to an African audience "should take cognizance of African values and realities" (p. 130).

## Section two: Learning theories, ID, HPT and RBM

### Learning theories

As a solution to the overarching problem, Reigeluth and Frick's (1999) call for "more sorely needed learning theories to provide guidance for the use of new information technology tools" (p. 633). The development of learning theories was not spared the controversies and paradigmatic wars that characterize the evolution of scientific thought. There is a whole range of different learning theories spanning from behaviorism to postmodern theories. Table 2.1 below shows some of the most used in instructional design.

Table 2.1

Some of the learning theories most used in Instructional Design

Theory	Theoretical framework	Principles/Strategies/Processes	Reference
Information Processing Theory	<p>Comprise two fundamental concepts of cognitive psychology and the information-processing framework.</p> <p>"Chunking » (1956): Short-term memory can only hold 5-9 chunks of information (7+/-2). A chunk is any meaningful unit of information like numbers, words or people's faces. The concept of chunking and the limited capacity of short-term memory became a basic element of all subsequent theories of memory.</p> <p>Test-Operate-Test-Exit (TOTE, 1960) suggests that TOTE should replace the behavioral psychology's</p>	<ol style="list-style-type: none"> <li>1. Setting a goal</li> <li>2. Performing</li> </ol>	<p>Miller, G. A. (1956)</p> <p>The Magical Number Seven, plus or minus two: some limits on our capacity for processing information"</p> <p>Psychological Review vol. 63 pp 81-97</p>

	Stimulus-Response (S-R) as the basic unit of behavior. The TOTE concept provided the basis of many subsequent problem solving strategies (e.g., GPS) and production systems.	<p>an operation</p> <ol style="list-style-type: none"> <li>3. Testing if goal achieved</li> <li>4. Repeating the cycle Test-Operate until goal is reached or abandon operation</li> </ol>	
Constructivist theory	Learning is an active process in which learners construct understanding based upon their current and past knowledge. Cognitive structure (i.e. schema, mental models) provides meaning and organization to experiences and allows the individual to "go beyond the information given". Therefore, the instructor should design learning activities in such a way as to encourage students to discover principles by themselves.	<ol style="list-style-type: none"> <li>1. Instruction must be concerned with the experiences and contexts that make the student willing and able to learn (readiness).</li> <li>2. Instruction must be structured so that it can be easily grasped by the student (spiral organization).</li> <li>3. Instruction should be designed to facilitate extrapolation and or fill in the gaps (going beyond the information given).</li> </ol>	<p>Bruner, J. (1966)</p> <p>Toward a Theory of Instruction. Cambridge, MA: Harvard University Press</p>
Constructivism (Cognitive)	Children are not 'blank slates'. They can meaningfully interact and learn from material they are presented (assimilation and accommodation) provided that the material is consistent with their developmental stages		<p>Piaget, J. (1969)</p> <p>The Psychology of the Child London: Routledge</p>
Constructivism (Social)	Learning and meaning making are the byproducts of social interactions. Children perform better when working in collaboration with an adult. The Zone of Proximal Development (ZPD) corresponds to those activities children "can do with help". The other levels of		<p>Vygotsky (1962)</p> <p>Thought and language Cambridge Mass.: M.I.T. Press.</p>

	activities being “can do alone” and “cannot yet do”		
Conversational Theory	The learner is considered as an active "maker of meanings". The role of the teacher is to engage a dialogue with the learner, trying to understand the meaning to that learner of the material to be learned, and to help her or him to refine their understanding until it corresponds with that of the teacher.	<ol style="list-style-type: none"> <li>1. Teacher sets goal</li> <li>2. Teacher describes conception of the subject</li> <li>3. Learner describes his conception of it</li> <li>4. Teacher can re-describe in the light of the Learner's conception</li> <li>5. Learner re-describes in the light of the teacher's</li> <li>6. Teacher can adapt the task goal in the light of the Learner's description or action.</li> </ol> <p>And so on....</p>	Laurillard, D. (2002)  Rethinking University Teaching: a framework for the effective use of educational technology (2nd edition) London: Routledge
Elaboration Theory	Learning should be organized in increasing order of complexity for optimal learning, each lesson building on learning from the previous lesson. A key idea of elaboration theory is that the learner needs to develop a meaningful context into which subsequent ideas and skills can be assimilated.	<p>Elaboration theory proposes a 7-sequence strategy:</p> <p>I. Elaboration sequences</p> <ol style="list-style-type: none"> <li>1. Learning prerequisite</li> <li>2. Summary</li> <li>3. Synthesis</li> <li>4. Analogies</li> <li>5. Cognitive strategies</li> <li>6. Learner control.</li> </ol>	Reigeluth, C. (1983)  Instructional Design Theories and Models. Hillsdale, N.J.: Lawrence Erlbaum

## **Postmodern theories**

Postmodern learning theories have challenged most of the above-mentioned categories. Cognitivism, the theoretical approach that encompasses most of modern learning theories contended that mental functions could only be understood by using quantitative experimental methods of inquiry. Having refuted behaviorist methods during the 50s, the information processing theory, one of cognitive psychology's strongest underpinnings was challenged on its turn only a decade later. Nowadays, although constructivist theories are spreading all over the world, they are being challenged by nascent theories like ecological psychology. For example, Bowers, (2005) agrees with Barker (1989) when he dismisses the information processing theory claim about the importance of mental processes during learning. Barker asserts that: "It's not what is inside the head that is important, it's what the head is inside of." Ethnomethodology (Garfinker, 2002) and Communities of practice (Lave & Wenger, 1991) are the other post-modern learning theories that have been explored with various fortunes in educational and training settings during the last decades.

Last but not least, affordance theory is grounded in environmental psychology (Gibson, 1979) and has been pervasive in ICT literature during the last decades. In the original conception, affordances were defined as naturalistic "actionable properties" existing between actors and their environment. The central tenet of affordance theory is ecological. According to Gibson, affordances are about direct perception. Norman (1988) established a close relationship between actors' past knowledge and experience. This brings to bear the cultural and environmental dimensions of learning.

## **Instructional Design (ID)**

Ragan and Smith (2000) define instructional design (ID) as: “The systematic and reflective process of translating principles of learning and instruction into plans for instructional materials, activities, information resources and evaluation.” (p. 2)

For her part, Driscoll (as quoted in Ragan & Smith, 2000) defines instruction as: “The deliberate arrangement of learning conditions to promote the attainment of some intended goal.” (p. 3)

Taken together, these two definitions give a complete picture of what ID is: a systematic, deliberate and reflexive arrangement of optimal learning conditions to attain some defined learning goal. The cornerstone of good ID is Needs Analysis (NA). The main goal of sound NA is to understand the context and achieve the learner centeredness discussed earlier in this study. As delineated by Ragan and Smith (2000), NA consists of three complementary steps:

1. Analyzing the learning context
2. Analyzing the learners
3. Analyzing the learning task

These steps lead instructional designers to making sure that the learning materials they are called upon to design and develop are adapted to the needs of the learners and their environment. Ragan and Smith (2000) insist on the role of instructional designers as advocates of the learners:

Information about learners should take precedence over other factors that might drive design decisions, including content itself. Often, the designer is not a content expert. In their constant querying of a subject matter expert for

clarification, designers are standing in the place of the learner, trying to obtain information to make the content clearer to the learner. (p. 8)

Nevertheless, Tessmer (2007) deplors the ease with which this paramount step of ID is overlooked and the damaging effects its neglect has on DE learning outcomes.

A good grasp of informations pertaining to the three main steps of NA delineated above allows instructional designers to embark on the design and development of instruction.

Depending on the design task at hand, a wide range of learning theories has been developed and refined over the last century to help the designers formulate learning objectives, design and sequence activities in such a way as to reduce learners' mental effort by scaffolding learning (Bransford, Brown & Cocking, 2000). Table 2.2 summarizes the different steps of ID and their properties.

Table 2.2

Steps of instructional design and their properties

<b>Steps</b>	<b>Properties</b>
<ul style="list-style-type: none"> <li>• <b>Analysis</b></li> </ul>	<ul style="list-style-type: none"> <li>- Learning context</li> <li>- Learners</li> <li>- Learning task</li> <li>- Time and cost of production</li> <li>- Assessment</li> <li>- Time and cost of production</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Planning &amp; Design</b></li> </ul>	<ul style="list-style-type: none"> <li>- Lesson-level instructional strategies</li> <li>- Supplantive and generative strategies</li> <li>- Instructional support</li> <li>- Operationalization</li> </ul>

- 
- **Delivery**
    - Timeliness
    - Media selection
    - Grouping strategies
    - Instructional management strategies
    - Integration of types of learning
  - **Monitoring & Evaluation**
    - Monitoring
    - Formative evaluation
    - Management of instruction
    - Summative evaluation
- 

Note: Adapted from Smith & Ragan (2000)

## **Human Performance Technology (HPT)**

Performance improvement is the ultimate goal of Results-Based Management (RBM). The field of Human Performance Technology (HPT) contributed to promoting the focus on performance improvement. Its origins can be traced back to the 50s with the work of behavioural psychologist B.F. Skinner and the concept of 'operant conditioning' he helped to develop. Robinson and Robinson (1998) define HPT as: "The science of improving human performance in the workplace through analysis and the design, selection, and implementation of appropriate interventions." (pp. 5-6)

Although decried in formal education circles by the current constructivist mantra arguing that knowledge is constructed and not transmitted, HPT principles are still widely used in corporate training and human resources development in general. Robert Mager and Joe Harless contributed to the development of two major theories relevant for this study.

Mager (1984) argued that learning needs should be determined and expressed in

terms of learning goals. In turn, these goals should be broken into smaller, specific and measurable learning objectives to be attained. According to Mager, a good behavioural learning objective has three main qualities:

- 1) It clearly describes (in specific and observable terms) what the learner is expected to do (Behaviour)
- 2) It states the conditions under which the behaviour is to occur, including what materials or assistance are needed by the learner (Conditions)
- 3) It states the desirable level of performance, including the range of correct answers (Standard)

Although these conditions may be difficult to reach or may even be undesirable in some specific domains such as concept and principle learning or attitude change, they can be helpful in practical areas such as problem-solving or procedural learning.

Joe Harless on his part coined the term 'Front End Analysis'. He argued that performance improvement requires a careful analysis of the system in which the performer is working before proceeding with the performance improvement intervention. As it will be seen in greater detail later in this study, understanding the system in which a program is to be implemented is the cornerstone of strategic management. The related term is 'Sector analysis'.

Although links between the shift from operational planning to strategic planning in strategic management on the one hand and the shift from focus on training to focus on performance in HPT on the other hand do not seem to be clearly elicited in the literature, there are striking similarities between the two approaches. Table 2.4 compares the traditional focus and performance focus of HPT.

Table 2.3.

Traditional vs. performance management focus

<b>Traditional focus</b>	<b>Performance focus</b>
<ul style="list-style-type: none"> <li>• Focuses on what people need to learn; acquisition of skills and knowledge is the end.</li> <li>• Event oriented</li> <li>• Primarily enters the work process reactively</li> <li>• Based in favour of a single solution; usually some type of structured learning experience</li> <li>• Can, and does, work independently of client partnerships.</li> <li>• Front-end assessment optional; work environment barriers to desired performance are rarely identified.</li> <li>• Success is measured in terms of the quality of the solution or event (e.g. quality of training program, of selection or appraisal system)</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Focuses on what people need to do; acquisition of skills and knowledge is a means to an end</i></li> <li>• <i>Process oriented</i></li> <li>• <i>Enters the work process both proactively (through own initiation) and reactively</i></li> <li>• <i>Unbiased toward solutions; relies on multiple solutions of which training is only one</i></li> <li>• <i>Must be partnered to a client with ownership for success jointly shared</i></li> <li>• <i>Front-end assessment mandatory; work environment barriers to desired performance are identified.</i></li> <li>• <i>Success measured in terms of contribution to performance change and operational impact.</i></li> </ul>

Note. From Robinson and Robinson (1998)

According to the respective definitions of HPT and ID, the main difference between the two concepts that is readily apparent seems to be the fact that the former is more behavioural and mainly used in workplace settings for training and human resources development purposes whereas the latter is applied to a wider range of educational settings and borrows from a variety of learning theories depending on the learning task at hand.

## **Results-Based Project Management (RBM)**

Successive shifts in development theories were parallel to changes in international development management thought and were affected by them. The most pervasive management models is arguably RBM. The Organization for Economic Co-operation and Development (OECD, 2002) defines RBM as: “a management strategy focusing on performance and achievement of outputs, outcomes and impacts”. It advocates moving from the traditional management of activities and resources as an end in itself towards a more comprehensive management philosophy that considers activities and resources as “means to an end”, the end being the outcome, the overall organizational performance resulting from its different activities. In international development work, projects’ outputs and outcomes should translate into improving people’s lives. RBM evolved from Peter Drucker’s (1954) management by objectives (MBO). Nowadays the RBM model is the management tool of choice for governments (e.g. Canada, the US, the UK, the Netherlands) and almost all international funding agencies including the World Bank, most of the United Nations agencies such as the United Nations Development Program (UNDP), the Food and Agriculture organization (FAO), the United Nations Educational Scientific and Cultural Organization (UNESCO), and the International Labour Organization (ILO).

Despite its mature age and its widespread use, RBM still suffers from the lack of a clear conceptual framework. For example, Ortiz (2004) points out that although the majority of the UN organizations use RBM, they use it under different definitions and terminologies. He laments that:

“This makes it harder to communicate using the same language among the UN organizations” (p. 4).

This lack of a common terminology is even more apparent between funding agencies and the non-governmental organizations funded by them. Like RBM, the Logical Framework Approach (LFA, often used interchangeably with RBM) evolved from MBO. The OECD defines the logical framework (Logframe) as:

A management tool used to improve the design of interventions, most often at the project level. It involves identifying strategic elements (inputs, outputs, outcomes, impact) and their causal relationship, indicators and assumptions or risks that may influence success or failure. It thus facilitates planning, execution and evaluation of a development intervention.

Although the logical framework was used for the first time by the United States Agency for International Development (USAID) in the early '70s and has ever since been adopted by almost all the international development agencies, they have yet to come up with a common terminology and understanding. While conceptually difficult, LFA is a powerful framework for investigating educational processes (Anderson, 1998, p. 61). Table 2.4 below shows the variety of terminologies used by different international organizations.

Table 2.4.

Terminologies used by different funding agencies for RBM and LFA

	<b>Ultimate Impact</b>	<b>End Outcomes</b>	<b>Intermediate Outcomes</b>	<b>Outputs</b>	<b>Interventions</b>	
<b>CARE</b>	Program Impact	Project Impact	Effects	Outputs	Activities	Inputs
<b>USAID (USA)</b>	Strategic Objective	Intermediate Results		Outputs	Activities	Inputs
<b>DANIDA (Denmark) DfID (UK)</b>	Goal		Purpose	Outputs	Activities	
<b>CIDA(Canada) GTZ (Germany)</b>	Overall goal		Project purpose	Results/outputs	Activities	Inputs
<b>European Union</b>	Overall Objective	Project Purpose	Results	Activities		
<b>FAO (UN) UNDP (UN) NORAD (Norway)</b>	Development Objective		Immediate Objectives	Outputs	Activities	Inputs
<b>UNHCR (UN)</b>	Sector	Goal	Project Objective	Outputs	Activities	Input/Resources
<b>World Bank</b>	Long-term Objectives		Short-term Objectives	Outputs		Inputs
<b>AusAID (Australia)</b>	Scheme Goal		Major Development Objectives	Outputs	Activities	Inputs

**Note.** From J. Rugh for CARE International and InterAction’s Evaluation Interest Group. This table has been referred to as “The Rosetta Stone of Logical Framework”

The one thing these international organizations agree on is the fact that despite these differences in terminology, LFA is considered as an efficient tool that helped them to move from operational planning to strategic planning, the starting block of strategic management. Table 2.5 below shows the difference between the two planning approaches.

Table 2.5.

Comparison between Operational and Strategic Planning

	<b>Operational Planning</b>	<b>Strategic Planning</b>
<b>Focus</b>	Routine activities	Achieving goals
<b>Purpose</b>	Achieving the best use of available resources	Planning the best course of action
<b>Rewards</b>	Efficiency, stability	Effectiveness, impact
<b>Information</b>	Present situation	Future opportunities
<b>Organization</b>	Bureaucratic, stable	Entrepreneurial, flexible
<b>Problem solving</b>	Relies on past experience	Finds new ways and alternatives
<b>Risks</b>	Low	High

Note. From UNESCO (2006). National Education Sector Development Plan. A results-based planning handbook. (p. 3)

As it appears from the foregoing, there are many similarities between RBM, HPT and ID. Although they stem from different disciplines to serve different purposes, the systematic and systemic nature of these disciplines make them quite comparable in many respects. Not least is the fact that all three fields broadly entail four basic stages: analysis, planning, implementation and evaluation. Table 2.6 below compares HPT performance standards, ID and LFA process.

Table 2.6

HPT standards vs. ID and RBM/LFA processes

	<b>HPT PERFORMANCE STANDARDS</b>	<b>ID PROCESS</b>	<b>LFA PROCESS</b>
<b>ANALYSIS</b>	<ul style="list-style-type: none"> <li>• <b>Focus on outcomes</b></li> <li>• Take a systems view</li> <li>• Add value</li> <li>• Work in partnership</li> <li>• Conduct needs analysis</li> <li>• Conduct cause analysis</li> </ul>	<b>Instructional analysis</b> <ul style="list-style-type: none"> <li>• Learning context</li> <li>• Learners</li> <li>• Learning task</li> <li>• Time and cost of production</li> <li>• Assessment</li> <li>• Time and cost of production</li> </ul>	<b>Sector analysis</b> <ul style="list-style-type: none"> <li>• General context</li> <li>• System description</li> <li>• Situation analysis</li> <li>• Stakeholder analysis</li> </ul>
<b>PLANNING</b>	<ul style="list-style-type: none"> <li>• <b>Design</b></li> <li>• <b>Develop</b></li> </ul>	<b>Instructional strategy</b> <ul style="list-style-type: none"> <li>• Lesson-level instructional strategies</li> <li>• Supplative and generative strategies</li> <li>• Instructional support</li> <li>• Operationalization</li> <li>• Timeliness</li> </ul>	<b>Policy and strategy formulation</b> <ul style="list-style-type: none"> <li>• Development objective and overall goals</li> <li>• Specific objectives and strategy for achieving development objectives</li> <li>• Beneficiaries</li> <li>• Institutional arrangements</li> <li>• Major sub-programs (sub-sectors)</li> </ul>
<b>IMPLEMENTATION</b>	<ul style="list-style-type: none"> <li>• <b>Implement</b></li> </ul>	<b>Delivery and management strategies</b> <ul style="list-style-type: none"> <li>• Media selection</li> <li>• Grouping strategies</li> <li>• Instructional management strategies</li> <li>• Integration of types of learning</li> </ul>	<b>Program of action (Implementation plan)</b> <ul style="list-style-type: none"> <li>• Sub-Program I</li> <li>• Sub-Program 2...</li> <li>...Sub-Program X</li> </ul>

- **Evaluate**

**Monitoring and evaluation**

Time and cost of production  
Formative evaluation  
Summative evaluation  
Management of instruction  
Summative evaluation

**Monitoring and evaluation**

- Governance and management
- Development coordination
- Risk assessment and assumptions

### Section three: Development theory

Social scientists who have focused their attention on the field of foreign aid traced the early foreign aid-funded development programs back in late 19<sup>th</sup> century (Foster 1967). After World War II, the dominant development model focused on boosting the industrial sector. It predicted that industrial development in under-developed countries would result in an overall 'trickle down' effect whereby grassroots communities would gradually benefit from wealth created by industrial development. Development projects were designed based on underlying ethnocentric assumptions and premises (Foster, 1967). This liberal model of development failed to deliver its development promises. Development theory shifted from a focus on economic growth to a focus on the fulfilment of human basic needs (health, food, education, shelter, etc) in the process of poverty reduction and economic development (Cusworth & Frank, 1993).

With the emergence of globalization during the '80s, the neo-liberal development model put emphasis on trade, economic privatization as the better way to foster the development of under-developed nations thanks to the same 'trickle down' effect advocated by the industrial development model (Rostow, 1960). But this new development model did not deliver more convincing results. The failure of the

modernity theorists of development gave further arguments to challenges from dependency theorists (Amin, 1989; Gunder-Frank, 1993).

Contrary to the “trickle down” theory, dependency theorists contend that foreign aid money is one of number of mechanisms rich countries use in order to perpetuate poor countries’ dependency and subsequent economic exploitation, the lifeblood of rich countries’ prosperity that pushes poor countries deeper into poverty.

## CHAPTER THREE

### METHODOLOGY

#### **Chapter overview**

This chapter consists of two sections. In section one, I situate the study with a brief and global presentation of the three DE projects whose performance is analyzed in this study and the two universities that host them. I briefly describe the emerging process that led to a shift from my original intention to study the contribution of sound in online learning materials developed by Western universities when they are used by learners from aural traditions in SSA to a study of the performance of foreign aid-funded DE projects.

In section two, I briefly describe the conceptual framework based on grounded theory that underpins this study. I describe the data collection procedure and the analysis methods I used in order to develop a theory of the performance of foreign aid-funded DE in SSA.

#### **Section I: Participants and sites**

The 33 participants in this study were recruited from the three main DE projects in SSA: the African Virtual University - Université virtuelle africaine (AVU-UVA), the Université numérique francophone mondiale (UNFM), the Formation ouverte et à distance (FOAD) offered by various French universities through the Agence universitaire de la francophonie (AUF). All three DE projects are hosted on the campuses of one Malian HE institution and one BF HE institution. These three projects

were particularly appropriate for a comparative study because they are similar on all accounts, except the participants. They are all funded by foreign aid, have the same course material providers, use the same delivery technologies, and are offered simultaneously in Mali and in Burkina Faso.

### **DE projects in francophone SSA**

Given the lack of infrastructure and equipment such as personal computers and accessories in SSA, the formula “anytime, anywhere” that characterizes DE in rich countries does not apply to SSA. The DE model currently in use has many similarities with traditional teaching except for content production and delivery. As in face-to-face education, learners gather in classrooms equipped with the needed information and communication technologies (ICT) following a predetermined schedule and attend lectures from Canadian and French institutions. This kind of DE initiative in SSA started in English-speaking countries, where even before the advent of ICTs, there was a relatively long tradition of well functioning distance education on national and regional levels (ADEA, 2003).

### **The African Virtual University-Université Virtuelle Africaine**

The African Virtual University (AVU) was the first pan African DE initiative. Etienne Baranshamaje, a World Bank staff member from Burundi, initiated the idea in 1995. From 1997-1999 it operated as a World Bank pilot project based in Washington delivering online courses from Western universities to African higher education institutions. The World Bank allocated \$13 million US to the pilot phase of the project. CIDA recognized the AVU in 1997 and granted it \$12 million CAD during its second

phase in 2002. This funding consisted of \$10 million allocated to AVU's core programs and \$2.1 million for strengthening UVA's presence in francophone Africa through a project called 'Le Virtuel au service de l'Afrique francophone' (VISAF). The Association of Universities and Colleges of Canada (AUCC) worked as CIDA's execution agency. Australia and the United Kingdom spent additional tens of millions of dollars on this project. The African Development Bank (ADB) was the last to fund \$8 million US for AVU's teachers' training program. The AVU's goal was defined as:

To contribute to efforts to improve education in Africa by harnessing the power of modern information and communication technologies and to position Africa in the wider knowledge society. This will build AVU's capacity to provide greater access to international-quality education in sub-Saharan countries.

Expected long-term results were:

- Lower cost and improved access to tertiary education
- Equitable student distribution by gender and social indicators
- Improved professional skill-set commensurate with market needs

African educational institutions will be provided an academic environment in which faculty and students can participate effectively in the worldwide community of learning, research, and dissemination of information.

Medium-term results were:

- Large numbers of African scientists, technicians, engineers, business managers and employees receive accredited training within operational phase
- The AVU will attract world-class administrators and teachers in a fully operational environment, thereby increasing the number of individuals willing to pay for such services

- Teaching, research and management of courses will be measurably improved in relation to specific baseline indicators
- AVU learning centre will be integrated into Anglo and Francophone institutions
- AVU has mechanism in place whereby operation and expansion of AVU will be increasingly paid for by tuition fees and/or government contributions thus increasing African ownership

AVU's modus operandi called upon External Partner Universities (EPU) from the USA, Canada, Australia, France and Belgium to deliver content in specified subject matter to African Partner Institutions (PI). Fifteen Anglophone and Francophone countries participated in the pilot phase. Originally, the content production system was planned to be a TV-like studio fully equipped to produce multimedia content: video, audio, still image and text (see figure below). The delivery model comprised an integration of satellite and Internet technology to provide one-way video and audio transmission of courses. It did not take long before technical problems forced the project promoters to reduce this idealistic delivery model to its strict minimum. Since 2003, the AVU has transitioned from a World Bank project based in Washington to an inter-governmental organization headquartered in Nairobi, Kenya.

Because of institutional, political, ideological or strategic reasons, most francophone countries embarked on the AVU initiative six years after its inception. Thanks to the CIDA-funded VISAF, a first cohort of students from five countries was recruited for the Université Virtuelle Africaine (UVA) in 2003. Under the auspices of the Association of Universities and Colleges of Canada (AUCC) playing the role of CIDA's executing agency, one Canadian HE institution was contracted as a content provider for

a Bachelor program in Computer Science. Participants of this study belong to the second cohort that was recruited in October 2005.

Through VISAF, the UVA offers a 4-year bachelor program in computer science destined to full time students. It offers also a certificate in computer science targeting professionals in need of professional development. This study focuses on the bachelor program. In it, lecturers deliver courses from the Canadian HE institution to students in UVA learning centres under the supervision of a computer science professor acting as the project officer. Local tutors have been hired in UVA learning centres to help students with problems they may experience during their learning process. Although a variety of delivery methods and interaction media were planned at the beginning of the project, they were reduced to a strict minimum because of the narrow bandwidth of the Internet.

Courses are delivered via Interwise, an Internet platform delivering synchronous sound and PowerPoint slides. Synchronous sessions are almost a one-way communication. Students have only one computer in the classroom. Using a headset with a microphone, they can communicate with the lecturer based in Canada. But because of frequent power outages and the poor sound quality, students rely mostly on a synchronous course backup available on the project's WebCT.

### **The Université numérique francophone mondiale (UNFM)**

Since June 2005, the Pathfinder Foundation for Education and development of Africa, a Mali-based NGO in partnership with La Fondation pour l'innovation politique (Fondapol), a French political think-tank, set up L'Université numérique francophone mondiale (UNFM). Based in Bamako, Mali, the home country of Cheikh Modibo Diarra,

the former CEO of the AVU and former NASA scientist who managed the Pathfinder space shuttle project in the '90s. This DE project started its two pilot DE centres in Bamako and in Ouagadougou in June 2005. A third campus in Brazzaville, Congo was added in November 2006.

The UNFM delivers lectures in tropical medicine to professional nurses. The courses are broadcast from one big French hospital situated in Paris, organized into three modules of six weeks each. Professional nurses attend four-hour lectures five days a week starting at 3 pm local time. The first course modules deal with topics such as health decision-making, prevention of mother-to-child HIV/AIDS transmission and practical vaccinology. Mediated via a French platform provided by the French multinational Alcatel Space, these courses in Tropical medicine are delivered by French specialists in tropical medicine assisted by local tutors.

Course delivery is a one-way communication process where students follow the lecture in real time on a big screen. A camera that can perform most of the basic movements (zoom in/out, panel, travelling) show the lecturer's image on a big screen. Different shot sizes of the lecturer or the moderator alternate on screen with PowerPoint slides from a laptop computer thanks to a video mixer, which is able to perform basic video effects: fade in/out, wipes, inserts, etc. Students can only send written questions via the local tutor's network computer. The lecturer reads the question from his laptop and answers it live. Pictures and sound are of better quality than those from Canada

## **The formation ouverte et à distance (FOAD) from the AUF**

In 2000, the French Ministry of education launched its first Request for Proposals (RFP) from French higher education institutions for fundable “Formations Ouvertes et à Distance” (FOAD). These proposals could be blended models or entirely technology-based. In 2003, another RFP encouraged the submission of “Environnements numériques de travail” (ENT) defined as:

Un dispositif global fournissant aux acteurs du système éducatif de l’enseignement supérieur (étudiants, enseignants, etc.), l’accès à travers les réseaux, la quasi totalité des ressources, services et outils numériques en rapport avec leurs activités. Un portail personnalisé de type bureau virtuel correspond à cette définition.

One multilateral funding organization for higher education in francophone countries used the idea of ENT and extended it to the whole francophonie under the name “*campus numériques*”. EducNet, the website for French higher education defines a *campus numérique* as:

Un dispositif de formation centré sur l’apprenant proposant des services innovants via les technologies numériques. Il permet d’accéder à la formation à partir des lieux proches ou distants selon les temps et les rythmes choisis par l’apprenant et tout au long de sa vie. (Para Observations)

Although this promotional definition makes it sound sophisticated, a *campus numérique* is nothing more than a computer lab with an Internet connection where FOAD students can access their DE course materials from French and Canadian universities.

The first international FOAD cohort was recruited in 2004. The same DE courses offered to French and Canadian students were offered to francophone students in developing countries. More than 4000 applications were received from 53 developing francophone countries. The following academic year, more than 5000 applications were received from 45 countries. More than 70% of the applications came from SSA.

Like for UVA and UNFM, FOAD students have to commute to the *campus numérique* to take their courses. Contrary to the UNFM and the UVA, the AUF adopted an e-learning structure whereby students take their DE courses individually. As a general rule, the *campus numériques* are situated on one of the national university's main campus.

### **The DE projects in their host Universities**

#### *The Malian HE institution*

Like the great majority of former colonies, the Malian educational system remained a copy of the French educational system after the country recovered its independence in 1960. Starting in 1962, although the creation of a national university was envisaged, only a few Grandes Ecoles were created to respond to the urgent need of professionals of the newly independent country. One such school was created to train public servants, another to train engineers, a third one was initiated to train teachers, and so on. After a good start during the sixties, the Grandes Ecoles policy began to show early signs of breathlessness during the seventies. The Structural

Adjustment Programs (SAPs) imposed by the IFIs since the early eighties killed the Grandes Ecoles altogether. Because of the lack of funding and the consequent downsizing in higher education, learning conditions deteriorated and unemployment among young graduates soared. A bylaw transforming the Grandes Ecoles into Faculties and Departments of a new Université du Mali was voted into effect in 1986. Its structures were completed only ten years later, after a long series of consultations that lead to an in-depth reform of Malian higher education. The Université du Mali changed its name recently to the Malian HE institution.

### **The DE projects in Mali**

One Malian engineering school situated in downtown Bamako hosts both the AVU and the UNFM. It is a three-storey, thick-brick, high-raised ceiling building with long sheltered corridors, high windows protected by shutters that characterise French traditional architecture. The building was built as a high school (Lycée) for French offspring during the colonial era. Composed of four buildings built in a square with a large courtyard in the middle, the site covers an area equivalent to two North-American street blocks. Both the UNFM and the UVA are located in the farthest block from the street.

### **UNFM-Bamako**

The UNFM occupies one room on the second floor of the school of engineering building. This room is used both as a computer lab and a classroom. Big tables in the room have been arranged in a U-shape for 12 students. A big white screen occupies the front wall facing the network computer operated by the local tutor to send questions to

the lecturer or receive answers from them. A projector linked to a VSAT antenna located on the roof of the building captures images from one French hospital. Two medium-sized loudspeakers placed on stands are well situated in each corner in the back of the room.

The sound and image quality is good. Five among the twenty-five computers in the lab are connected to the Internet. The 12 students rarely switch the computers on. The only way for learners to interact with the lecturer in Paris is to send written questions via the network computer. Given the very hot weather in the region, two modern air conditioning units are placed high on the wall opposite to the room's entrance, one towards the front, and the other towards the back of the room. Two fans a few meters apart hang on the ceiling in the middle of the classroom.

### **UVA-Bamako**

Located on the third floor, the UVA has three rooms. It has a different layout: the director's office is located between the computer lab and the DE classroom. The classroom is equipped with only one network computer. Pairs of chairs have been arranged in three rows. A headset-microphone unit is hooked on the network computer. This is the only medium students can use to communicate with the DE lecturer, one at a time. Two small loudspeakers have been placed on the floor at each front corner of the classroom, one on each side of the big screen on which course materials are projected by a projector placed next to the network computer. The sound quality is poor.

The UVA has its own VSAT antenna situated next to the UNFMs on the roof of the building. Because of narrow Internet bandwidth, the cameras in Canada and in the

field have been disconnected. Only PowerPoint slides from Canada are projected onto the screen, synchronously commented by the lecturer. The image quality is also poor. One student has been appointed to operate the computer network unit and transmit questions/responses to the lecturer in Canada either orally or by typing them in. The poor Internet connection seems to be a constant technical preoccupation.

Disconnections are very frequent.

In case of Internet disconnection, students can rely on an asynchronous WebCT backup they can access and listen to in the lab beyond the director's office on each course's website. The lab is equipped with 30 computers connected to the Internet. This is where students spend most of their time.

### **The AUF-Bamako**

The science department of one Malian HE institution hosts the AUF-Bamako, The UNFM is situated just across the street. The AUF-Bamako occupies two semi-basement-like rooms. One of the rooms plays the role of a documentation centre. There are about twenty computers connected to the Internet in this room. It also hosts the office of the local AUF director.

The room next door is the Campus numérique francophone (CNF). It is the computer lab at the disposition of FOAD students. Contrary to the cases of the UVA and the UNFM, the AUF adopted an e-learning architecture that does not require students to attend their courses at the same time in the same classroom. However, they still have to commute to the local CNF because it is the only place where they can find the Internet connection they need to take their courses. The CNF is open all day from

9 am to 9 pm in order to accommodate FOAD students who are working professionals to use the facility during lunch hours and after work.

FOAD students come to the CNF on an individual basis according to the needs of the program in which they are registered. Students have access to workstations equipped with Internet connection, headsets and microphones allowing them to take their courses and interact with their lecturers or their colleagues. Although the synchronous oral interaction option exists, it seems as though students prefer to interact with teachers and colleagues by asynchronous online chats. In addition, despite the wide range of programmes students are registered to, it happens that several students are registered to the same program. It looks like these students rarely work collaboratively. It appears that the only interaction between CNF users consists in seeking the help of the technical assistant to resolve technical problems.

### **Some of Mali's socio-economic indicators relevant to this study**

According to the ADB figures, 55% of government expenditures in Mali were ensured thanks to foreign aid in 1999. However, the living conditions of ordinary Malians do not seem to have improved much. Mali is ranked as the third least liveable country in the world. The Malian population was estimated at a little less than 12 million in 2006. More than 48% of the population is aged 0-14 years old. In 2003, its literacy rate was 46%. In 1997, there were 45,000 television sets and 570,000 radios. In 2006, the number of main telephone lines in use was estimated at 82,000. They were believed to be unreliable but improving. The number of cell phones almost quadrupled during the last 5 years. It jumped from 40 000 in 2001 to 1, 513,000 in 2006. There were 28

Internet Service hosts in 2007 and only 70,000 Internet users in 2006. (Central Intelligence Agency, 2008)

### **The DE projects in Burkina Faso**

The BF HE institution was created in 1974 with only 324 students. At the beginning, it was organised in the Grandes Ecoles and Instituts like its northern sister, the Malian HE institution. Enrolment grew steadily. In 2004, thirty years later, it hosted more than 20,000 students divided into Ecoles (des lettres, des sciences économiques, de droit, des sciences de la santé) and Instituts (technologie, polytechnique, maths, physiques, cinéma). In its short history, the BF HE institution underwent a number of pedagogical and administrative changes to adapt to the negative consequences of lack of funding from international financial institutions following the SAPs and the subsequent negative repercussions on the effectiveness of the Burkinabé higher education system.

For example, the latest reforms were triggered by the alarmingly low success rate, estimated at around 30 percent, observed at the BF HE institution. The adoption in 2000 of a modular pedagogical system with courses organised in more flexible modules and credits quite similar to the North American educational system was a major shift from the traditional core programs. This shift is credited with having helped double the success rate only two years after its inception. On the administrative level, this pedagogical reform was accompanied by the transformation of the Ecoles and Instituts into Unités de Formation et de Recherche (UFR) in an attempt to reconcile theoretical learning with applied research.

## **UVA-Ouagadougou**

Geographically, the BF HE institution is more centralized than the Malian HE institution. The three DE projects are located on the same central campus in downtown Ouagadougou. It is a big campus organized in departments, research institutes and administrative services. As in Bamako, both the UNFM and the UVA share the same building, the Centre de pédagogie universitaire. It is a more modest building. Contrary to Bamako, where the two VSAT antenna dishes that receive courses from Canada or Paris are located on the roof of the building and are hidden from the public's view, in Ouagadougou the two antenna dishes are located on the ground right at the entrance of the site next to each other.

The UVA classroom has the same layout as in Bamako. The Direction pour la promotion des nouvelles technologies de l'information et de la communication (DPINTIC) is a distinct service that was created to promote new technologies within the University. The AVU computer lab/classroom is equipped with 30 computers connected to the Internet. The lab is shared by the AVU short training program in computer sciences destined to professionals, the bachelor program in computer sciences and the Cisco Academy training program in network management.

## **UNFM-Ouagadougou**

The UNFM was launched in Ouagadougou in June 2005. The first cohort of nurses began taking their DE course modules the same month. The UNFM-Ougadougou had more candidates than its counterpart in Bamako. The computer lab is equipped with 50 computer stations. The classroom is laid out in four tight rows of desks facing the main big screen on which course materials are projected. The UNFM-Ouaga bought

quality sound equipment abroad but it disappeared at the hands of customs officers. It was never recovered. Small computer loudspeakers screwed on the rear wall of the classroom were being used instead. In addition to the course projector, there is a printer, which is never used because it is too expensive. The sound quality is not as good as at the UNFM Bamako.

### **AUF-Ouagadougou**

The AUF is located in a different building on the campus, a few hundred meters across the street from the UVA and the UNFM. Located on the third floor, it has the same layout as in Bamako, but it enjoys more room and a better view. Although students learning and living conditions seem to be hard, this university has the reputation of being better organized and the most rigorous in teaching and learning in the region.

### **Some Burkina Faso socio-economic indicators relevant for this study**

In Burkina Faso, the ADB figures in 1999 show that 57% of the government expenditures came from foreign aid. Burkina Faso is ranked as the fourth least liveable country in the world. In July 2006, the population of Burkina Faso was estimated at a little less than 14 million, with 46% aged 0-14 years old. In 2003, the literacy rate was estimated at 21%. In 2006, there were 94,800 main telephone lines, in use (one telephone line for every 100 people) and 1, 017,000 cell phones. In 2007, there were 193 Internet hosts and 80,000 users in 2006 (Central Intelligence Agency, 2008).

## **The DE content providers in SSA**

### *The Canadian HE institution*

In addition to the participants recruited from these DE projects in SSA, additional participants were recruited from one large and reputable Canadian HE institution, the content provider for the AVU program in francophone Africa. It offers around 400 programs to a 40,000-student population. It is one of the main destinations of francophone international students from Africa and from around the world.

The Association of Universities and Colleges of Canada (AUCC), the CIDA execution agency, contracted this Canadian HE institution to provide content for the VISAF project. The project is located in the Computer science's Pavillon Adrien-Pouliot on the main campus. It consists of two rooms far apart from one another. The first room is the project manager's office, the other is the room where teaching assistants deliver their lectures to participant universities in SSA.

The teaching room is the size of a regular faculty office, 4 by 5 meters. It is minimally equipped with a 19-inch computer screen connected to the Internet, a keyboard and a headset. *Interwise* is the communication software that allows teaching assistants to present their lectures synchronously to ten universities across SSA. In case of a power outage in any of the participant universities during the lecture, students can rely on WebCT backups.

*Interwise* features a simple system of icons showing the list of participant universities. This system is designed to allow the teaching assistant to orchestrate his lecture to his convenience. For example, when a student from a particular university has a question, the icon representing their university turns green and turns into a raised

hand icon. It is up to the lecturer to allow the learner to speak or not. When allowed to speak, there is a small microphone icon next to the name of the participant's university.

#### *Universities offering FOAD programs*

To the notable exception of two Canadian universities, almost all the FOAD programs were offered by French universities in 2006.

## **Section 2: Conceptual framework**

This study used a Grounded Theory approach to investigate the performance of foreign aid-funded DE projects in SSA from the participants' standpoint. This approach stresses the importance of the participants' experience as a source of sound knowledge of phenomena they experience on a regular basis (Glaser & Strauss, 1967; Strauss & Corbin, 1998). Given the scarcity of previous research efforts to understand the experience of DE users in SSA, this study is exploratory in nature. Apart from promotional, opinion and evaluation materials from foreign aid-funding agencies, and ICT-based projects to "bridge the digital divide" in SSA, independent research on DE in francophone SSA is rather rare.

### **Grounded theory.**

Grounded theory methodology is well suited to this study because of its comparative approach. Instead of studying one group, I was interested in conducting a multicase analysis varying on multiple levels as described in the previous section, in order to generate a theory that explains the interaction between various stakeholders of

foreign aid-funded projects as they attempt to deliver sustainable results that live up to the recipients' expectations. As Cresswell (2002) puts it: "A grounded theory design is appropriate when you want to develop or modify a theory, explain a process, or develop a general abstraction of the interaction and action of people." (p. 456)

Consistent with the grounded theory conceptual framework, I attempted to acquire a fine-grained understanding of the performance of DE projects in SSA in order to develop a theory based on the experience of various stakeholders. To that end, I used a multicase comparative design in order to provide "a rich and comprehensive picture" of the experience of the various stakeholders. According to Glaser and Strauss (1967) the most important advantage of this design is that it deepens understanding and explanation. In addition, a comparative approach enhances generalizability (Miles & Huberman, 1994). Although generalizability is a contentious issue in qualitative research, an analytic comparison of participants' experience from multiple cases pertaining to the same phenomenon helps to highlight differences and similarities and provides quality raw materials for developing a sound theory.

The use of literature has been a contentious issue among grounded theorists. In the beginning, Strauss and Glaser (1967) advocated against literature review prior to conducting a study intending to generate a theory. In their words, they argued that:

An effective strategy is first literally to ignore the literature and fact on the area under study, in order to assure that the emergence of categories will not be contaminated by concepts more suited to different areas. Similarities and

convergence with literature can be established after the analytic core of categories has emerged. (p. 37)

After years of arguments between grounded theory researchers, it is now widely recognized that some literature review is needed to allow researchers to be inspired by previous research efforts in their field of study prior to undertaking their own research (Hill, Thomson & William, 1997; Ritchie et al, 1997; Vaughn, 1992). As pointed out earlier in this study, my experience and interest in foreign aid can be traced back to my childhood. In addition, I completed my Masters degree and I am completing my doctoral programme in Educational Technology. Over the years, I ingested a fair amount of literature about this study's central phenomenon. Therefore, it would be difficult to pretend to ignore all the literature I have read over the years.

Contrary to the founding fathers of grounded theory, Pidgeon and Henwood (1996) advocated the use of literature. They argued that pure induction is a myth. For these researchers, emergent concepts are the result of interplay between the data and the researcher's prior conceptualizations. Even Strauss eventually softened his stance about this issue in his later work (Strauss & Corbin, 1998).

This is the up-to-date version of grounded theory that I followed. However, I made sure to "bracket" previous concepts I held from my previous understanding of the central phenomena of my study. I approached my study with an open-minded stance in order to let the data speak for itself as advised by Strauss and Corbin (1998).

## **Grounding the study in the field's realities**

In July 2004, I landed a timely contract for 18-months of work in West Africa, just as I was wondering how to finance my doctoral dissertation fieldwork. My original dissertation dealt with the role of sound in online learning materials in SSA. My interest in this topic stemmed from my past experience in journalism and media production. Most of the time, sound is treated as a poor relative in the family, even in more traditional media like radio and television. I wanted to understand to what extent this situation was true in online learning materials and its impact on learners in SSA.

Upon my arrival in the field in July 2004, the UVA and the UNFM had not yet started, but short preliminary online training courses were already underway. I attended online training courses in network management offered by the US-based multinational CISCO Systems and short training sessions offered to professionals by one Canadian HE institution both in Mali and in Burkina Faso. I talked about my research project to learners, local tutors and administrators in charge of these programs. After only a few discussions with prospective participants to my study, it became clear that the quality and the contribution of sound were only minor preoccupations to them. They were more preoccupied by pedagogical and administrative issues like course organization, course schedules, school fees, technology access, Internet connectivity, degree equivalence, evaluation systems, course tutoring, course practice items, language clarity and understandability. This was a wake-up call for me.

Further casual discussions with prospective participants to my study in the field in SSA convinced me to focus my attention on the issues of concern to the participants, i.e. instructional design and management issues. While on my holidays in Canada in

December 2004, I reported to my doctoral supervisors the new developments in my dissertation proposal. They gave me their go-ahead. I paid a visit to the UVA project manager at Canadian HE institution in January 2005 and I met with two online lecturers. Although I did not collect any other formal data than field notes summarizing the main ideas stemming from my conversations, that visit allowed me to better understand the functioning mode of the UVA, its challenges and opportunities. This helped me to ascertain the validity and the importance of my research project. The visit also allowed me to refine my research questions and think through the most appropriate research methodology to adopt for the study.

### **Purposeful sampling**

Consistent with the tradition of grounded theory methodology, advocating selective sampling as new data point to more focused areas to explore (Strauss & Corbin, 1998), I considered my visit to Canada University in Quebec City as the beginning of the selective sampling procedure for this study. The timing was good. Both the AVU and the UNFM were actively preparing to launch their programs in both Mali and in Burkina Faso during 2005. The FOAD had started in 2004. This situation was propitious to adopting purposeful sampling strategy for this study. Creswell (2002) describes purposeful sampling as a research strategy in which “Researcher samples cases or individuals that differ on some characteristics” (p. 194).

In the case of my research project, I had three cases of DE destined to the same two countries (Mali and Burkina Faso) but differing on number of characteristics:

- 1) The nature of the DE project or its targeted level of education: Higher education and capacity building (training)

- 2) Content provider: single, multiple
- 3) Funding source: Canada, France

Table 3.1 below shows the selected research sites

Table 3.1. Selected research sites

Cases	Targeted Level	Content Provider	Donor Country	Recipient Country
AVU-UVA	Higher education	Can HE institution	Canada	Mali/Burkina Faso
AUF	Higher education	Various universities	France/Canada	Mali/Burkina Faso
UNFM	Capacity building	HEGP, France	France	Mali/Burkina Faso

I adopted a purposeful sampling strategy because it allowed me to scrutinize DE projects performance from multiple perspectives. After having determined the cases to sample, their commonalities and differences, I had to determine the categories of “information rich people” who could provide me with valid and useful information for my research.

**Preliminary contacts with participants.**

*The administrators*

Although I had previously met with some of the persons in charge of the preparation of the AVU and the UNFM centres in Bamako and in Ouagadougou, I contacted them again in February 2005 to tell them about the new orientation of my study. DE projects’ administrators in both countries welcomed the idea. They provided me with the few project documents they had. They shared with me their hopes, their preoccupations and their frustrations about the forthcoming projects. Given the fact

that students had not yet been recruited, I only met administrators and technical assistants. In April 2005, an important AVU field mission comprising of the project manager from the Canadian HE institution, an AUCC representative from Ottawa, the AVU regional officer and the senior technical officer based in Dakar, Senegal toured the project area of intervention. I met them in Bamako and learned more about how the project was progressing.

At the beginning of my fieldwork, the local centres' UVA administrators also administered the UNFM in both Bamako and in Ouagadougou. That allowed me to learn about the development of both DE projects from the same source. I regularly wrote a summary of my visit in a 100-page field notebook. I read through the summary of my previous visit before making any following visits in order to refine further my understanding of the early administrative and management issues these two DE projects were facing. During the first half of 2005, I worked on framing my research and clarifying concepts from administrators' and technicians' perspectives. These preliminary meetings I had with prospective participants helped me to frame the study and develop preliminary categories.

#### *The learners*

The French-funded UNFM was the first to start, simultaneously in Mali and in Burkina Faso, in June 2005. After two postponements (September 2004 and January 2005), the Canadian-funded VISAF under the banner of AVU was up and running in October 2005.

I first visited both UVA and UNFM students in Ouagadougou in mid-November, followed by a visit to students in Bamako in early December 2005. Completing the Baccalaureate and accessing higher education is quite an achievement, reserved to a tiny

minority of young people in SSA. For example, in Burkina Faso only one in twenty-five secondary school students makes it to higher education<sup>4</sup>. Most of the time these fortunate few are insecure and intimidated by older students and even more by university administrators during the first months of their freshman year. Given the fact that I was expecting this distance between students and their administrators to be even greater because of the insecurity created by the totally new DE environment, I politely declined the offer from some administrators to introduce me to their new DE classes.

Both in Bamako and in Burkina Faso, I sought permission from the local project administrators to attend two to three DE courses. They graciously granted me permission. I then contacted the local tutors of DE courses I intended to attend. I privately discussed with them the details of my research project and asked them if they would agree to let me attend the DE courses they tutor. All of them allowed me to attend. We agreed that I would take the 15-minute break of the first course I attended to introduce myself to the class. I attended two DE courses in Ouagadougou and three in Bamako, sitting on the last row at the far rear of the classroom, observing what was going on in the class.

As agreed upon with the local tutor, I used the 15-minute break to introduce myself and explain the objectives of my research project. I explained the purpose of my research and I told them that I would be coming back in two to three months to conduct a series of interviews with volunteer participants so that they could tell me about their experience with DE.

---

<sup>4</sup> 25% make it from elementary school to secondary school and a fortunate 1% makes it to higher education. Although these figures reflect the situation in Burkina Faso, they are largely similar throughout SSA

I informally chatted with some of the learners. As for the FOAD sessions at the AUF in both countries, they had been up and running for a year and both administrators and learners had many things to say about their experience with DE. One difference between the UNFM, the AUF and the UVA is that FOAD students in the latter programs do not take their courses in a local class. Although they still have to commute to the AUF computer lab to access their online courses, FOAD students follow the French universities' schedules. They take their courses from individual computer stations equipped with headsets. During my preliminary visit, I sat in the room, observed and took note of what was going on in the classroom. I engaged in casual discussion with students.

### **Recruitment of participants**

This study is mainly based on in-depth interviews from 33 participants. Table 3.2 shows an overall distribution of participants to this study. Learners and administrators constituted the bulk of the participants. Overall, 23 out of the 33 participants (69%) belong to these two groups (11 learners 33%) and 12 administrators (36%). The remaining 10 participants (21%) consisted of tutors, lecturers, technicians and instructional designers. These additional groups of participants contributed depth in the understanding of administrators' and learners' perspective about the performance of DE projects in SSA.

On the institutional level, I sampled the AVU at three sites (Mali, Burkina Faso and Canada), whereas I sampled the UNFM and the AUF at two sites (Bamako and Ouagadougou). The UVA had the lion's share of the participants, 24 of 33 participants (72%) have some connection with the AVU. The remaining 28% of the participants are

from the UNFM and the AUF in the proportions of four (13%) and five (15%) respectively.

As for the participants' locations, 16 out of 33 (48%) are from Ouagadougou, 13 out of 33 (36%) are from Bamako and 5 out of 33 (15%) are from Canada.

Ouagadougou contributed more participants because in addition to the DE projects that were the subject of this study, it is the headquarters of the *Conseil africain et malgache pour l'enseignement supérieur (CAMES)*, the central continental decision-making body in matters regarding higher education and research in most of francophone countries. Some senior staff members of the CAMES participated in this study.

Finally, the low representation of women in the sample, only 4 out of 33 (13%), reflects their actual low representation in these projects in the field. One of the criticisms often made about DE in developing countries in general and in SSA in particular is that it reproduces the traditional gender bias against women despite claims to the contrary from DE promoters.

Table 3.2

Participants' demographics by projects, sites, profession and gender

Category	AVU-UVA						UNFM			FOAD-AUF				Total	
	BF		Mali		Canada		BF		Mali	BF		Mali			
	F	M	F	M	F	M	F	M	F	M	F	M	F		M
Students	1	2	1	2				1			1	2		1	11
Tutors		1		2											3
Lecturers						2									2
Instr. Designers				1	1										2
Technicians		1		1				1							3
Administrators		5		3		1		1		1				1	12
	1	9	1	8	1	4	0	3	0	1	1	2	0	2	

---

<b>Total</b>	<b>24</b>	<b>4</b>	<b>5</b>	<b>33</b>
--------------	-----------	----------	----------	-----------

---

F= Female

M= Male

Participants in the administrators' category comprised local DE project directors, university faculty and administration members currently involved or having been involved in the preparation for these DE projects in various ways in the past and intercontinental public servants from the CAMES. The learners' category consists of young freshmen, students who were already enrolled in a university department but switched to the DE opportunity, and working professionals (nurses in the case of the UNFM). The rest of the sampled categories consist of lecturers, tutors, technical assistants and instructional designers. The two instructional designers were interviewed together because of their limited availability.

### **Equipment and Materials**

Data from non-participant observations were videotaped using a Sony DCR-TRV 510 Digital 8 video camera equipped with a sensitive built-in microphone and a colour screen monitor mounted on a tripod. The fact that the camera was equipped with a night shot option that provides perceptible black and white images even in very low luminosity conditions was very helpful. Most of the time, learners had to close the curtains to allow them to better view the PowerPoint slides or images on the big central screen in their classrooms.

Ninety-minute Hi 8 videotapes were used to record data. A headset was used to monitor sound quality. The video and tape recorder functioned on battery most of the

time. It allowed me more freedom to discreetly move around in the classroom without being too obtrusive. Most of the time, I set the camera on a tripod in the back of the classroom and recorded what was going on in the classroom for an average of ten minutes every hour.

Data from in-depth interviews are the core of this study. Thirty-two individual interviews were conducted with various participants. They were tape-recorded using an Aiwa JS 215 stereo mini recorder with a discreet bi-directional external microphone.

### **Data collection procedure**

Given the fact that the UVA did not start its first session until late October 2005, students had no Christmas holidays. I attended two DE courses at the UVA and two courses at the UNFM in Bamako at the beginning of December before heading south. I arrived in Ouagadougou on December 28. Courses were over for the semester at the UNFM and at the AUF. UVA students were preparing their first exam scheduled during the first week of January 2006. Day and night, students were flocking into the computer lab to listen individually to past lectures on computer stations, the only resources they had to prepare for their first evaluation. They had course photocopies as well but they almost never used them. They preferred to re-listen to past lectures. Computer lab opening hours were exceptionally extended to allow students to work longer hours to better prepare for their exams.

During my first week in Ouagadougou, I went to work in the lab while students prepared for their exams. I had informal chats with them. Students were so stressed by their first DE evaluation that many of them spent a few nights in the computer lab

preparing for exams. After one week, I was a familiar figure on the campus. I had an excellent rapport with all the prospective participants of my study.

I waited until courses resumed after the holidays. I started to approach potential participants individually during the breaks, at lunchtime or after class to ask them if they would be interested in sharing with me their DE experience. All the students I approached accepted my invitation. Appointments for the interviews were taken. Voluntary participation and withdrawal from the study were clearly mentioned to all potential participants along with confidentiality. I insisted on the fact that participation in the study would have no academic or personal consequences. Given that this study was conducted in francophone countries, all the data collection instruments were designed in French. I printed a Letter to the Participant and a Consent Form (See Appendix A). I handed both documents to each voluntary participant.

A similar approach was used with the UNFM trainees as soon as they came back from holidays in mid-January 2006. They were also preparing for their first evaluation. Contrary to the UVA where students could access courses on WebCT backups and work individually, at the UNFM the only resources students had to prepare their evaluation were CD-ROM copies of all past lectures. They could only watch them on the lab's main screen and trainees had agreed on a playback schedule. The lab was open every afternoon from 3 to 9 pm. During the lecture week, learners established a viewing schedule. They were only present when they were interested in reviewing the courses scheduled for playback for that day.

Contrary to the UVA and the UNFM, there was no learners' community following the same courses at the same time at the AUF. They form a virtual learning

community with the French counterparts only, with whom they share the same courses. Both at the UNFM and at the AUF, participants were approached individually.

The same data collection procedure was followed as in Bamako in February 2006. It was remarkable that all stakeholders were eager to share their experience with DE, contrary to what happens in many qualitative studies. One of the reasons for participants' good grace was the fact that the interview did not have any direct bearing on sensitive issues such as elements of the participants' private life, or their political or religious opinions, for example. The other reason is that participants were more than willing to take this opportunity to vent their mixed feelings regarding their new DE experience.

Both in Bamako and in Ouagadougou, interviews with the administrators were recorded in their offices. Interviews with students, tutors and technical assistants were conducted in the living room of the guesthouse I lived in during the five weeks I stayed in Ouagadougou. Situated on a central location on the campus a few meters from the three DE projects' sites, I was the only occupant during the day and I could safely use the living room anytime I wanted to record interviews.

In Bamako, the director of the AVU learning centre provided me with a room where I could conduct interviews. Overall, the data collection procedure yielded twenty-two 90-minute regular audiotapes. Hunches and insights inspired by interviews and observation were written down in two field notebooks. Three 90-minutes Hi8 tapes were filled with images from the research site. Video data and memos from field notes were used not only for illustrative purposes but also as additional sources of information to elicit initial categories during the analysis. In addition, they enhance data triangulation (Maxwell, 1996).

I listened to the most recent interviews before starting a new day of interviews. Unfortunately, I lost interviews from three early participants (two from Ouagadougou and one from Bamako) because of some technical recording errors. I fixed this problem by systematically hooking up my headset and wearing it during the entire interview in order to monitor the sound quality.

### **Section Three: Data analysis**

Interviews were integrally transcribed and the video footage was screened. Although the subsequent data analysis focused exclusively on the interview transcripts, the video footage and field notes were very helpful in recreating the atmosphere of the DE projects in SSA throughout the analysis procedure. Copies of interviews transcripts were sent by e-mail to every participant to check if they accurately reflected the experience they shared with me. Three participants suggested minor corrections to the wording of their interview transcripts. One participant changed his mind after he received his interview transcript. This participant e-mailed me back a scripted transcript, totally different from the first version of his interview. I assured him, once more, about the totally confidential character of my study. He let me use the original interview.

Given the qualitative nature of this study, I used HyperResearch 2.5 for the entire coding and part of the analysis process. I formatted all the thirty-two interview transcripts from Word format (.doc) to text format (.txt) as required prior to coding using HyperResearch 2.5.

## **The coding process using HyperResearch 2.5**

HyperResearch 2.5 is qualitative coding software that supports data from various sources: text, audio, video and graphics. It allows researchers to organise, code, index and easily retrieve and display big quantities of data. I coded all textual data from all three cases and analyzed them using HyperResearch 2.5. Although some qualitative researchers voiced reservations regarding the dangers of losing sight of significant details when mechanically coding data with computer programs, some features of HyperResearch 2.5 make qualitative coding work less cumbersome (Hesse-Biber & Smith, 1996).

The coding process begins by setting up a list of potential code categories, then the coder selects a portion of the data source and assigns a code to it corresponding to the concept contained in that particular portion of the data. Every time the coder wants to encode a new portion of the data, the software presents the list of previously created codes. The coder can then choose one code among the existing codes or create a new one depending on the concept at hand. The coder can then view source material by a simple click on the code name, which helps to refine the coding process.

In addition, the coder can rename, duplicate, recode, edit, and delete codes as desired as the refinement process progresses. In addition, some HyperResearch 2.5 features allowed for the addition of short descriptions or more substantial annotations to codes. These descriptions and annotations allowed me to write down hunches and insights inspired by particular codes as they were progressively emerging from the data. They were very useful during the theorizing phase.

## **Audit check**

At this stage of my study, I deemed it timely and necessary to seek help from two doctoral student friends as data auditors. One is in Political Science and has worked for a Canadian international development agency. She is quite familiar with the LFA. The other is in journalism and is not familiar with the field of international development. Contrasting perspectives from these two auditors with an unequal familiarity with international development projects were sought to manage my own subjectivity and idiosyncrasies regarding the subject of this study.

According to Marshall and Rossman (1995) audit check and “peer debriefing” ensures some degree of trustworthiness and reliability by limiting individual researcher bias. Six interviews (two from administrators, two from learners, one from a tutor and one from instructional designers) were more analysed in order to look for preliminary categories, sub-categories and properties, and to develop a coding scheme.

## **Coding scheme**

The graduate student in Political Science had already used HyperResearch a few years earlier. She was considering using it for her own doctoral research and took this opportunity to practice. After half a day practicing together with HyperResearch coding, we gave ourselves a whole week to do initial coding separately. This preliminary coding was done entirely in French. All instances expressing participants’ experience with DE projects in SSA were assigned a code. This process helped us to substantially reduce the long interviews to the main constitutive concepts they encapsulated.

We used HyperResearch’s “Report” feature to compare our coding of the six cases. We agreed to include in the report the case name, the code name, the code

frequency and the source material. This report provided us with enough information to compare the results from our coding. We compared the different codes we each had come up with during the coding process. Although the constructivist nature of the GT used in this study (as opposed to objectivist GT, see Charmaz, 2006) did not require the computation of an interrater agreement, more than 9 out of 10 codes each of us came up with were in agreement.

Given this study's research questions and the interview protocols designed to explore participants' experience in order to answer these questions, most of the codes yielded from the interviews pointed to the different levels of compliance of these projects with the different phases of ID, HPT and RBM.

According to Charmaz (2006), one of the main reasons why GT methodology lends itself to the exploration of processes is the fact that it allows the analyst to concentrate on relationships between the different phases of the processes: "From early on, you know the path and can watch for markers and transitions in the passage." (p.136).

As discussed earlier in this text, ID, HPT and RBM are processes whose frameworks are similar in many respects to that of the Logical Framework Analysis (LFA) the majority of foreign aid-funded projects claim to abide by. The initial analysis of the interviews from the six cases yielded codes that could be divided in two major groups: the most important group consisted of objective elements of project analysis, planning and implementation.

The second group of codes was made of subjective elements of participants' motivation, expectations and their forecast of the likelihood of the DE projects to live up to their promises of cost-effectiveness, cost-efficiency and economy of scale.

Whereas the first group of codes addressed this study's main research question regarding the level of compliance of DE projects in SSA with ID, HPT and RBM principles, the second group dealt with the second research question regarding the extent to which these project are capable of living up to their promises.

As discussed earlier, RBM and LFA are often used interchangeably in development literature. A close scrutiny of the preliminary codes showed that most of these codes related to different LFA levels as defined in a recent UNESCO publication (2006). Although this publication applies strategic management principles (RBM) on a macro (national) level, the general LFA process and concepts remain similar to the one in the substantive field of the performance of DE projects in SSA this study set out to investigate. Therefore, this study used definitions of categories, sub-categories and their properties from the afore-mentioned UNESCO's publication (see appendix F).

The analysis proceeded by relating each code to corresponding category whenever possible, according to its fit with the definition of the category. This matching of codes to pre-defined categories was done with the following Glaser's & Strauss (1967) caution in mind: "categories can be borrowed from an existing theory, provided that the data are continually studied to make certain that the categories fit" (pp. 36-37). The resulting master code list counted more than 200 codes. Using the HyperResearch feature "Select codes by criteria", codes pertaining to the same major concept were merged under the same category. This procedure allowed the number of significant codes retained for the final analysis to be reduced to a more manageable 68 codes that captured this study's bulk of categories, sub-categories and properties.

## **Categories, subcategories and properties**

1. The remaining codes were grouped in five categories corresponding to the five UNESCO's LFA/RBM levels. They consist of: Sector analysis: this broad category comprises six fundamental parameters (subcategories) that should be taken into consideration prior to any educational innovation: the macroeconomic and sociodemographic situation, the access and participation to education, the quality of education, the educational outcome and external effectiveness, the educational cost and finance and the managerial and institutional aspects.
2. Policy and strategy formulation comprises policy dialogue and goal/purpose formulation.
3. Program of action is meant to translate policy directions into operational terms within a given time span.
4. Monitoring and Evaluation: monitoring is about regular assessment of the status of each level of the program to see how the uses of the means allocated are helping to deliver the expected results, whereas evaluation is an external assessment of the attainment objectives.
5. Cost-estimation concerns itself with whether the policy is credible in that sufficient human and financial resources are available for carrying out planned results.

Each of these categories and subcategories have their own properties. As will be shown in further detail later in this study, the LFA/RBM and HPT/ID processes are very similar. Appendix E gives further detail about these categories, subcategories and their properties.

## **Analysis: Open coding**

Once the analysis of the six preliminary interviews was complete, and the coding scheme and code definitions developed, the remaining 26 interviews were analysed using the code template thus formulated. During the analysis I carefully scrutinized the participants' interviews. Every passage pertaining to an already existing category was assigned to that category. When new information relevant to the subject of this study did not fit the existing categories, a new category was created. In this case I re-examined the previously analyzed interviews to see if I could find instances of this newly created code.

Apart from the ease of coding, HyperResearch offers also allows for a range of features that allow flexible analysis of data. The feature I used most in this study was the possibility to run reports of the codes across cases and compare what experience the participants report in response to any particular question asked during the interview.

The "run report" feature allowed me to pull together all the codes pertaining to each research question and examine them carefully to see what picture they painted. For example, I would select all the codes pertaining to particular aspects of LFA and run a report across all 33 interviews to find out commonalities and variations of participants' experience with these particular aspects.

The excerpt represented in Figure 1 illustrates the result of such an analysis of the various participants' motivations to enrol in DE. The display contains the case name, the assigned code, and the frequency of the code, the type of source material, its reference and the coded source material. In this example, the code MOT covers various expressions of motivation, such as "improved job perspectives", "interest in computer

science”, etc. For the sake of confidentiality, all elements that may make the identification of the respondent possible have been replaced by a code.

Figure 1.

Excerpt from open coding report generated by HyperResearch 2.5

Case	Code	Freq	Type	Reference
STU BaGd-AB 276,764	MOT-interest in compsci-frustration at local University Intvw P 19.txt			1 TEXT

Source Material:

Q : Qu'est ce qui t'a poussé à abandonner ta deuxième année à l'université pour aller recommencer en première année à l'UVA ? J'avais toujours voulu faire de l'informatique, mais au (nom du pays) on ne le fait pas assez. A la Faculté où je suis inscrit ce n'est pas facile de travailler là-bas. C'est la faculté des sciences économiques et juridiques de l'Université de (nom de la ville). J'étais en 2<sup>ème</sup> année, sciences économiques. Donc, quand j'ai entendu parler de l'opportunité qu'offrait l'UVA, j'ai posé ma demande et j'ai été accepté. Actuellement je suis les cours à distance de l'UVA et j'ai pratiquement abandonné la faculté.

Case	Code	Frequency	Type	Reference	Source
STU Dial-DB Intvw P 26.txt	MOT-improved job perspectives	1		TEXT 384,830	

Source Material:

Q : Qu'est ce qui vous a poussé à entreprendre votre FOAD une année seulement après votre doctorat ? J'ai toujours voulu avancer dans le domaine Santé publique. Je suis déjà un rat d'Internet et un jour je suis tombé sur un site qui annonçait des bourses pour une FOAD de l'AUF. Je me suis présenté. On m'a retenu. Comme je n'avais pas de boulot, je me suis présenté à cette formation pour augmenter mes connaissances en matière d'épidémiologie.

Case	Code	Frequency	Type	Reference	Source
STU HerL-AO Intvw P 31.txt	MOT-Western degree - interest in ICTs	1		TEXT 64,519	

Source Material:

Q : Pourquoi tu t'es inscrit à ce programme de baccalauréat en informatique de l'Uaval à distance ? L'informatique c'est quelque chose qui me passionne. En voyant ce programme, je me suis inscrit et puisque l'université subventionnait quelques éléments et je faisais partie de cette liste, j'ai dit pourquoi pas tenter ma chance aussi. Comme c'est un diplôme canadien, c'est comme si j'avais fait le déplacement, quoi. Donc j'ai préféré m'inscrire là-bas.

Case	Code	Frequency	Type	Reference	Source
------	------	-----------	------	-----------	--------

MGRSB-AM MOT-Western degree I TEXT 8275,8599 Intw P 05.txt

Source Material:

Un troisième élément qui est connexe aux deux autres qui peut expliquer le contentement des apprenants, c'est que il y a pas de référentiel d'appréciation. Ils pensent que ce qui est livré est forcément de bonne qualité et à la clé, on reçoit un diplôme d'une université du nord, ce qui est prisé sur le marché de l'emploi.

---

Case	Code	Frequency	Type	Reference	Source
STU KoiM AB	MOT-improved job perspectives	1	TEXT	312,497	
	Intvw P 08 .txt				

Source Material:

J'ai décidé de postuler pour un bachelor en informatique puisque de nos jours les informaticiens sont très rares au Mali. J'espère être un bon informaticien pour mieux servir mon pays.

---

Note. Generated by the following string of HyperResearch 2.5 functionalities: Run Report>All Cases>Select codes by name>all codes starting by MOT (motivation)

I could have included more information in the report if I deemed it necessary for the clarity of the analysis. The analysis of this excerpt of the report reveals that most DE students are motivated by their interest in computer science and the good job prospects this field offers to graduates in SSA. This kind of analysis was done throughout the study looking for the most salient features emerging from the participants experience with DE.

Another HyperResearch function I used is "select codes by criteria". This function helped me to reduce the number of codes by merging the codes reflecting the same concept. For example, in the excerpt above, although "MOT-Western degree" and "MOT-improved job perspective" were coded separately, the rest of the interviews they were extracted from show that in reality, these two codes point to the same concept. As in the rest of the world, Western degrees are valued in SSA because they substantially improve the graduates' prospects to land a good job. Therefore, these two codes were merged in the same code: "MOT-improved job perspectives".

Although HyperResearch offers other sophisticated features, including one to generate hypotheses (Smith & Hesse-Biber, 1996), I used its most basic features in this study.

### **Axial coding**

After the number of codes from open coding was reduced to eliminate code duplication, I proceeded to axial coding. This is the phase of the analysis where the researcher makes connections between categories and their constitutive elements, their subcategories (Strauss & Corbin, 1998).

For example in this study, the category “ Educational cost” (Costfin) emerges from the combination of subcategories such as:

Personnel salary >technical equipment purchase>technical equipment servicing> Internet connection fees> furniture purchase>photocopy fees> tuition fees> etc.

In addition, these subcategories had been assigned dimensional properties (lacking, poor, good/sufficient, very good) during the phase of open coding. Therefore, selecting all subcategories pertaining to the “Educational cost” category yielded a “dimensionalized” aspect of the category COSTFIN. That reflected one piece of the overall puzzle of the performance of the DE projects in SSA. The sum of dimensionalized aspects of all categories yielded the overall picture of the performance of foreign aid-funded DE projects in SSA.

Once I could find no more instances in the data pointing in the direction of a particular category, this category was considered “saturated”. When I considered all

categories saturated, I proceeded to the final step of the coding process: selective coding.

### **Selective coding**

As Grounded Theory purists prescribe, during this final step of the coding process the categories that emerged from open coding and were refined during the axial coding process, as explained above, have to be further scrutinized, organized and ultimately integrated in order to build a theory. For this to happen, the core category of the study has to be first identified. The core category represents the phenomenon that emerged as central to the study. The rest of the categories have to be logically articulated around the core category. This is the procedure used when researchers set out to explore an unknown topic. Glaser & Strauss (1967), the founding fathers of grounded theory went as far as to advise researchers to ignore literature in order to avoid categories from being “contaminated” by preconceptions. Many prominent social scientists (Dey, 1993; Lakatos, 1982) have contested this rigid stance of grounded theory. Strauss himself backed down and came to a more flexible position in his later work (Strauss & Corbin, 1998). As Lakatos puts it: “there are and can be no sensations unimpregnated by expectations” (p. 37).

Prior to the beginning of this study, I had enough time in the field and had gained some understanding of the phenomenon that I wanted to explore further: the performance of DE projects in SSA. However, if it were absolutely necessary to identify a core category, it would have been called LACK OF ANALYSIS because it appeared quite clearly from the data that most of the performance problems of the DE projects in SSA pointed to the lack of analysis. Diagrams were drawn to illustrate these

relationships between the different concepts that emerged from the data. The refined version of these diagrams will be displayed throughout the Findings chapter.

A theory of the performance of DE in SSA was developed. According to Strauss and Corbin (1998), the ultimate goal of developing a theory grounded in the data is to uncover relationships that link elements of the data together in a logical manner. These relationships constitute a paradigm that should have the following parts: a core category (phenomenon), causal conditions, a strategy (action-interaction), intervening conditions, contextual conditions and consequences.

**Phenomenon** is the core category, the rest of the categories are linked to. It answers to the question: “what is going on here?” As defined by Strauss and Corbin (1998):

In looking for phenomena, we are looking for repeated patterns of happenings, events, or actions/interactions that represent what people do or say, alone or together, in response for problems or situations in which they find themselves.  
(p. 130)

**Conditions** are sets of events that create a situation pertaining to a particular phenomenon. They explain why and how people react to a given situation. Conditions can be causal, intervening or contextual.

**Causal conditions** influence phenomena, **intervening conditions** facilitate or mitigate the impact of causal conditions and **contextual conditions** determine the context in which people act/interact to respond to a situation or a problem related to a phenomenon.

**Strategies** (or actions-interactions) are deliberate actions taken to achieve some outcome that will solve a problem or shape the phenomenon in some way.

Finally, actions/interactions result in a number of **consequences**, intended or unintended. These consequences affect, one way or the other the phenomenon at study.

The next chapter will provide a detailed discussion of the grounded theory developed in this study.

### **Standards of rigor**

This study pertains to one particular aspect of foreign aid, a field that has gathered its fair amount of controversy during the last few years, a trend that is likely to increase in coming years. Given the fact that I have been a keen observer of foreign aid outcomes for many years and have had some vested interest in it in the past, I have adopted rigorous methodological and ethical standards to limit my own biases and idiosyncrasies and ensure this study's dependability, truthfulness and credibility.

**Internal reliability** means that objectivity is maintained and the findings will be similar within the site (LeCompte & Goetz, 1982). Drew, Hardman & Hart 1996) suggest five steps that can help qualitative researchers protect internal reliability:

1. Use low inference descriptors
2. Use multiple researchers whenever possible
3. Create a careful audit trail
4. Use mechanical recording devices where possible (and with permission)
5. Use participant researchers or informants to check accuracy or congruence of perceptions

All these five steps have been attended to throughout this study. Although I was working in West Africa during the early stages of this study, I kept in touch with my two supervisors. I kept them informed of new developments of my thinking about this study

and the methodological steps I envisioned to carry it out. I met them twice during my holidays to discuss the progress of the study. In addition, the use of auditors from different backgrounds added some depth to peer debriefing. The doctoral student in political science who helped me during the preliminary coding process came back to audit the new developments of the study after axial coding. The journalism teacher who is not familiar with the RBM read through the material and pointed out many instances where clarifications were needed. Thanks to the contributions of these two auditors, I was able to further merge categories and subcategories and clarify fuzzy concepts. As a consequence, resulting diagrams that illustrate major sections of the next chapter (Findings) of this study were simplified and clarified.

With the preliminary results of selective coding and resulting diagrams in hand, I went back to the original interviews to check how the theory I had developed fit the participants' experiences as expressed in their own words. Lincoln & Guba (1985) refer to this methodological precaution as "negative case analysis". Its most important contribution is to allow the researcher to identify instances disconfirming the emerging theory. This helped me to refine the theory. For example, it is during this process that I realised that although they provided very interesting information about the participants' experience with DE, some categories had to be discarded because they did not pertain to the research questions pursued in this study. The category "Motivation" used as an example of coding with HyperResearch earlier in this chapter was discarded from the theoretical model that emerged from this study.

**External reliability** is a standard that is rejected by some qualitative researchers (phenomenologists in particular) because it suggests a replicability of concepts across and between sites. Phenomenologists argue that human and social

experience are unique and cannot be replicated. Despite this argument, Drew, Hardman & Hart (1996) propose five procedures that help qualitative researchers protect external reliability:

1. Clearly specify the researcher's status so that the readers know exactly what point of view drove the data collection
2. Clearly state who the informants are (or what role they play in the natural context) and how and why they were selected or chosen (while protecting confidentiality)
3. Carefully delineate the context or setting, boundaries and characteristics so that a reader can make judgements about similar instances or settings.
4. Define the analytic constructs that guided the study
5. Specify the data collection and analysis procedures meticulously

This chapter has specifically attended to each of these methodological considerations in detail.

**Validity:** One of the recognized strengths of qualitative research is that it sets the findings within natural settings (LeCompte & Goetz, 1982). Other qualitative researchers refer to this concept as “trustworthiness”, “credibility” or “authenticity” (Miles & Huberman, 1994).

The duration of the fieldwork and the intensity of data gathering are very important elements that enhance trustworthiness. By helping the researcher get involved with the participants in the field in many different situations, these two factors prevent him from giving unwarranted importance to unrepresentative events during data collection and analysis. As described in this chapter, I spent twenty months in the field

and have followed the development of the topic of this study step by step and from various perspectives.

**Accuracy and member check:** I sent each participant a copy of their interview transcripts to check for accuracy of transcription of their recorded interviews. I provided them with my e-mail address, phone number and civic address so that they could contact me for any comments or observations regarding the transcripts.

**Triangulation:** Triangulation was achieved by collecting data on foreign aid-funded DE projects in three different sites located in three different countries in SSA. In addition, two different countries with different aid traditions fund these projects. They target two levels of learning (higher education and capacity building). This study used three different data collection instruments: interviews, video recordings and field notes. Participants are administrators, students, technical assistants, tutors and instructional designers, all with particular perspectives on these DE projects.

### **Ethical considerations**

Given my long presence in the field, I was a familiar figure and had a good rapport with participants before I started data gathering. On many occasions I had the opportunity to inform potential participants about the purpose and procedures of the study. I emphasized that participation was voluntary and the result of participation confidential. In order to protect confidentiality, participants' anonymity was maintained throughout the study. I locked audio and videotapes, field notebooks and other documents of the audit trail in a cabinet in my house. I am the only one who can access this data.

## CHAPTER FOUR

### FINDINGS

#### **Chapter overview**

In the previous chapter, I reported on how I carried out a systematic comparative data analysis from various sources according to grounded theory methodology. In this chapter I report on DE projects' performance as experienced by learners, administrators, technical assistants, lecturers, tutors and instructional designers involved at different levels in these projects. Given the grounded theory methodological framework used throughout this study, findings will be presented in the three main sections comprising this chapter. In section one, I present the phenomenon of the performance of foreign aid-funded DE projects in SSA and its properties; the causal conditions; and the strategy adopted to deliver the many DE promised benefits. In section two, I report on intervening and contextual conditions that mitigate the attainment of these promises. Section three completes the picture of DE performance in SSA by showcasing the consequences resulting from the interplay between causal conditions and strategy on the one hand, intervening and contextual conditions on the other hand. This will display the big picture of the theoretical model of the performance of foreign aid- funded DE projects in SSA developed throughout this study.

Given that fieldwork was conducted entirely in French for obvious linguistic reasons, participants' *in vivo* voices will be heard in French throughout this chapter. The DE project that participants belong to will be mentioned in brackets at the end of each quote. Given the low number of participants in some categories, the sites of the DE project were not added in order to protect participants' confidentiality. I have added

emphasis on words or expressions appearing in bold within selected quotes because they illustrate the central idea of the quotes.

## **Introduction**

The nineties were the years of the Internet effervescence and its resulting hype. It did not take long before it made its way into the centre of international development circles. Funding agencies from all over the developed world became more than eager to pour millions into DE in developing countries.

From the end of the mid-nineties to the turn of the century, “ICTs for sustainable development”, “ICTs for capacity building”, “ICTs to bridge the digital divide” became something of a mantra to open up funding agencies’ coffers. From basic education to adult education through “multipurpose community telecenters” in remote villages, a mosaic of ICT-based projects popped up all over poor countries.

This Internet bubble coincided with the increasing realization that the Structural Adjustment Programs (SAPs) imposed by international funding bodies like the IMF and the World Bank in developing countries had done more harm than good. Since the eighties most of the loans from international funding agencies destined to education in developing countries were tied to the condition that elementary education gets the lion’s share to the detriment of higher education in order to achieve the Education for All (EFA) objectives. The vicious circle created by this measure was increasingly evident: as universities became financially impotent, education departments were no longer able to properly train graduates who were needed to achieve the EFA objectives in elementary schools. While numbers of teachers dwindled or remained stagnant and the quality of their training deteriorated, numbers of students soared at all the levels of the

educational system. The social sector suffered as a whole from the damaging effects of SAPs but higher education and training were particularly hindered.

### **Section One: Phenomenon, causal conditions and strategy**

After two decades of abandonment, higher education in SSA is struggling to survive, especially in francophone SSA. Overcrowded classes, vociferous and politicized students; overworked, underpaid and demotivated faculty; antiquated curriculum, overwhelmed and penniless administrators struggling to manage costly yet mostly free-of-charge institutions etc., these are but a few of the aspects outlining the fate of higher education in francophone SSA. Paradoxically, although higher education institutions are overflowing, qualified human resources are desperately lacking in public as well as in private sectors. Building the capacity of under-qualified human resources to adapt them to the needs of their countries and communities is sorely needed.

International funding organizations presented DE as a way to fix this problem. In 1997, the World Bank launched the African Virtual University (AVU) pilot project. It was the first comprehensive DE project to specifically target higher education and capacity building in several fields including computer science, business administration, journalism and education. At the beginning of the AVU, American, Canadian and Australian universities broadcasted live courses to students from English-speaking countries in SSA (Kenya, Tanzania, Uganda, Ghana, Zimbabwe, Ethiopia). Some of these programs were short capacity-building programs offered to working professionals. Others were undergraduate programs offered to full-time students. The FOAD was the first to offer DE programmes in francophone universities in 2004. The first cohort of the CIDA-funded VISAF program under the banner of the AVU started the following year in

2005. It offered a bachelor program in computer science to five francophone universities.

The new DE programs were presented as quality programs from prestigious, long-established Western universities. They were assumed to be a cost-effective and cost-efficient solution to provide the quality education the higher education community in SSA so desperately needed. It was supposed to offer an economy of scale that would help SSA to “leapfrog” decades of damaging educational policies. Desperate African students and administrators alike were ready to embrace anything offering the slightest hope of better learning and teaching conditions.

**DE performance: *Cost-effectiveness, cost-efficiency and economy of scale***

I started each interview with two broad questions that I had designed as warm-up questions. They proved to be very useful for my understanding of the participants’ DE opinions and expectations. Although predictable and understandable, the spontaneous and unanimous appreciation of the quality of the DE programs was striking nonetheless. All participants from all categories thought the DE programs offered were of good quality, well structured, and up to date. However, the two main groups had different motivations in expressing positive expectations from DE.

*Positive expectations from the administrators*

From the outset, the vast majority of participants expressed optimism and enthusiasm about this new way of teaching and learning. For the majority of participants, DE is simply a must.

“Incontournable” and “inéluçtable” are the two qualifiers that come back over and over again in the discourse from all categories of participants. This is how one faculty member and administrator sees the DE programs.

Les NTICs<sup>5</sup> sont incontournables, compte tenu du fait que nos ressources sont très limitées... Donc vraiment les NTICs permettraient de toucher le plus grand nombre d'étudiants avec les mêmes ressources. C'est ça la merveille avec les nouvelles technologies. Donc, oui, nous fondons beaucoup d'espoir là-dessus.

This high expectation from DE is due to the financial hardships administrators experience in their university management tasks on a daily basis. They were more emphatic about DE's assumed cost-effectiveness, cost-efficiency and economy of scale. Another administrator estimates that DE could make it possible to provide quality education to ten times as many students as there currently are in African universities:

« Il y a ce moyen qui peut nous permettre de former, et réellement former, *dix fois plus* que les effectifs que nous avons et que nous traitons de pléthoriques. »

Understandably, administrators cited these three concepts to be their most important expectations from DE projects more often than other categories of participants. This does not come as a surprise since the administrators' financial preoccupations have important consequences for their pedagogical mission. Giving

---

<sup>5</sup> An accurate translation of Open and Distance education (ODE) in French is Formation ouverte et à distance (FOAD) but Nouvelles technologies de l'information et de la communication (NTICs i.e. ICTs) is most commonly used today in West Africa to mean ODE.

quality education to such a greater number of students at such a low cost, what more could a manager dream for?

*Positive expectations from the learners*

Administrators were not alone to mention cost-effectiveness, cost-efficiency and economy of scale. Participants from all categories mentioned these expectations. One learner agrees with administrators even more emphatically. For this learner, DE is nothing less than an extraordinary opportunity. In his words:

Je suis tout à fait d'accord avec l'idée que la FOAD est une opportunité très intéressante pour les pays africains. C'est une opportunité extraordinaire.

The following participants go further by providing figures to buttress their agreement with the cost-effectiveness, cost-efficiency and economy of scale argument. This learner describes the prevalent learning conditions in most universities in SSA:

Comme je viens de vous le dire, par rapport au nombre, tu trouveras dans une faculté ici plus de 1,500 étudiants. Tout le monde ne peut pas rentrer, certains sont obligés de rester dehors, il y a un problème de micro, ou bien.... Ce qui est sûr et certain, il y a toujours un problème de moyens qui est là. Face à ce problème de nombre, je pense que l'EAD peut être une solution qu'il faudrait adapter à notre contexte... (FOAD)

One technical assistant argues that DE reduces educational costs by 40%.

Je crois que les TICs en éducation sont une nécessité vitale pour l'Afrique, vu le fait que ça réduit le coût. Je crois qu'on l'a évalué à 40% moins cher que l'enseignement présentielle.

Table 4.1 shows the number of times the 33 participants mentioned expected benefits from DE.

Table 4.1.

Expected DE benefits by participants from SSA

DE expected benefits in SSA	Frequency
Allows cost-effectiveness/cost-efficiency	9
Allows economy of scale	10
Bridges the digital divide	3
Stops brain drain	3
Builds/transfers capacity	5
Allows sustainable development	2
Is flexible (anytime, anywhere)	4
Brings quality Western education at home in SSA	10
Is ineluctable worldwide	11
Allows professional growth/promotion	3
Allows knowledge sharing/collaboration worldwide	1
Initiates to modern lifestyle/time management	1

Note. Participants mentioned some expected DE benefits more than once. That is the reason why the total number DE benefits mentioned is higher than the total number of participants.

As the table shows, cost-effectiveness, cost-efficiency and economy of scale are among the most mentioned expectations, even when they are considered separately.

Given their proximity and their complementarity, the numbers of participants who mentioned these expectations can be safely added up. This combination illustrates how expectations from most of the participants are of a financial and economical nature. They were mentioned 19 times, much more than the rest of the expectations.

### *DE ineluctability*

These assumed DE financial benefits, added to the ambient DE publicity, discourse and effects of globalization convey to the participants a sense of an ineluctable shift towards a one-size-fits-all educational system. This expectation was the most mentioned (11 times). This administrator is confident it is a matter of time before DE becomes the prevalent mode of teaching in SSA:

Moi j'ai confiance que ça va venir. C'est inéluctable. Les universités africaines seront obligées de développer ce type d'enseignement au sein de leurs institutions parce que avec la mondialisation, on ne peut pas être en marge de ce type de formation.

This sense of ineluctability is related, and perhaps accentuated, by the fact that the few lucky holders of degrees from Western universities usually land better jobs within the government or, better yet, within international organizations. Since the advent of DE, the privilege to get such prestigious degrees is no longer reserved to those lucky few who can afford to meet the impossible conditions for ordinary Africans of attending European or North American traditional universities. One learner said a friend of his landed a well-paid job with the World Bank after the completion of a DE program:

Je peux vous dire que je connais personnellement quelqu'un qui a fait un Master à distance et quand il a fini, automatiquement il a eu un emploi dans une boîte de la Banque mondiale. Donc c'est pas mal, quoi... C'est pas mal du tout!

It follows that quality Western education comes in the second place as the most mentioned expectation (10 times). Moreover, as it was mentioned in the previous chapter, this expectation constitutes the major motivation of learners to enrol in DE programs. The foregoing suggests that capacity building and subsequent professional promotion are among the most mentioned expectations for the same reasons. The rest of participants' expectations (bridging the digital divide, initiation to modern lifestyle time management, and flexibility) seem to revolve around the perceived ineluctability of DE and its capability to crack open juicy professional nuts.

The ineluctability of DE stands out even more prominently when the five participants from Canada express their opinion on this issue. Although they are, by and large, reserved about the assumed DE contribution to education in SSA, they warm up when it comes to the ineluctability of DE. The following table shows it was mentioned eight times whereas other assumptions are mentioned only once or twice.

Table 4.2.

DE contribution to SSA assumed by Canadian participants

DE expected benefits	Frequency
Allows cost-effectiveness/cost-efficiency	1
Builds/transfers capacity	1
Allows sustainable development	1
Brings quality Western education	1
Is ineluctable worldwide	8
Allows knowledge sharing	2

One Canadian participant observes that DE is not an option any more. It has become a necessity:

Avec l'évolution, les besoins de l'être humain changent. On veut plus de confort, on a des contraintes aussi qu'on cherche à résoudre. On a besoin aussi d'une autre option que l'enseignement en classe. Avant il fallait que l'étudiant se déplace pour aller suivre des cours en classe. Il y a des étudiants qui se privent de cours soit à cause de l'éloignement géographique, des horaires qui ne conviennent pas aux gens qui travaillent, etc. Donc pour résoudre ces problèmes-là, je pense que ça devient une nécessité, l'EAD. Ce n'est plus une option.

It is worth noting that three out of the five Canadian participants are from a computer science department and the two others are instructional designers. In any case, there is a general unanimity about the good quality of DE programs per se and quite enthusiastic expectations about their benefits. One administrator sums up this unanimity and calls for action as follows:

Nous sommes tous d'accord que l'EAD est une méthode d'enseignement qui devrait se développer pour le bonheur de nos pays. Donc nous devons résolument nous tourner vers ce système, en faire notre cheval de bataille au niveau des gouvernements et y mettre le prix qu'il faut. (UVA)

It is important to point out that in addition to the unanimity pertaining to the necessity of adopting DE, participants also recognize the quality of offered DE program and the expertise of the lecturers in their subject matter. Up to this point in this study, participants' expectations and assumptions regarding the phenomenon of DE in SSA are consistent with mainstream discourse about the potential benefits of technology-based education and training. As will be shown later in this chapter, it did not take long before the downside of the DE programs emerged. After having exposed the findings about the phenomenon and its causal conditions, let's see if the same unanimity holds regarding strategy.

## **Section Two: The strategy**

In the grounded theory methodology this study follows, Results-Based Management (RBM) and its corollary Logical Framework Analysis (LFA) have been identified as the strategies that have the most important bearing on the phenomenon of DE performance in SSA. With slight differences in terminology, RBM/LFA is the mandatory framework for the conduct of international development projects.

As was discussed in greater detail earlier in this study (see Chapter Two), RBM/LFA shares the same procedure as Human Performance Technology (HPT) and

Instructional Design (ID). This procedure comprises six steps: (1) Analysis, (2) Planning, (3) Design, (4) Implementation, (5) Monitoring, and (6) Evaluation.

The core objective of this study was to find out from the participants' experience, the extent to which the strategy was carried out following the appropriate ID procedure. This is what the following few pages analyze in detail.

## **The lack of analysis**

### *The learning context*

Needs Analysis is the cornerstone upon which subsequent phases of an Instructional Design project are built. Although they are sometimes presented as different phases, Needs Analysis and Planning are intimately linked. A thorough Needs Analysis informs good planning, which in turn decreases risks of haphazardness and improvisation during the project implementation phase. Needs Analysis and Planning have been analyzed together in this study.

### *The fear of the unknown*

The DE projects this study deals with targeted stakeholders in SSA who were not familiar with ICTs. For example, only 3 out of the 11 learner participants had navigated the Internet more than five times in their lives and only five learners were familiar with a computer keyboard before the DE courses began. One participant describes this context as follows:

Ça demande beaucoup de travail, que les apprenants aient une bonne expérience de l'ordinateur, des outils qui sont utilisés. Quand on sait que les étudiants arrivant du secondaire n'ont pas cette culture-là, beaucoup ont touché à un

ordinateur quand ils ont commencé ce cours, cela demande beaucoup plus de travail et de temps d'apprentissage.

In addition, these DE projects were destined to two of the poorest countries in the world, with very poor communication infrastructures. Furthermore, contrary to the DE programs offered by the UNFM and the AUF, which were from a more familiar French educational tradition, the computer program offered by the Canadian HE institution is from an educational tradition totally unfamiliar to the students. From program entry-level requirements to course organization in modules and credits, evaluation grading in letters and the Québécois French accent, everything was alien to the students. These are but some factors that made it all the more important to conduct a careful Needs Analysis in order to ensure the success of these projects.

Yet, many Canadian participants concede that no formal Need Analysis was conducted prior to the UVA commencement. A project management team of four people carried out a one-week field mission in Cotonou (Benin) in 2002. For one week, the field mission team met with representatives from the five first participant universities to work out final details before the beginning of DE courses for the first cohort. The project manager toured the selected sites to discuss with local people in charge of the project. In addition, all the project stakeholders in Canada attended a half day of training in multicultural communication. But no formal Needs Analysis was carried out.

One participant argued that the UVA did not feel the need for a more elaborate Needs Assessment. Since Africans wanted a degree from the Canadian HE institution, it made sense to teach them the same content as Canadian students students.

One direct consequence of this lack of Needs Analysis was that many problems unfolded after the beginning of the DE project, as the following excerpt of a conversation with one participant illustrates:

**Question:** Si je comprends bien ce que vous dites, tous les problèmes se sont annoncés au moment de l'exécution du projet?

**Participant:** Oui, oui, c'est exactement ça ! Les problèmes sont apparus au fur et à mesure... des trucs qu'on n'avait pas prévus... Il y a eu beaucoup d'erreurs qui ont été faites, peut-être par ignorance. (UVA)

At UNFM, a formal Needs Analysis was also neglected, but for different reasons. The project began in June 2005 even before its incorporation process was finalized in the two countries. The project's promoters wanted to have some results to present during the Tunis World Information Summit in December the same year. Sure enough, this lack of a careful Needs Assessment provoked numerous problems to the DE projects from the outset. Not only were the students not familiar with computers and ICTs in general, but also nothing had prepared UVA students, for example, for the Canadian higher education system they were called upon to learn into for four years.

One technical assistant who oversaw the beginning of the UVA describes in further detail the consequences of this lack of preparedness, the fear of the unknown new DE environment it inspired not only to the students but also to their local support personnel. Even the Canadian course organization and evaluation system was alien to students. They did not know what a course credit or a module was. One participant recounted with humour how students had a hard time understanding what that was all

about when they saw their grades in letters besides their ID numbers without their names on the list. They misinterpreted this as a strategy invented by the UVA to hide how miserably they had failed their first evaluation.

On a tout le temps essayé d'envoyer des messages au Canada, mais on n'arrivait pas à trouver les bonnes réponses à nos questions dans des mots que nous on pouvait comprendre ici. Donc on ne se projetait pas trop dans l'avenir pour voir ce qu'on avait au bout parce que j'avoue qu'on ne comprenait rien de tout ça...Souvent je me sentais obligé de leur expliquer (aux étudiants) des trucs que je ne comprenais pas beaucoup moi-même. J'étais obligé d'être dans leur rythme et suivre comme eux. Je crois que tout ça est dû au changement de système. On est passé de notre système au système canadien (...) J'avoue qu'au début c'était compliqué parce que les étudiants avaient très peur. Ils ne voyaient pas encore clairement ce qui se dessinait devant eux. On voyait quantité d'affiches qui parlaient de sessions, de modules, de crédits. J'avoue que moi-même je ne comprenais rien là-dedans. Mais il fallait expliquer les trucs aux étudiants.

But the consequences of lack of understanding of the learners and their learning context went both ways. While the local project stakeholders in SSA were struggling to make sense of the new DE context, lecturers and administrators in Canada were struggling to get used to such things like language subtleties and unfamiliar communication patterns. For example, one participant explained how some project team members learned not to use the familiar “tu” widely used in French-speaking Canada while speaking to their African colleagues. No matter how hard he tried to make them feel familiar, they stuck to the more distant “vous” reflecting, to some extent, a hierarchical relationship.

One lecturer said he could not understand why he didn't get answers to simple questions he asked. The participant recounts how surprised he was one week when he wanted to know how many students were attending his class in different centres. He asked the question many times but no one would answer, until a colleague explained to him that there was a hierarchy to be respected. Since students and tutors thought the lecturer was controlling class attendance, only centre directors had the authority to answer to this kind of a question.

Another participant aptly highlights how fundamental cultural and religious questions unfolded only once the project was underway:

Il y avait aussi toutes les coutumes, les fêtes, les journées là où... les vendredis, d'autres étaient musulmans, d'autres étaient protestants, d'autres étaient catholiques, il y avait des journées importantes pour chaque religion. Et on ne savait pas : est-ce qu'on doit tenir compte de tout ça ? Est ce que comme les étudiants sont inscrits à (Canadian HE institution) est ce qu'ils doivent se soumettre au calendrier de (Canadian HE institution) ? En tout cas on a décidé qu'il n'y aura pas de cours le vendredi parce qu'il y avait jamais personne dans plusieurs centres (rires).

#### *Poor infrastructure and equipment*

This is one of the most complained about problems throughout this study. One of the participant administrators gave some figures that illustrate to what extent his university is poorly equipped in technology. Overall, this university's student per computer ratio are one computer for every 125 students. The time of accessibility to the computer is estimated to four hours/student/month in the best-case scenario.

The ratio for the DE projects is estimated at one computer for every two students. Students can access the Internet during the computer lab opening hours from 9 am to 9 pm in most cases. Although almost all the participants agree that the ratio and accessibility is convenient for students, the trouble comes from the poor Internet connectivity and narrow bandwidth due in part to the countries' poor communication infrastructure. The most recent figures indicate how the capability of local Internet providers is limited. It served only 30,000 clients in Mali (2002) and 48,000 clients in Burkina Faso (2003).

To circumvent the unreliability of local technological infrastructure the UNFM and the UVA set up expensive VSAT satellite reception and emission dishes. The original plan consisted of an interactive audiovisual learning experience, whereby students and teachers would interact synchronously. Such was not the case both for the UNFM and for the UVA due to bandwidth problems. Given the fact that narrow bandwidth did not allow these two projects to carry audiovisual materials both ways, they both somehow sacrificed the interactive side of the DE courses.

The UNFM kept fairly good quality images and sound from the content providers in Paris. Learners can see and hear distinctly the lecturers through loudspeakers set up in the two front corners of the classroom. But learners were left with no other means of communicating with the lecturers other than typing in their questions and comments. Given the fact that the only computer in the classroom used to deliver course materials and communicate with distant lecturers is operated by the technical assistant, students have to communicate their questions and comments to the technical assistant. He types them in and sends them to the distant lecturers in Paris. The typing of questions takes a

very long time during which the class is put on hold. Lecturers await questions and the rest of the class is inactive.

The UVA gave precedence to sound. The web camera in Canada was unplugged to save on bandwidth. DE students can hear the lecturer's voice through speakers set up in the two front corners of the classroom while reading the accompanying PowerPoint slides or the lecturer's synchronous written explanations. Students can interact with tutors through microphone and headset equipment at their disposal in the classroom.

But all of these activities depend on the Internet connectivity. During the several weeks I attended the courses both at the UNFM and at the UVA in both countries, there were more days with Internet connection problems than days where the connection ran smoothly. During the first months of the DE programs, more than half of the synchronous courses were missed because of poor Internet connectivity as one technical assistant describes:

Le débit n'était pas suffisant, le son était saccadé, le téléchargement des diapositives ou bien les acétates comme le disent les Canadiens prenait énormément de temps et puis il y avait des coupures intempestives de la connexion. Nous rations plus de la moitié des cours.

The problem of poor connectivity constitutes the greatest problem expressed by the majority of the participants. Sometimes, it makes students miss the traditional face-to-face system. One student complains:

Souvent avec les problèmes de rupture, on est obligé même de quitter la salle pour revenir plus tard. Si on avait la possibilité de faire cet enseignement sur place, on éviterait ce genre de problèmes.

As I witnessed during my fieldwork period, sometimes the connection problems would last for several days in a row. In the too many cases of Internet disconnection, students enrolled at the UVA could rely on a WebCT backup system that allows learners to “listen” asynchronously to the course materials later. As for the UNFM, lecturers postponed the course if the Internet disconnection occurred early during the course or students had to wait a few weeks before CDROM copies of the course were sent to their computer lab by mail.

#### *A formidable learning task*

The Internet connection causes the same problems for the FOAD learners as for those from the UNFM and UVA. However, given the fact that the AUF privileged an e-learning structure, sound and image are less of a problem. Yet, some of FOAD learners experience different kinds of problems linked to the poor needs assessment at the beginning of the project. Those who take DE courses that require equipment for practice do not have access to such equipment at their AUF computer labs. One participant in a Masters program in software development deplores the fact that he does not have access to the required software to practice the theory he gets from his courses. The university in which this participant is enrolled says the needed software is too expensive and cannot afford it. As this participant reports, university officials are confident the FOAD learners should be able to find freeware to use in their practice on the Internet. But all three informants I spoke to contend that despite their research efforts, they have not managed to find anything close to the kind of specialized freeware they require on the Internet. They concluded it does not exist.

This being the case, many FOAD learners point out that they experience unfair learning conditions, compared to those of their colleagues who take the same program from France. One participant bitterly laments about the double standard between face-to-face students in France and FOAD learners in SSA. He goes as far as to question the professional competence that will accrue from such a hands-on DE program like the multimedia development program he was taking when he has no opportunities to practice the theory he learns:

Ceux qui sont en présentiel ont des logiciels installés sur leurs machines et ils peuvent travailler sans problèmes. Mais pour nous qui sommes à distance... c'est un vrai problème. Je ne suis pas le seul à le dire, c'est un fait auquel nous faisons face tous les jours. Et c'est un grand handicap. Parce que si vous devez travailler une matière avec un logiciel que vous n'avez pas, je me demande ce que vous pouvez bien faire... A la fin vous êtes évalué sur un même pied d'égalité que les autres étudiants en présentiel... Donc ça pose vraiment problème parce que même si à la fin on vous donne votre diplôme, il faut avoir les compétences qui vont avec.

#### *The overlooked students' prerequisites*

*Lack of computer literacy:* The most intuitive prerequisite to taking an DE program is to have a minimal understanding and hands-on experience of how the medium used for content delivery works. This requirement does not seem to have been taken into consideration in the analysis phase of the three DE projects under scrutiny in this study.

More than six months after the beginning of courses at the UNFM, this learner acknowledges that his biggest difficulty in DE is his lack of computer literacy:

Pour ma part, la plus grande difficulté que j'éprouve en ce moment c'est que je ne suis pas initié à l'informatique.

Although the UNFM computer lab is relatively well equipped with computers, learners who are practicing professional nurses are so stretched that they hardly have time to switch the computers on. They arrive on campus after work right on time for class and they have to rush home after class.

Although the UVA's students are full-time, they face the same computer literacy difficulties four months after the beginning of DE courses. They had only 10 days of initiation to using new technologies prior to the beginning of their DE program. One administrator laments it is utterly insufficient to teach the basics of how an DE environment works to students who are totally unfamiliar with it in such a short period of time:

**Question:** Ont-ils été préparés à travailler dans ce type d'environnement?

**Participant:** Ils ont été insuffisamment préparés. Il faut le dire tout à fait honnêtement, leur promotion a été cueillie tout à fait à froid. Ils ont commencé au mois d'octobre dans ce dispositif-là. Nous aurions dû les recruter avant et avoir un mois, un mois et demi de préparation. Nous avons eu au total 10 jours pour qu'ils prennent connaissance de l'environnement...

Another administrator finds it regrettable that the UNFM had to rush to begin before the envisioned pedagogical council was set up to give a pedagogical orientation to the project.

As for the AUF, since DE students were enrolled to take courses primarily targeted to French students, many FOAD students complain that they were treated as

mere appendages of French students. Their specific prerequisites and needs for adequate learning conditions did not seem to matter to the FOAD promoters as will be clarified further in this study. In any case, all this comes down to the one-size-fits all attitude that pervades the foreign aid world as summarized by the following participant:

L'équipe qui pense ces cours là ne se rend pas forcément compte des pré requis qu'il faudrait aux étudiants africains puisqu'ils les pensent en regardant les étudiants que eux ils ont sous la main. Ça ne leur est pas facile d'imaginer des étudiants dans notre contexte qui, après un bac n'ont jamais touché à un ordinateur.

#### *Financial and political admission criteria*

In addition to the lack of familiarity with computers, students' admission criteria seem to be driven by political and financial considerations rather than by established pedagogically oriented prerequisites. A few examples drawn from informants' experience aptly illustrate this situation.

The UVA graduates in computer science will receive a degree from the Canadian HE institution. It follows that admission criteria would apply to potential candidates to the UVA program. They were required to have completed the equivalent of 13-year baccalaureate in sciences (Math-Physics-Chemistry) with a 12/20 GPA. Translated to the French educational system still prevalent in most of former French colonies in SSA, the admission criteria proved to be particularly challenging in some countries.

In one of the two prospective UVA sites, very few bachelor qualified, since this country has a 12-year baccalaureate system. The DE project was at risk of being written off the list, which was neither in the UVA's nor in the host university's best interest. It

looks like the Canadian HE institution became more flexible with regard to the number of years for the “science” requirement. This gave a good leeway to local UVA centre promoters to adopt a new enrolment strategy to solve the problem they were confronting. They went “poaching” among students in their second university year in other departments such as social sciences and health sciences. The context was conducive to such a recruitment strategy. Given the endemically late start of the academic year in the country (postponed some years as late as January of the following year instead of September of the current year) students who were tired of waiting for an elusive return to school let themselves be tempted by the prospect of learning in an up-to-date, soon-to-be universal DE environment as DE was being marketed to them.

One administrator informant told me it took an aggressive recruitment campaign to convince these students to surrender the benefits they had already acquired at their local university and start over in a very costly DE program in computer sciences for which they had no adequate prerequisites. They had completed their freshman year. They did not have any tuition to pay at their local university. To the contrary, they benefited from a government bursary, no matter how meagre it was. In the participant’s own words:

L’institution d’enseignement supérieur canadienne voulait des candidats qui avaient déjà réussi leur première année d’université. Alors c’était un problème. Un étudiant qui a déjà réussi sa première année, qui a sa bourse, qui va passer en deuxième année, pour le convaincre de revenir en arrière recommencer à l’UVA et de payer une grande somme pour ça, c’était vraiment difficile.

The centre eventually managed to open with 29 DE students. It remains to be seen how they are faring in the program.

In another instance, one informant told me that one of the first UVA centres was allowed to start with only a few students without adequate prerequisites in computer science. The president of the host university was a member of the UVA board of directors. She wanted credit offering her university the prestige of hosting an DE centre.

Worse yet, another informant confided in me that he knew of a centre whose candidates were clearly not qualified to undertake a computer science program but the centre was accepted nonetheless to be part of the UVA centres. In these conditions, it does not come as a surprise that the success rate in this particular centre was close to zero at the end of the first term.

This situation prompted one tutor to lament about students' entry-level prerequisites and strongly advocate for their upgrading:

Il faudrait que les étudiants aussi se mettent à niveau. Leurs niveaux d'entrée sont très disparates et il faudrait qu'ils revoient leur niveau avant de prétendre s'inscrire à l'obtention d'un diplôme en informatique. Ça c'est très, très déterminant.

The AUF is also confronted with this kind of student recruitment recklessness. All the prospective candidates for a FAOD program have to do is to fill in a form and send it to the university of their choice. One AUF insider observes that supporting documents from qualified candidates are not submitted to close scrutiny to ensure their authenticity. There is no formal interview to check whether or not the candidates have what they claim to have on their forms. The participant worries:

Je me demande comment ils font pour s'assurer de l'authenticité de ces documents-là. Est ce qu'ils regardent vraiment le profil quand ils demandent à quelqu'un de fournir une lettre de motivation? Il n'y a pas un entretien pour tester si le candidat a vraiment les compétences qu'il dit avoir... Donc la grande difficulté c'est une question de niveau. Quelqu'un peut affirmer qu'il maîtrise l'informatique et l'Internet alors que c'est la première fois qu'il ouvre l'Internet ou le courrier électronique. Et moi je voyais ça souvent. Il fallait vraiment les former en informatique...

Here again, it appears that a rigorous recruitment procedure has been sacrificed in order to make life easier for those students who can afford to pay for the DE programs.

*Poorly trained and motivated teaching personnel*

In this category, I include teaching assistants and tutors. Supporting personnel like technical assistants are not included because despite the many technical problems experienced by DE learners, no one seems to complain about the competence or availability of technical assistants. It is another story when it comes to teaching assistants and tutors.

*Teaching assistants:* Some participants questioned the fact that the UVA program is entirely handled by teaching assistants with no prior experience of DE in general, let alone its synchronous mode used by UVA. According to one informant, no one had ever experimented with this mode at the Canadian HE institution before:

Pour la diffusion synchrone, il y avait une journée de formation avec les chargés de cours. Parce que c'est un outil qui n'est pas évident à utiliser. Les chargés de cours n'ont jamais fait de formation comme ça... Donc il fallait former tout ce monde-là d'abord à la FAD comme telle ensuite au soutien en synchrone, les familiariser avec les outils et aussi préparer avec eux tous les documents pour mettre leurs cours sur un site Web. Alors il y a une préparation courte quand même, je crois que c'est une heure par personne. C'est peut-être une formation qui n'est pas suffisante pour la première fois mais les gens s'habituent assez vite avec les outils...

It will be seen in further detail later in this study, contrary to this informant's hope, students, tutors and teachers themselves still experience some difficulties in coping with this synchronous mode.

In the case of the UNFM, one participant recognizes that French lecturers have respectable credentials in tropical medicine. But he points out in the same breath that they are a little outdated. He calls for an increased role of local human resources:

Vous avez des cours qui sont délivrés à partir de Paris. Les profs sont des gens qui ont beaucoup travaillé en Afrique et qui connaissent bien la médecine tropicale. Mais les choses bougent. Ils ont vécu en Afrique, il y a 20 -30 ans. Il y a des contextes nouveaux. Donc il faut qu'on puisse impliquer davantage les cadres, les personnes ressources locales pour qu'on tienne mieux compte du contexte évolutif et de la médecine et des ressources humaines.

*Local tutors:* Another serious issue concerns local tutors. Both UVA learning centres in Bamako and in Ouagadougou ran without tutors during the first term. They were hired during the second term when I was doing my fieldwork in January-February 2006. There are no local tutors at either AUF sites either. Learners get by with the

learning materials provided from French universities under the conditions the reader is acquainted with by now.

One of the two UNFM sites had two highly qualified Medical Doctors appointed as local tutors. But given their various other professional activities; their availability to help learners was rather limited.

At the other UNFM centre, there was no qualified local tutor. The person who was temporarily playing the role of the local tutor was an electrical engineering graduate. He had no background whatsoever in health science. The question period was difficult for him. Since he was the one to operate the computer central station, it was his role to type in questions from the students to the lecturers. He had terrible difficulties understanding and spelling the complex medical terminology. Students who had questions had to come by the station for help in spelling many technical words.

This situation resulted in a lot of time lost and frustration from the students both at this particular site and at the other site that was following the same course simultaneously, from the lecturers in Paris and from the interim tutor himself. On two occasions, he was so frustrated he confided me he was considering quitting his role at the UNFM, especially since in addition, he had not been paid once in more than three months of work.

Many participants deplore the fact that local tutors are not prepared to help students in their learning tasks. Some students criticize their local tutors for their lack of computer skills. One student declares:

Franchement dit pour une préparation, je ne pense pas que les tuteurs soient bien préparés. Parce qu'il y a des tuteurs qui ne maîtrisent pas l'outil

informatique. Ils ne savent même pas quel bouton presser pour entrer en communication avec le professeur là-bas, ni comment... bon, ils ne maîtrisent pas la chose, quoi.

For another informant, it is the local tutors' competence in the subject matter itself that is questioned. Her complaints are illustrated by an example about the negative impact of the lack of support from local tutors during her learning.

Par exemple en calcul matriciel qu'on a fait à la première session, il y avait le logiciel d'exploitation Math Lab que notre tuteur en place ne connaissait pas. Ça fait qu'on a validé la session mais si on me demandait de faire quelque chose sur Math Lab, moi ici, je n'y arriverais pas!

This complaint echoes the one encountered earlier in the study regarding the learners' worries about their future professional performance after graduating from their DE programs.

### **Poor planning**

Because it involves important administrative and managerial decisions that have decisive pedagogical bearings on the project performance, project planning is performed after close scrutiny of the project's various needs.

#### *Objectives definition and policy dialogue*

Objectives definition constitutes the bridge between Needs Analysis on the one hand and instructional planning and design on the other hand. Informed by Needs

Analysis, objectives give, in turn, orientation to instructional planning and design. It is the equivalent of policy and strategy formulation in RBM. One particularly important prerequisite to objective formulation is policy dialogue between the various stakeholders of the project. This concept points to the necessity to know as much as possible about the various categories of people affected by the project or those who have an impact on it.

The various experiences the participants revealed in the previous sections of this chapter let the reader anticipate that goal setting and policy dialogue did not attract a great deal of attention from the DE project planners. As one administrator deplures, the UNFM started before a due dialogue took place between the main stakeholders. It started even before its administrators knew exactly where it was headed, or what kind of training it wanted to offer to its trainees:

Donc, c'est comme ça que nous avons démarré sans trop nous concerter et c'est par la suite que nos collègues de Paris sont venus et nous avons discuté sur la forme que prendrait la formation dispensée par l'UNFM. Est ce que c'est une maîtrise que nous allons délivrer? Un diplôme interuniversitaire?

But the best illustration of the serious difficulties caused by the lack of policy dialogue between the various project stakeholders comes from the uncertain future of the UVA after the CIDA funding period. As the story goes, the UVA planners decided from the outset that one Principal Partner University (PPU) would be chosen among participating universities to take over from the Canadian HE institution as a content provider at the end of the project funding from CIDA. These planners did not concern themselves with knowing beforehand the opinion of participating universities about the idea. The UVA was caught off guard after the project had started by the hostility of

participating universities against this idea when it was proposed. The problem is that participating universities do not trust degrees delivered by fellow African universities, even though the PPU formula proposes that the various DE courses would be taught by teachers from all the participating universities. Participating universities are not interested in DE programs delivered by fellow African universities, even though specific courses would be taught by teachers from all over the continent. They are only interested in degrees delivered by Western universities.

As a result, the UVA has been struggling for a long time to secure a politically acceptable exit door in accordance with the sustainability requirement that foreign aid-funded projects are submitted to by RBM. Given the difficulties provoked by this situation one administrator bitterly concedes that some serious mistakes due to naiveté or ignorance were committed during the project planning period:

Donc il y a eu beaucoup d'erreurs qu'on a faites, peut-être par ignorance. Par exemple l'histoire de l'université partenaire principal, c'était pas notre idée, c'était l'idée de Cheikh Modibo Diarra. Et nous, ça nous a paru plausible. Mais on ne connaissait pas la mentalité des autres pays qui ont dit: non, nous on n'en veut pas. Maintenant qu'ils ont dit non, on se dit que c'est raisonnable qu'ils disent non. On comprend le problème. Mais on ne connaissait pas, par naïveté ou par ignorance.

The lack of policy dialogue is visually illustrated on both campuses. The two universities (Malian HE institution and BF HE institution) have been endowed with three VSAT antennas each from different funding agencies (see picture on page 158). For example, at the BF HE institution the UVA and the UNFM share a small building made of 6-8 office spaces and two bigger classrooms. But the UVA has its VSAT antenna for

Internet unlimited access. It uses this antenna for teaching purposes only for three hours a day. On its part, the UNFM has its own videoconference antenna. It equally uses it for three hours a day for teaching purposes. One participant deplors the fact that these infrastructures are so conspicuously underused when they are so direly needed by the host university. He suggests that this equipment could be used to deliver DE courses to other campuses of the University of Burkina Faso during the long hours they are not used by their owners. This participant qualifies this situation as a waste of resources:

Ces équipements pourraient très bien être exploités le reste du temps pour livrer des cours dans d'autres universités du Burkina le temps qu'ils ne sont pas utilisés par l'UVA et l'UNFM. Mais ce n'est pas fait. Ce qui fait qu'il y a gaspillage et duplication des ressources, une mauvaise allocation des ressources.

But what angers this participant the most is the fact that at the end of the projects, funding agencies will tally the number of VSAT antennas they erected and the money they invested and congratulate themselves for their accomplishments even though the impact is negligible. This participant calls upon the universities' administration to design a global policy framework to coordinate all DE efforts on the university level:

Au bout du compte les bailleurs de fonds diront qu'ils ont investi autant d'argent mais les résultats sont pratiquement inexistantes. Donc, les universités qui accueillent ces structures devraient faire un travail de base qui est l'élaboration d'un cadre de politique générale, de sorte que toute initiative qui arrive s'inscrive dans une logique de mutualisation ou de continuation de quelque chose qui existe déjà.

As will be shown, this is a good suggestion in theory but a difficult one to implement given the competitive nature of these DE projects and the pressures some funding agencies submit university administrators to in order to make them abide by their projects no matter how poorly planned they are. In any case, some project planners seem to have learned their lessons as illustrated by the following interview excerpt:

**Question :** Si c'était à recommencer, quels sont les éléments auxquels il faudrait faire attention si on veut qu'un programme d'EAD destiné à l'Afrique soit efficace ?

**Participant:** Avant de donner des cours à distance ou quelque cours que ce soit dans le fond, il faut bien connaître la clientèle qu'il va y avoir à l'autre bout. Ensuite, quand on donne un cours qui nécessite une plate-forme technologique, il faut s'assurer que les gens à l'autre bout ont bien ce qu'il faut pour le faire. Nous on avait quand même fait le tour des centres pour nous assurer que c'est le cas. Et même là il y a eu des problèmes imprévus. Donc il faut s'assurer très sérieusement que les clients ont le matériel qu'il faut pour la réception si on utilise les moyens technologiques. Mais même si on utilise les moyens traditionnels comme les cours par correspondance, par la poste, il faut s'assurer que le matériel va se rendre. Si on utilise DHL, c'est très cher. Les frais sont énormes.

One administrator sums things up by highlighting the negative pedagogical consequences that resulted in the rushed, unplanned manner in which these projects were carried out: calling for better planning:

On a commencé en retard par rapport au Canada. Nous avons voulu faire des choses difficiles en peu de temps avec des étudiants qui n'étaient pas initiés. Donc les problèmes étaient énormes sur le plan pédagogique... Parce que quand

nous avons commencé, il y en a même qui n'étaient pas habitués à l'utilisation de l'ordinateur... Pour terminer dans tout ce que nous faisons, il faut une bonne planification stratégique et des plans d'actions clairs et nets avec des moyens qu'il faut pour mettre ces actions en œuvre.

Although it might be too late for some of the DE projects this study focused on, it would be helpful if DE project administrators learned the basic principles of Needs Analysis and Planning from their past mistakes.

#### *Financial planning*

Although they do not always have an assigned spot on the strategic management table, it goes without saying that financial considerations are the backbone upon which all the steps of strategic management revolve. In the corporate world, cost and finance considerations such as return on investment (ROI) and financial risks are the most important (if not the only) considerations that determine, in particular, whether or not a project is worth funding or not. Although this hard-edged financial stance might not be appropriate for projects in social sectors like those funded by foreign aid, since, contrary to corporate projects their stated goal is not to make money but rather to cater for essential services to needy populations, this does not exonerate them from abiding by standards of cost analysis and estimation from the early stages of the project cycle. Alternatively, this is mandatory in the LFA/RBM procedures they are supposed to follow throughout the project cycle.

In addition, project budgeting, cost-estimation and resource allocation are the main constitutive elements of good project planning.

### *The Cost*

Despite the fact that cost-effectiveness, cost-efficiency and economy of scale were the marketing arguments to introduce DE projects in SSA, these projects' cost analysis, cost-estimation, budgeting and financial analysis do not appear to have been handled with care. One administrator recounted the financial odyssey his colleagues and he went through in order to get his DE centre started. Despite the fact that the UVA had, among other funding, a 12 million dollar package from the Canadian government and that the shared responsibilities between this informant's government, his university and the UVA were supposed to be clearly delineated in the project planning document, this informant affirms that he has gone as far as paying for loudspeakers for his centre's DE classroom from his own pocket. When one knows how much money this administrator makes, one gives him credit when he argues that it took an unusual amount of determination to get his centre off the ground. He illustrates the dialogue of the deaf and mutual accusations between his government and the UVA prior to the opening of the centre:

L'UVA avait une partie à faire, mon gouvernement aussi. L'université de (nom de la ville) a aménagé les locaux, les infrastructures et l'UVA devait fournir les équipements et la connexion. Nous avons aménagé les salles et mis du matériel là-dedans. Nous avons ouvert le réseau. Mais l'UVA a pris du retard. Quand les représentants de l'UVA sont venus nous voir, nous leur avons dit que le retard dépendait d'eux puisque le matériel promis n'avait pas été livré. Ils nous ont dit que si le matériel n'a pas été livré, c'était à cause de la lourdeur du traitement du dossier de notre côté. Pour eux, on n'avait pas fourni ce qu'on avait promis.

The second cohort of the UVA eventually started their DE program 13 months behind the originally scheduled date of September 2004. It was first postponed to January 2005, then again to September 2005. It eventually started in mid-October 2005 in Mali and in Burkina Faso. Although there are other contextual reasons to explain this state of affairs, as we will see later in this study, this is but one good example of the negative impact of poor financial analysis and budgeting on the overall project cycle and eventually on the project's performance. As a matter of fact, this late start had an impact on the students' poor performance at the beginning of the project as will be seen later in this study.

To continue the parallelism between corporate project management and foreign aid-funded project management, it is worth noting that in the corporate world, thorough market research is mandatory prior to launching a new project in order to offer a new product or service to consumers. Some of the most intuitive criteria that are taken into consideration are the needs of the consumers in the targeted market niche and their financial purchasing power. In the case of this study, financial preoccupations that emerged from the data were: tuition fees, documentation fees, document shipping fees and tutor salaries.

#### *Tuition fees*

Higher education is almost free in most of former French colonies in SSA. Whereas free higher education might sound fair, democratic and ethical, given the endemic poverty in the region, it must be admitted too that this situation is the root cause of most of the difficulties these institutions have been facing for the last two

decades. It is an unsustainable luxury higher education institutions in SSA cannot afford in the long run.

Despite the fact that the AUF subsidizes two thirds of the total tuition fees of its “allocataires”, the remaining one third to be paid by the student ranges between 200 and 1000 Euros depending on the program they are taking. It is still a lot of money for the majority of the population in two of the poorest countries in the world, living on less than one dollar a day. This informant anticipated my question right in the middle of the interview as if he did not want us to forget this important aspect of his experience with DE:

Il y a un point que je n'ai pas mentionné. C'est le coût de la FOAD. Et ce coût, je peux vous le dire, il est inaccessible au citoyen ordinaire. Quand on demande à l'Africain moyen de payer 500 000 F CFA pour une formation, on lui demande beaucoup d'argent. Donc, en plus de l'accessibilité technologique, il faudrait travailler pour rendre les coûts de la FOAD accessibles à l'Africain moyen si on veut que cela puisse progresser et tenir toutes ses promesses.

But the majority of administrators refute the high cost argument. They argue that the idea of a free higher education is deeply harmful to the university system in francophone SSA. One administrator finds that the difference between the progress of DE in English speaking and in French speaking universities lies in the fact that students pay tuition fees in the former whereas they get an almost free of charge higher education in the latter:

L'EAD a un coût et ça c'est un gros problème. Puisque dans les universités francophones, traditionnellement l'éducation n'est pas payée alors que pour expérimenter de nouvelles choses comme l'enseignement à distance ça demande

de l'investissement. Et ça, ça n'existe pas dans les universités francophones. J'ai été à Cap Coast au Ghana et ils ont un bon centre d'EAD. Le directeur nous expliquait qu'il avait au moins trois millions de dollars dans son compte. Vous voyez, il peut entreprendre des choses. Alors que nous, ici on peut pas parce qu'on n'a pas assez d'autonomie financière pour nous permettre d'entreprendre des choses.

Another manager from a different site hammers even more vigorously the same point. His argument forcefully underscores one eloquent paradox. He argues that in his country, as in many French-speaking countries in SSA, K-12 education is three to four times more expensive than higher education. This informant estimates 15,000 to 20,000 CFA Francs in various costs associated with schooling in the former case as opposed to only 5,000 CFA Francs of registration fees asked in the latter case.

He goes back more than forty years ago when he completed his baccalaureate to highlight to what extent the current free higher education is incongruous. Back then, this informant argues, because of the lack of qualified professionals in the government, graduates had to work for the government or pay back the government loans if they wanted to work in the private sector. This participant agrees with his colleague we just heard from. He provides figures to buttress the argument that the backwardness of Francophone higher education system in SSA compared to its Anglophone counterparts is mostly due to the difference in the financing mode of the two university systems.

**Question:** Etes-vous d'accord avec ceux qui pensent que les universités francophones sont en retard comparées aux universités anglophones?

**Participant:** Oui. Oui. Oui, puisque le mode de financement des universités anglophones comparé à celui des universités francophones c'est différent. Les universités anglophones sont généralement des universités privées qui ont des ressources additionnelles très diversifiées tandis que les universités francophones fonctionnent à 95-98% sur les budgets de l'Etat. Donc, c'est des budgets salaires. Vous ne pouvez pas vous épanouir.

*Photocopy fees and document shipping*

One of the most surprising findings during the fieldwork stage of this study is the fact that all the administrators I spoke to admitted that they had not foreseen the need to plan for such recurrent costs as photocopies or shipping costs of student evaluations.

The problem with the cost of photocopies is common to all three DE projects. Students complain about the mental effort and resulting fatigue associated with reading all their course material on a computer screen. Not only is this a tool they are not used to but also the resolution of the computer screens they have is low. Since they do not have the means to pay for photocopies from their own pockets, students were left with no other choice than to read all their course materials on the computer screens. The large volume of online course material renders photocopying even more unaffordable for students and expensive for the project. One female learner puts it this way:

Comme les cours sont volumineux, ce n'est pas facile de photocopier les cours. Tu es obligé de dépenser au moins 1000 F par jour. Pour une étudiante qui n'a pas de bourse, qui n'a aucune source de revenu, il est bien vrai que nous avons fait le choix de suivre ce genre de cours mais ce n'est pas facile.

The following administrator recounts one of the best illustrations of the detrimental effect of poor financial analysis and planning of his DE project. He talks about the negative domino effect provoked by the late realization that shipping costs of the examinations were much higher than originally anticipated:

Les copies d'examens ça c'est très clair qu'on avait prévu de les envoyer par DHL mais on ne savait pas que ça coûterait si cher. Mais ce qu'on ne savait pas non plus, c'est que les centres n'avaient pas les moyens de payer DHL... Là ce qui arrive c'est que pour diminuer les coûts, les centres cumulent les examens et puis ils font un gros paquet qu'ils envoient au Canada pour correction. Ils reçoivent les copies trois semaines après le premier examen de la séquence. Ça retarde tout le processus. Les étudiants n'ont pas de feedback avant l'examen suivant. Donc, il n'y a pas beaucoup de délais. Mais c'est parce que les centres n'ont pas les moyens de payer le DHL. S'ils avaient les moyens de payer DHL, ça pourrait être viable. Mais ils n'en n'ont pas.

#### *Tutors' salaries*

As highlighted in the previous section, teaching centers are not staffed with competent tutors. Although the UVA was in the process of hiring local tutors at the beginning of 2006, it is worth noting that half of its 10 centres throughout SSA have no tutors. In those centres that have tutors, they refused to work for many months in 2005 because they were not paid. The dispute was settled in 2006 when the UVA accepted to pay tutors who were already hired but refused to hire new tutors for those centres still without tutors. One direct consequence resulting from this situation was that students in those learning centres without tutors argued that since they are at a disadvantage compared to their colleagues attending centres staffed with tutors, they should be

allowed to pay less school fees. The UVA rejected this argument. The problem remained unsettled by the time this study was conducted during the winter of 2006.

At the AUF also, DE students have to grapple with their courses alone. Like their colleagues from the UVA, they also crave for tutors.

### **Design and delivery**

The many shortcomings of the analysis and planning phases shown in the previous section preclude the design and the delivery of sound DE. For one thing, although the subject matter expertise of lecturers from the Canadian HE institution, the French hospital and from various French universities is by and large recognized and saluted by all participants, their knowledge about the subtleties of proper design and delivery of DE courses is more problematic. One participant observes that given their lack of proper training in online teaching, teachers reproduce the only teaching method they know: traditional lecture.

Lorsqu'on ne connaît pas l'enseignement à distance (EAD), lorsque tout ce qu'on connaît de l'enseignement, c'est de recevoir un cours magistral en salle, et c'est le cas de la plupart des cours de sciences on ne se le cache pas, évidemment, c'est ce qu'on va vouloir reproduire en (EAD). Alors, c'est la chose naturelle vers laquelle sont allés les gens d'ici. Et en Afrique c'est la même chose aussi. Qu'est ce qu'on connaissait en (EAD) dans les différents pays ? On attendait d'un cours que ce soit la prestation magistrale d'un professeur.

This is exactly how one participant understands the role of DE teaching: transcending cultural and technological problems in order to reproduce good standards of face-to-face teaching. In his words:

À mon avis à moi, si on arrive à dépasser les problèmes techniques et les problèmes de culture, si en fin de compte on fait la simulation exactement comme un cours traditionnel en classe, l'EAD devient l'équivalent de l'enseignement en classe. Et c'est ça, je pense l'objectif qu'on veut atteindre. Donc, si d'ici deux, trois ans on arrive à résoudre ces problèmes techniques et l'aspect culturel, je pense qu'on aura atteint notre objectif.

At the UVA, in addition to the fact that online teachers were not well prepared to carry out their task, the number of participating centres and subsequent students' cohort rose from 6 to 10 when VISAF started. One lecturer estimated the overall number of his DE students during the Fall 2005 semester at 220.

When the World Bank initiated the DE projects in 1997, UVA was designed to use a two-way interactive videoconference system. It did not take long before they realized that the cost of satellite links was astronomical. This system was abandoned. Given the high number of centres spread across the subcontinent and the aural nature of African culture, VISAF's promoters found it wise to add synchronous voice to accompany and explain PowerPoint course slides. Two instructional designers from the Canadian HE institution were asked to help teaching assistants hired to teach DE courses to organize their course materials and adapt them to a suitable format for distant courses destined to Africa. They helped in designing PowerPoint slides and developing a website for each course.

Given the poor knowledge of the stakeholders and their environmental conditions at the receiving end in SSA due to lack of analysis and planning, distant teachers quickly realized that PowerPoint slides did not work. Since this realization came

only after the project was underway, teaching assistants were left with no other choice than commenting on the PowerPoint slides in a traditional tutorial mode, the only instructional method they knew.

#### *Disharmonious synchronous lecture delivery*

After three months of fieldwork during which I attended classes at the receiving end in SSA, I attended two computer science classes at the source in Canada during the spring of 2006. In the first class, the teaching assistant was equipped with scripted PowerPoint slides and a stack of printed notes. In addition to the computer, the teaching assistant's means of communication with his distant students consists of a headset equipped with a microphone. Smiley-like icons situated on the bottom of his 19-inch flat screen represent participating centres. The names of the centres are written under the respective icons. A small box situated on the top of the icons shows a green Y for yes or a red N for No. This teaching assistant's teaching method comes down to methodically going through the scripted PowerPoint slides one line after another, one page after another. Using a finger-like pointer from the mouse, he points on important concepts as he goes through the PowerPoint slides. He checks students' understanding now and then and allows for a 10 minutes question period.

In the second class I attended, the teaching assistant adopted a totally different approach. He scrapped the PowerPoint presentations altogether. He confessed that he did not like the static nature of PowerPoint presentations that forced him to comment on the same slide for five minutes. He also came to realize that PowerPoint slides were too heavy for the weak Internet connection in many of the participating centres, which desynchronized voice accompanying the PowerPoint slides. Gifted with a remarkable

typing speed, this teaching assistant typed his explanations while explaining to his distant audience what he was doing. He challenged his audience with exercises and proceeded by typing explanations as he spoke. When I asked this tutor how he felt about his teaching method, he answered that it helped him to realize that he could use his computer keyboard and screen as the traditional chalk and blackboard:

Le fait d'avoir renoncé aux acétates m'a fait réaliser qu'il y avait moyen d'utiliser l'ordinateur comme s'il s'agissait d'un tableau traditionnel. En tout cas je suis surpris de voir à quel point il est possible de rapprocher les méthodes d'EAD des méthodes que j'utilisais en classe normale.

Although this teaching assistant admits his ambition is to match the standards of face-to-face teaching methods, his class showed some level of participation and interactivity that is very rare in the three so-called DE projects analyzed in this study. What happens in most DE classes resembles traditional lectures delivered from a distance to an unknown audience with all the technological, cultural and environmental barriers between the teachers and the students. One administrator relates the low success rate at the UVA to the fact that courses designed for face-to-face teaching are taught online without any effort to adapt them to minimal standards of instructional design:

Donc en ce qui concerne l'UVA, c'est beaucoup plus des programmes destinés au mode présentiel. C'est l'une des raisons pour lesquelles le taux d'échec est assez élevé puisque les cours sont livrés à distance sans vraiment répondre aux critères de ce mode d'enseignement.

### *Poor interactivity and students' support*

The UNFM has only two centres attended by a few more than 15 learners in Bamako and 20 in Burkina Faso. But the same lack of minimal instructional design thoughtfulness prevails. As when watching TV, the learners can see and hear the lecturers but they cannot directly interact with them. The only way to interact with their lecturers is to type in their questions during a question period and send it online. Students, tutors and administrators alike complain about this lack of interactivity. One local tutor and administrator expresses his disappointment with the lack of student feedback to the lecturers from Paris, especially when there are no permanent local tutors to help the learners:

Nous sommes un peu déçus parce que le cours à distance marche bien mais le retour ne se fait pas. Tant qu'un enseignant local est disponible, nous parions à cette lacune en expliquant les notions qui n'ont pas été comprises. Étant donné que nous avons plusieurs occupations, nous ne pouvons pas être là tous les jours. Mais le retour me semble indispensable.

Regarding local tutors' availability and qualifications at the UNFM, although the project is designed for professional nurses, the role of local tutor in one of the centres was played by a graduate in electrical engineering, eight months after the beginning of the project. He had severe difficulties in understanding the medical terminology while trying to type in learners' questions to send to the lecturers via the Internet.

The FOAD adopted an e-learning structure whereby students access course materials individually either synchronously or asynchronously via courses' websites.

Some course websites add sound, others do not. In any case, learners lament about the lack of tutors at the FOAD as well. One learner cannot insist enough on the necessity of local tutors:

L'autre problème qui à mon avis est crucial, c'est le problème de tutorat. Chez nous par exemple, on n'a pas de tuteur pour le moment...Et ça c'est un manque important. J'insiste : Il faut ABSOLUMENT des tuteurs pour encadrer les étudiants en présentiel. Des gens qui sont là et peuvent vous donner des conseils sur des problèmes potentiels que vous rencontrez.

One student likens it to listening to the radio. He confesses that students sometimes fall asleep during the course:

Parfois ce n'est pas facile d'être assis là à écouter. C'est comme si on écoutait la radio et qu'on avait une main virtuelle qui courait sur un tableau et qui écrivait. Parfois c'est pas facile. On s'endort même parfois.

Given this lack of interactivity, one participant from the UVA observes that there is an unnecessary duplication between the synchronous voiceover commenting the PowerPoint slides and the permanent WebCT backup system. She argues that since the synchronous sessions repeat course materials students find on the courses' WebCTs, the synchronous mode could be more advantageous if it was reserved to interacting with students and answering their questions:

Je trouve qu'on devrait utiliser le synchrone pour répondre à des problèmes que les étudiants rencontrent en étudiant leur contenus sur le Web. Parce que tout

le contenu qui est présenté en synchrone, ils l'ont aussi sur le Web... Moi je pense que ça serait plus avantageux pour tout le monde de répondre à des problèmes de contenu. S'ils ont travaillé, s'ils ont étudié une matière qui présente plus de difficultés, ben, quelles sont ces difficultés ? Et le prof pourrait répondre. Moi je verrai ça plus fructueux de cette façon-là. Parce que là les étudiants n'ont pas le temps de poser leurs questions.

This participant concludes her discussion by pointing out that using the synchronous delivery mode does not leave students enough time to ask questions because the lecturers' are overly preoccupied with time constraints in covering the program, which pushes them to speed up delivery to the detriment of student comprehension.

#### *Delivery in a high-speed mode*

When asked about his interaction with his learners, one lecturer's reply implies his dilemma. Given the high number of students, he has to choose between allowing for better interaction with students or covering the program:

J'aime beaucoup cette interaction sauf que quand il y a un grand nombre d'étudiants, elle prend beaucoup plus de temps. Donc, on va tomber dans le problème de ne pas être capable de donner toute la matière dans la plage horaire qu'on est supposé utiliser.

Eventually, the preoccupation to cover the program in the allotted timeframe impedes the quality of delivery and the resulting students' understanding. One student laments about this situation:

Le professeur change de module après un certain temps une fois que la semaine est passée sans savoir si les étudiants ont compris le module précédent ou pas.

This complaint is taken one step further by a tutor. He accuses some lecturers of carelessness about student understanding. He gives the example of one particular lecturer:

Par exemple pour la 1ère session, un prof comme (nom du prof) qui donnait (nom du cours) n'enseignait qu'en tenant compte juste de l'emploi du temps qui lui a été donné. Il devait terminer ce volume de telle heure à telle heure et il s'en foutait que vous compreniez ou pas. C'est ce que j'ai compris de sa façon d'enseigner. C'est extrêmement malheureux parce qu'il partait à un rythme extrêmement élevé et les étudiants n'y comprenaient rien.

I had the chance to pay a visit to the lecturer involved in the preceding quote in late September 2005, during the early stages of this study, six months before I started fieldwork. Although the UVA learning centres described in this study had not yet started, I considered him a good potential informant since he had taught the five early UVA learning centres and would continue to teach the ones I was interested in. During the 15 minutes I spent in his office, he made jokes about the difficulties his African students experienced with his programming course. He sounded disparaging, cynical and amused. I was shocked by his attitude but I made efforts to hide my reaction in order to avoid confrontation with a potential "information-rich" individual. It must have shown nonetheless that I did not share his amusement. In the end he declined my request for the interview.

Because of the same preoccupation to cover the program, FOAD students do not count much on their teachers in case they have questions. They prefer to ask their

questions to their fellow French students. One participant points out that questions asked of teachers need to be worded with precision. Otherwise, they go unanswered. He argues that it is not always easy to find accurate words to frame a good question in a subject matter you have just started to learn. Therefore most of the time, when students from SSA have questions, they adopt a spontaneous international collaborative learning strategy by asking questions to their fellow French students:

Il vaut toujours mieux poser une question à un étudiant qu'à un enseignant puisque avec l'enseignant, c'est tout un problème. Il va falloir bien ficeler ta question. Le problème c'est que quand tu n'a aucune base en informatique, ce n'est pas facile de poser clairement une question en utilisant la bonne terminologie. Mais avec un étudiant, il va te diriger dans la façon de poser la question pour pouvoir bien te répondre. Dans la vraie vie c'est comme ça. Il vaut mieux demander conseil à un étudiant qu'à un enseignant, du moins c'est comme ça que moi je trouve la situation.

#### *The lack of content contextualization*

One participant who happens to know the UVA situation in Anglophone countries still remembers how the Australian Royal Melbourne Institute of Technology (RMIT) systematically imposed an accountancy course on African students despite the fact that the accountancy practices in use in most of these countries were different from the Australian accountancy model:

L'autre problème qui paraît souvent dans ces programmes, c'est le manque de contextualisation des enseignements. C'est un problème qui est très majeur... Je me rappelle par exemple qu'à l'UVA nous avons eu beaucoup de discussions avec une équipe australienne de la Royal Melbourne Institute of Technology sur l'apprentissage de la comptabilité où ils imposaient de façon systématique la

comptabilité australienne tandis que nos étudiants Kenyans, Tanzaniens, Ethiopiens, etc. se retrouvaient à apprendre une comptabilité qui n'est pas la leur. Demain si vous les envoyez sur le marché du travail, il est évident qu'ils ne seront pas opérationnels. On a eu ce débat et on leur a demandé, pas de supprimer la comptabilité australienne mais d'adjoindre un autre cours qui va tenir compte de la comptabilité acceptée par le Accounting Committee International (ACI) pour que les étudiants puissent se débrouiller partout où ils seront.

At the FOAD, courses are primarily designed with a French audience in mind. All references and examples are related to French realities, leaving African learners in limbo. This is what one FOAD student had to say about this problem:

La majorité des apprenants au FOAD trouvent que les cours qu'ils prennent ne sont pas adaptés à nos réalités et ça, c'est un problème qu'il faut voir... ça nous fait avoir des expériences, on comprend un peu les réalités françaises mais le fait que ce ne soit pas adapté à notre milieu et que ce sera difficilement adaptable, souvent je me demande quelle est la raison d'être de certaines de ces formations, quoi.

In addition to the lack of contextualization of content, a poor knowledge of the target audience and its cultural references results in communication problems that are detrimental to understanding the message. The following anecdote one tutor and administrator recounted illustrates this situation. In a computer science class, one lecturer used the metaphor of a pizza slice to explain a concept students had some problems in grasping. This did not help students since they do not know what a pizza is.

On a vu cette année un prof qui faisait son cours en parlant de pointe de pizza... Il faut d'abord connaître ce que c'est qu'une pizza et une pointe ! C'est une

anecdote mais tu vois un peu les difficultés de compréhension qui peuvent naître de ce genre de situations. Il y a une contextualisation qui est absolument indispensable par rapport à ces questions-là. Sinon les autres aspects, quand ils sont d'ordre technique, on peut arriver à les circonscrire mais les problèmes de compréhension, de culture en fait, ça, ça demeure un grand problème.

Again, this lack of contextualization is common to the three DE projects analyzed in this study. At the UNFM, we heard earlier one participant complaining about the fact that most of lecturers are out of tune with African realities since their African experience is more than 20 old. He argued that one way to help contextualize learning would be to use local case studies that UNFM students experience on a daily basis. This participant regrets the fact that this idea will not translate into action any time soon because the UNFM was not designed to accommodate this kind of learning model.

*Tests and examinations: one size fits all or free for all*

Contrary to the similarities between the three cases observed so far, there were similarities and significant differences when it comes to the frequency and quality of evaluations. Participants almost unanimously point out that evaluations are frequent, rigorous and closely monitored at the UVA. To the contrary, they are believed to be sloppy and not as closely monitored at the FOAD. One participant who knows both the UVA and the AUF well says that some FOAD learners seek help from outside to complete their assignments and the lecturer will never notice it, since students are not supervised while writing their evaluations and exams. In addition he observes that French teachers grade more generously than local teachers:

À l'UVA, il n'y a pas de soucis à se faire, c'est comme en présentiel. L'étudiant est évalué avec des devoirs jusqu'à l'examen final. Au niveau de l'AUF, il y a des devoirs en ligne sans aucun contrôle... Heureusement qu'à la fin il y a un examen. Mais il va falloir qu'on mette un peu plus de sérieux au niveau des devoirs parce que je connais des gens qui se font aider. Mais je dois dire aussi que comparé à notre système à nous ici, les professeurs occidentaux sont beaucoup plus généreux. J'étais surpris d'avoir des 20/20 ; des 18/20 dans mes devoirs. Ce n'est pas évident qu'avec nos enseignants ici j'aurais pu avoir ça.

At the UVA it was another story. For example, even before the beginning of the second cohort the success rate in its five first centres was 36.7% during the winter term of 2004. The results from evaluations of the second cohort's first term were catastrophic, especially in the core course of Programming. Students were not familiar with the programming tool they were using. One participant describes what students went through during their first evaluation:

Le premier TP qu'on nous avait donné, c'était la conception d'une calculatrice programmable avec mode affichage... Il y avait plein d'options supplémentaires qu'il fallait faire telles que les calculs élémentaires, le mode statistiques où il fallait calculer la variance, avec un autre mode où il fallait tracer des droites. Pour des étudiants qui n'étaient pas encore familiers avec l'outil compilateur, c'était quand même énorme. Quand on a vu un programme comme ça... (rires) on le trouvait vraiment difficile. Tout de suite les étudiants ont cherché à voir quelqu'un qui est familier avec le compilateur... Ils ont formé les groupes en fonction de ça... En fait j'avoue que c'était très compliqué (rires). Même le sujet nous faisait rire en fait.

Given the preoccupation to finish the program, it looks like this evaluation was tailored to the Canadian schedule and timing and did not take into account teaching shortcomings and learning constraints experienced by learners as revealed throughout this study, not even the fact that the term began in mid October, six weeks behind schedule. As the previous participant mentions above, students tried to work in groups to help each other, mainly as a last resort because the evaluation items were too tough for them to solve individually. Rather than true collaboration, it appears that individuals copied from one another and made the same mistakes. As the following participant's intervention shows, this was defined as plagiarism and shocked some people in Canada:

Au début de la formation on a vu beaucoup de cas de plagiat et c'est très clair, même si on n'assure pas la surveillance de l'examen ou des TP là-bas, même si on n'est pas sur le terrain là-bas, on peut le voir lorsqu'on a des copies qui se ressemblent beaucoup. Il y a même des cas qui sont allés jusqu'à scanner le travail de leurs collègues. Ils n'ont même pas pris le temps de copier. Ils ont scanné. Je trouve ça terrible.

Instead of looking for alternative explanations (of a pedagogical nature for example) for this situation it was readily misinterpreted as originating from the legendary inclination of Africans to work together; it appears that what the people in Canada had been taught during their woefully inadequate half day training course in intercultural communication served only to reinforce their own prejudices.

Far from being thankful to French teachers' generosity and easygoingness, some FOAD students are very worried about the professional skills they will learn from their FOAD courses. Those taking courses in technical fields like multimedia are the most worried. They complain about the lack of proper documentation and software for practice. Although they learn in such disadvantaged conditions, their evaluations are similar to those of their French counterparts. One participant points out this double standard as follows:

C'est un grand handicap parce que si vous devez travailler une matière avec un logiciel que vous n'avez pas, je me demande ce que vous pouvez bien faire... A la fin vous êtes évalué sur un même pied d'égalité que les autres étudiants en présentiel... Donc ça pose vraiment problème parce que même si à la fin on vous donne votre diplôme, il faut avoir les compétences.

At the UNFM, students wrote their first evaluation while I was conducting my fieldwork. They did not get any feedback to their first evaluation until I left the field. They could not, therefore, comment on their experience with regard to evaluation.

### **Project Monitoring and Evaluation (M-E)**

In the RBM framework used in this study, monitoring is defined as a regular assessment of the status of each level of a project or program to see how the use of the allocated resources are helping to deliver the expected results. Evaluation is defined as an external assessment of objectives attainment which is concerned with questions related to project relevance, effectiveness, impact and sustainability. In other words, evaluation seeks to establish whether a project has used wisely and effectively the

resources it was allocated to address identified needs in order to produce a sustainable impact to the benefit of the target populations.

Given the fact that the UNFM was in its pilot phase, there was no monitoring and evaluation data available. This section will thus deal with the UVA and the AUF.

#### *M-E of VISAF-UVA*

In CIDA's corporate system, project administrators are required to produce narrative and financial reports on a regular basis. In addition, independent consultants are hired to conduct evaluations. In the case of VISAF, the first such evaluation was conducted by Jean-Louis Latulippe from August to September 2004, eight months after the first cohort of students from five countries had begun their computer science program provided by the Canadian HE institution. Although globally optimistic, this first evaluation pointed to some early and serious gaps in the project's expected results and future prospects.

For example, the evaluation reports an attrition rate of 63.3%. Women's participation was only 20.7%, far from the targeted 50% participation. Computer and satellite equipment promised to learning centres were not delivered. In addition, working relationships were tense not only between the AVU and the AUCC, the CIDA executing agency, but also between the AVU and participant universities. Learning centre managers complained about poor communication with the UVA and not being consulted or included in decisions regarding the future of the project. They accused the UVA of lack of leadership. Even more threatening for the project's sustainability was the fact that the plan to select a Principal Partner University (PPU) among the participating

universities, the partner that was expected to carry on with project activities at the end of VISAF, had been abandoned due to 'unforeseen disagreements' among stakeholders.

A formative evaluation report concerning the broader AVU was released in March 2005, three months after the beginning of VISAF II. It confirmed most of the early signs of lack of strategy and poor management skills on the organizational level. Some of the major findings from this evaluation read as follows:

- Through its content provider universities, the AVU conducted several capacity-building activities for African partner universities. However, most African partner institutions interviewed were disappointed with or had reservations about the scope and nature of these initiatives.
- The quality of AVU's programmes is affected by technological limitations inherent to many of the countries where AVU operates.
- Assessing AVU's progress in achieving its objectives is problematic. Although AVU developed several plans over the last few years, the proposed objectives and strategies were not realistic and none of the plans could be fully implemented.
- The AVU had mixed results in achieving its objectives for 2003-2004. However, it should be emphasized that some of these objectives were either too optimistic or not appropriate.
- According to its financial forecast, the AVU will face a significant cash shortage for the next three years (2005-2008) unless donors provide additional cash injection.
- AVU's frequent changes of direction and limited results over the past nine years are leading to donor fatigue, which could jeopardize AVU's ongoing funding.

(p. 2)

#### *Monitoring and Evaluation at the AUF*

Regarding the FOAD at the AUF, I was not able to access independent institutional evaluations like those commissioned by CIDA regarding VSAF and UVA.

However, I could access the summary of a survey entitled “Enquête qualité auprès des apprenants 2004-2005”(AUF, 2005) dealing with the FOAD students’ perceptions of the quality of the DE programmes they are provided with by French universities. Using quantitative and qualitative methodology, this study was conducted on a sample of 360 FOAD students benefiting from the AUF bursary (*allocataires*). Data collected via an online questionnaire was analyzed and interpreted by the AUF’s “TIC et appropriation des saviors” service in collaboration of the Université de Besançon.

The results of the study are globally positive. Ninety-five percent of the participants say they would recommend FOAD to their family members and friends. The study suggests that 95% of the students value the degrees they earn through FOAD mostly because these degrees are internationally recognized. Only 27% mention that courses lack opportunities for practice.

Regarding tuition fees, 90% of the participants of the study find it “normal” to pay for a FOAD, 75% find tuition fees justified and worthwhile but only 54% find it justified to pay more for a foreign degree than for a local one. Cross-tabulation between “socio-professional status” and “tuition fees” variables suggests that teachers are the only socio-professional category that finds FOAD tuition fees too high. Forty-four percent of teachers hold that opinion as compared to 30% of students and only 20% of the rest of socio-professional categories. The study concludes its findings by the following quote that places the responsibility of success to a FOAD programme entirely into the students’ hands:

En résumé, pour la plupart d’entre eux, il s’agit d’une « *bonne initiative qui nous facilite la vie* » mais qui demande cependant « *bien des efforts, du courage et de la*

détermination » ainsi que « de la discipline et surtout de la volonté d'apprendre ». (p. 12)

### *Prestige vs. pedagogical value*

According to many participants, most of the seemingly positive evaluations rely on a superficial reading of students' satisfaction with the programs offered by the DE projects. As I demonstrated at the beginning of this chapter, without scratching the surface, one leaves with the impression of enthusiasm and satisfaction regarding these projects. Although all stakeholders recognize the high quality of the programs, what students are content with is more the privilege of using new technologies on a daily basis in countries where it is still considered as a luxury reserved for the lucky few and the social prestige that comes with it than the pedagogical prowess of these projects.

Si tu compares les étudiants de l'UVA à nos étudiants classiques, c'est des privilégiés. Ils discutent avec les autres étudiants sur le campus. Ils se rendent compte que ne serait-ce que ce qui est mis à leur disposition comme support pédagogique, les autres n'ont absolument rien. Ça pourrait être mieux du point de vue pédagogique mais eux ils n'ont pas assez de recul pour comprendre ça.

One FOAD student participant confirms this feeling of privilege. He says other students on the campus have complexes about their lack of access to new technologies and not being as Internet savvy as DE students are.

Si je dis à quelqu'un que je suis la FOAD, il est complexé. Il crois qu'il ne peut pas avoir ce privilège. Pourtant tout le monde peut s'inscrire au programme. Il suffit que ton dossier soit retenu.

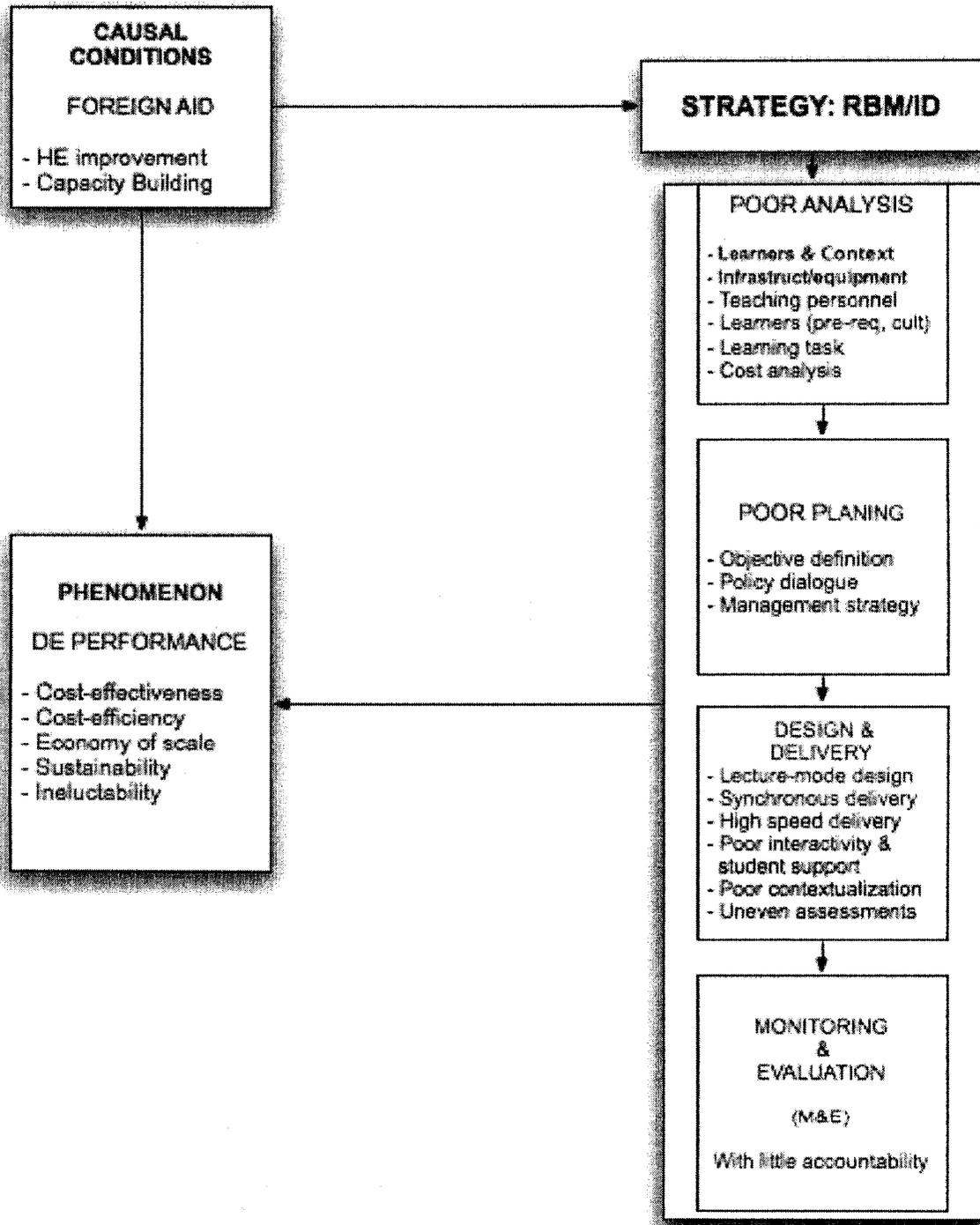
### *Summary of the section*

Consistent with grounded theory methodology, this chapter presented the phenomenon of the performance of DE projects in SSA. Improving desperately needed higher education and capacity-building in SSA by providing quality distance education have been identified as causal conditions, the reasons why foreign aid agencies engage in funding these projects. RBM and ID constitute the strategy DE project management is expected to follow to deliver the promised benefits accruing from DE. In this section, participants' voices told the reader how this strategy was flawed in many ways, mostly by the lack of Needs Analysis and subsequent poor planning.

From participants' perspectives, it appears that all three cases under scrutiny in this study did not pay enough attention either to the basics of Instructional Design or to the DE users' socio-economical and technological environment. As a result, hard to manage traditional lectures were offered from a distance to insufficiently prepared and poorly equipped users in SSA who spent considerable time and effort grappling with them. Figure 2 below is a partial representation of elements of the theoretical model of the performance of DE projects in SSA presented in this section. In the following section, I turn to the contextual and intervening conditions that led to the poor performance of foreign aid-funded projects in SSA.

Figure 2.

Partial theoretical model: Causal conditions and strategy



### **Section Three: Intervening and contextual conditions**

In Grounded Theory, intervening conditions are defined as those conditions “that mitigate or otherwise alter the impact of causal conditions on phenomena” whereas contextual conditions are those that intersect “to create the set of circumstances or problems to which persons respond through actions/interactions” (Strauss & Corbin, 1998 pp. 131-132). Having made the distinction between the different categories and subcategories resulting from axial coding, Strauss and Corbin warn against the temptation of dogmatism in trying to define as precisely as possible the content of these categories because they can change from one category to another. The most important thing, they insist, is:

Capturing the dynamic flow of events and the complex nature of relationships that, in the end, make explanations of phenomena interesting, plausible and complete. Analysts who rigidify the analytic process are like artists who try too hard. Although their creations might be technically correct, they fail to capture the essence of the objects represented, leaving viewers feeling slightly cheated.  
(p. 129)

As discussed in the previous chapter, intervening conditions facilitate or mitigate the impact of causal conditions whereas contextual conditions determine the context in which people act/interact to respond to a situation or a problem related to the phenomenon under scrutiny. Given the fact that there seem to be no clear-cut boundary between contextual and intervening conditions identified in this study and that both

conditions seem to have a significant impact on the performance of DE projects in SSA, they are presented together in this section.

### *The dominant ideology*

In the immediate aftermath of the Berlin Wall downfall and the end of the Cold War in 1989, capitalism's victory over socialism induced broad changes in international relations and economics. Developing countries were no longer allies that the two ideological blocks competed for, using aid money and military support, to maintain them under their ideological umbrellas. They became markets that conquering globalization was eager to capture on its own conditions. Market liberalization became its gospel. To the exception of success stories in a handful of countries, the promised economic prosperity did not materialize in the majority of poor countries (Stiglitz, 2006).

Slogans like "Trade not Aid" and Structural Adjustment Programs (SAPs) imposed by the World Bank and the IMF burgeoned during the 80s and blossomed after the collapse of the Berlin Wall. Contrary to what was promised, they had many negative consequences, particularly in the social sector such as health and education (Stiglitz, 2003, 2006). For example, by imposing developing countries to spend most of the loans destined to the educational sector on elementary education to the detriment of higher education, international funding agencies ended up, perhaps unwittingly, lending a hand to military dictators reigning over most of SSA in their crackdown on higher education institutions.

Students' frequent protests against their living conditions and demonstrations in favour of democratic reforms and human rights were considered to be a big threat to their dictatorial regimes (Abderkader, 2002; Tedga, 1988). The acknowledgement of the

detrimental effects of past policies on higher education in SSA coincided with the heydays of the Internet bubble in the early 90s. In addition to promoting DE as a solution to help higher education in SSA to leapfrog the enormous problems accumulated over decades, campus of major western universities started to spring up in many capital cities. As one participant puts it:

Il faut dire qu'il y a beaucoup de rivalités entre les pays du nord aussi. Parce que l'enseignement est devenu une business. C'est comme la charité, c'est devenu une business à part entière.

### *Colonial legacy*

Like the economy, educational systems and practices in SSA are still dependent on their former colonial masters. When I asked one senior administrator why Francophone universities seem to be backward in the adoption of DE as compared to their Anglophone counterparts, he conceded that the French higher education system that most French formal colonies are tied to via the Conseil africain et malgache pour l'enseignement supérieur (CAMES) is very conservative and views with suspicion any changes that disturb traditional values and practices:

Il faut savoir que nous sommes presque tous des fruits des universités de nos anciens colonisateurs... Nos universités sont très traditionnelles, très conservatrices. Tout ce qui est bouleversement, tout ce qui est changement est perçu avec beaucoup de réserves. Ça va venir. Moi j'ai confiance que ça va venir. Les universités africaines seront obligées de développer ce type d'enseignement au sein de leurs institutions parce que avec la mondialisation, on ne peut pas être en marge de ce type de formation.

Despite this participant's hope and many other participants' hopes that things are about to change, there are no clear indications that steps are being taken in the right direction. To the contrary, one participant goes even further in eliciting the prevalent conservative mindset in francophone educational systems in SSA. He points out the fact that up to 2006, there were neither trained human resources nor institutional measures in favour of DE in francophone countries. Under these circumstances, this participant worries the degree equivalence for DE graduates might cause a problem:

Les compétences manquent et la structure supranationale qui s'en occupe qui est le CAMES n'a pas un seul texte sur l'EAD. Il est évident que le problème de validation et de reconnaissance de diplômes risque fort de se poser.

I had the opportunity to verify this information when I visited the CAMES head office in Ouagadougou during my fieldwork. I spoke with a few people in the francophone continental organization. Given the fact that the CAMES is the only organization to which country members in SSA granted the authority to regulate the key area of degree equivalence, I asked one senior staff member what was being done to accommodate DE graduates. The participant told me there was a plan in progress to integrate DE. As I asked for some details about the plan, the participant replied it was too soon to give details.

Given the supposedly close collaboration between francophone regional institutions and specialized agencies like the AUF and bigger international organizations like the Organisation internationale de la francophonie (OIF), one follow-up question I had was why the AUF is actively delivering costly DE degrees by the hundreds in SSA

when the CAMES has not taken steps towards their official recognition? My informants pointed to some administrative problems that remained to be worked out and their hope to find a solution to this problem in the near future.

This is the kind of situation that could explain the reason why some people in academic circles in francophone universities are openly questioning the inherited French educational model. This is what one participant had to say about it:

Quand vous prenez les pays colonisés par les Français et ceux colonisés par les Anglais, ce n'est pas la même chose. Au départ déjà, ce qui a été laissé par les colonisateurs est différent. Il faut que nous changions nos mentalités. Je ne dis pas qu'il faut rejeter la France. Je dis qu'on doit s'ouvrir un peu et coopérer avec tous ceux qui nous aident y compris les anglophones, et bénéficier de leur expérience.

One source of persistent frustration from the higher education institutions' managers is their governments' stubbornness to keep a costly higher education system free of charge, a practice inherited from colonization.

C'est souvent frustrant. Nous sommes très en retard par rapport au monde anglophone... Les anglophones sont déjà habitués à l'EAD. Ils ont plus de responsabilités là-dedans. Seulement 10 des 47 centres de l'UVA sont francophones. Leurs centres sont plus ou moins autonomes. La gestion des centres francophones comme mon centre risque de fermer à la fin du projet de la coopération canadienne. C'est là que les anglophones ont mis leur poids.

Among all the problems higher education in SSA faces, this is the one that is likely to find a solution in earnest. Public universities are under intense pressure to

privatize. According to many participant administrators, the recent vague of renaming formal national universities after the cities where they are located is a small step that prefigure bigger changes towards the privatization of the higher education sector in SSA.

#### *Competition between funding agencies*

Some participants who had the chance to witness the birth of the UVA pointed out that people at the AUF were angry when they realized they had been overtaken by the UVA while they were working on a comprehensive DE project of their own. While a few meetings were held between the AUF and the UVA prior to the beginning of the UVA in francophone countries some eyewitnesses contend that French delegates would turn around and try to topple the project. One participant put it this way:

On a su après-coup que l'AUF était furieuse parce qu'elle se préparait à donner des cours à distance vers l'Afrique. Et puis nous on est arrivé avec l'UVA et puis on s'est mis à en donner avec une plate-forme qui ne permettait pas aux Français de faire mieux. Et notre programme est bien reconnu. On les a pris de court. On leur a coupé l'herbe sous les pieds. Alors ils sont furieux contre nous.

On the other hand, the UNFM was initiated by one of the several AVU's past CEOs. Its funding came from the Fondation pour l'innovation politique (Fondapol), a political think tank close to the ruling right-wing party, the UMP. Given these origins the UNFM is widely considered as a French creation in response to the World Bank-initiated and mostly Anglophone AVU. According to one inside informant, the UVA tried unsuccessfully to get in the way of the UNFM. It alleged that the former AVU's CEO who initiated the UNFM violated one of the terms of his terminated contract stipulating

that he would not start anything that could compete with the AVU within the three years following his contract termination. This prompted the following comment from another participant pointing in the direction of the fierce competition between the various DE projects:

Vous voyez, même l'UVA, le bébé qui est censé être révolutionnaire maintenant commence à paniquer puisqu'elle pense que l'UNFM va lui faire la compétition.

#### *Careerism and opportunism*

Drawing from my recent personal and professional experience, I can confirm that international development jobs are better paid compared to equivalent jobs at home in developed countries. This is particularly true for those Western project managers and team members who are modestly qualified. In addition to lucrative contracts, international development jobs confer the prestigious status of field experts and a high social status in the eyes of the impoverished and mostly uneducated local populations. They ride in expensive project trucks with air conditioning and a chauffeur. They can afford renting fancy colonial mansions and hire a little army of maids, cooks and gardeners, all the luxuries very few people can afford back home. Despite some inconveniences such as having to take preventive medicine against tropical diseases on a regular basis, longing for their friends and extended family members, a richer social and cultural life left behind in their native countries, expatriates' life in the tropics is nothing much to complain about.

Similarly, although the lucky few local project team members are paid a small fraction of the high salaries and benefits paid to their expatriate managers and colleagues, they still make more money than most of their fellow countrymen, including

high-ranked government officials. Working for an international organization is one of the most well-paid and prestigious positions in SSA.

Under these circumstances it does not come as a surprise when one participant explains the rivalry between foreign aid projects and funding agencies by the fact that like charity, development work has become a business and livelihood for many people:

Les gens gagnent leur vie avec ça. Ils vont chercher des fonds auprès des organismes et des bailleurs de fonds pour faire de l'enseignement à distance. Et il y a beaucoup de compétition.

The livelihood function of foreign aid-funded projects seems to transcend and overshadow projects' outcomes and their sustainability in the field. One participant goes as far as to criticize the positive move the AVU's prospected move towards the transformation of its learning centres into DE faculties within its partner universities:

**Participant:** Le but de l'UVA maintenant c'est que ses centres deviennent un peu la faculté d'enseignement à distance de chacune des universités... Donc c'est ça que l'UVA se donne comme mission. C'est comique parce que c'est une vision qui va faire que l'UVA n'aura plus de raison d'être une fois que toutes les universités de l'Afrique de l'Ouest vont savoir faire de l'enseignement à distance.

**Question :** Ça fera de l'UVA un projet qui aurait réussi... un projet qui aura réussi à se pérenniser, comme vous dites en GBR... .

**Participant:** Ce sera un projet qui aura réussi et qui s'auto-détruit quand il est fini. Voilà!...

Yet this prospected UVA's move would result in potential sustainable benefits since it would spread DE from capital cities, the usual sites of national universities to

rural areas. Whether this UVA's intention is genuine or whether it has the means to achieve it is another question. What can be safely assumed from the previous participant's very critical opinion of an initiative that would foster the sustainability of DE projects is that some project team members are motivated by selfish careerist interests.

*A disguised form of corruption*

Careerism and opportunism is far from being limited to expatriates. As argued earlier, local project team members benefit from a privileged social status they are eager to protect. Uncertainty due to the temporary nature of development projects adds pressure to do whatever it takes, to the point of becoming obsequious, to stay in the managers' good graces. This provides good references and credentials, an invaluable asset in the quest for a position in future development projects.

One of the participants to Loiret's MA thesis dedicated to the AVU (2005) illustrates how careerism and opportunism pervade beyond the limited circle of the project's immediate team members to higher political echelons. He contends that although they were aware of the AVU's many shortcomings and criticized it in private, the presidents of partner universities accepted to involve their universities for purely selfish reasons. They expected to benefit from frequent paid for trips and the per diem they collect whenever they attend meetings or sit on the Board of Directors. As the participant puts it:

Nos recteurs, il n'y a qu'une chose qui les intéresse: ce sont les voyages et les per diem. Et pour nous, les recteurs qui participent à l'UVA n'acceptent le programme que parce qu'une partie de l'argent est dépensée pour eux. Quand ils

ne sont pas à Kigali, ils sont à St-Louis. Quand ils ne sont pas à Washington, ils sont à Nairobi. Et nous on se dit: mais qu'est ce qu'ils font? Ça c'est un problème. La conclusion c'est qu'ils se partagent les postes au niveau du conseil d'administration, chacun préparant sa relève quand il ne sera plus recteur en se disant qu'il faut avoir une certaine visibilité et être quelque part. (p. 161)

One participant goes as far as to liken the circumstances in which the AVU operated to a disguised form of corruption.

#### *Donors' national interest*

Competition between funding agencies is no stranger to the notion of national interest. This notion has always gotten in the way of international initiatives, even those as big as the UN. One knowledgeable participant points out that development projects involving the collaboration between the World Bank and French funding agencies are usually problematic.

Il est souvent difficile de trouver une structure de la BM qui accepte de travailler main dans la main avec une structure française par exemple. Le plus souvent il y aura cette guéguerre entre bailleurs de fonds et chacun voudra avoir sa parcelle d'autorité et ne voudra pas qu'une partie de son initiative soit ancrée dans l'initiative d'un autre.

This situation results in considerable jockeying within and between funding agencies in order to position the country they represent in the most likely profitable spot.

For example, one of Loiret's (2005) main arguments in his vitriolic attack against the World Bank-initiated UVA is that it is all about money-making and nothing about

pedagogy. Whereas this seemed to be true as this study shows, it is also true that the author of the thesis was working for the FOAD promoter when he wrote the thesis. Although the FOAD prides itself on providing bursaries (allocations) to its DE students, its programs are not any cheaper than UVA's. As it was seen earlier, FOAD students complain about the high tuition fees they have to pay, just like AVU's students. As for pedagogy, this study's findings suggest that it is not a major preoccupation of any of the studied DE projects.

#### *The obsession of visibility*

Competition between funding agencies and development projects illustrates their competition for visibility in the field. This leads to funny if not sad situations like the one evoked earlier in this study where instead of investing in one VSAT with a large bandwidth, the Malian HE institution and the BF HE institution find themselves with three VSATs with narrow bandwidth and therefore inefficient and underused (See picture on page 149). One participant remarks that the more visible a foreign aid-funded project is, the more 'proves' of results it can claim and the more likely it will get additional funding for its activities, leaving unfulfilled less visible yet essential needs for local populations:

C'est vrai que les partenaires ont envie de montrer leurs réalisations. Et ça je l'ai constaté. Quand vous avez un partenaire qui vous a construit un bâtiment, vous dites à l'autre est-ce que vous pouvez nous équiper? Ils sont réticents puisque ça ne se voit pas bien l'équipement alors que le bâtiment se voit bien. C'est pareil pour le VSAT. Dire que ça c'est le VSAT de tel partenaire, ça se voit très bien, on fait des photos, etc.

More than other audiovisual means, pictures are invaluable public relation tools that give credibility to projects' narrative and financial reports full of numbers and positive testimonials from local people in poor countries. They serve to illustrate narratives and financial reports as evidence showing that projects are delivering results in the field.

#### *The dependency mentality*

Last but certainly not least is the African elite dependency mentality. Many scholars agree that this is the biggest impediment to the development of Africa. The beginning of this chapter showed the unanimity with which participants agreed in saying that DE is the ineluctable thing of the future of education in Africa. The same unanimity and hyperbolic rhetoric can be found all the way to the upper echelons of governments. However, when it comes to project funding, African elites prefer to give ground to foreign aid. One administrator blames this dependent attitude on aid. The massive infusion of aid money during the last three decades has created a debilitating dependency mentality that is one of the root causes of Africa's demise despite its considerable natural wealth. The participant used a powerful castration metaphor to capture this sad situation. He emphatically contends:

Vous savez, on nous a tellement couvés en Afrique ici qu'on nous a pratiquement castré de toute initiative. On attend toujours que ce soit l'autre qui doit apporter les moyens de notre épanouissement. On ne nous a jamais, jamais appris que nous devons concourir à l'apport des moyens de notre propre développement.

Another participant who witnessed the birth of UVA said how saddened he was by this dependency mentality. He recalls how at the fundraising meeting prior to the inception of the UVA, not one African country put a penny on the table. All the funds came from foreign aid. He argues that Africa cannot have it both ways, especially when its elites abdicate their responsibilities. In this participant's own words:

Vous savez, le problème c'est qu'on ne peut pas avoir le beurre, l'argent du beurre et la petite dame qui vend le beurre. Si nous voulons que les institutions que nous créons soient des institutions africaines qui s'occupent de nos besoins et de nos intérêts, il faut qu'on mette notre argent là-dedans. Parce que quand l'UVA a été créé, quels étaient les pays qui finançaient l'UVA? C'était la Banque mondiale en termes de multilatéral, c'était l'ACDI en terme du bilatéral, c'était le DfID des Anglais, c'était le Département d'État en Amérique, l'Union Européenne en multilatéral et c'était l'Australie. Ça, c'était les pays qui avaient donné de l'argent... Vous comprenez? Mais c'est pour vous dire que les pays eux-mêmes qui veulent être servis par cette institution-là aucun de ces pays n'a mis un centime là-dedans.

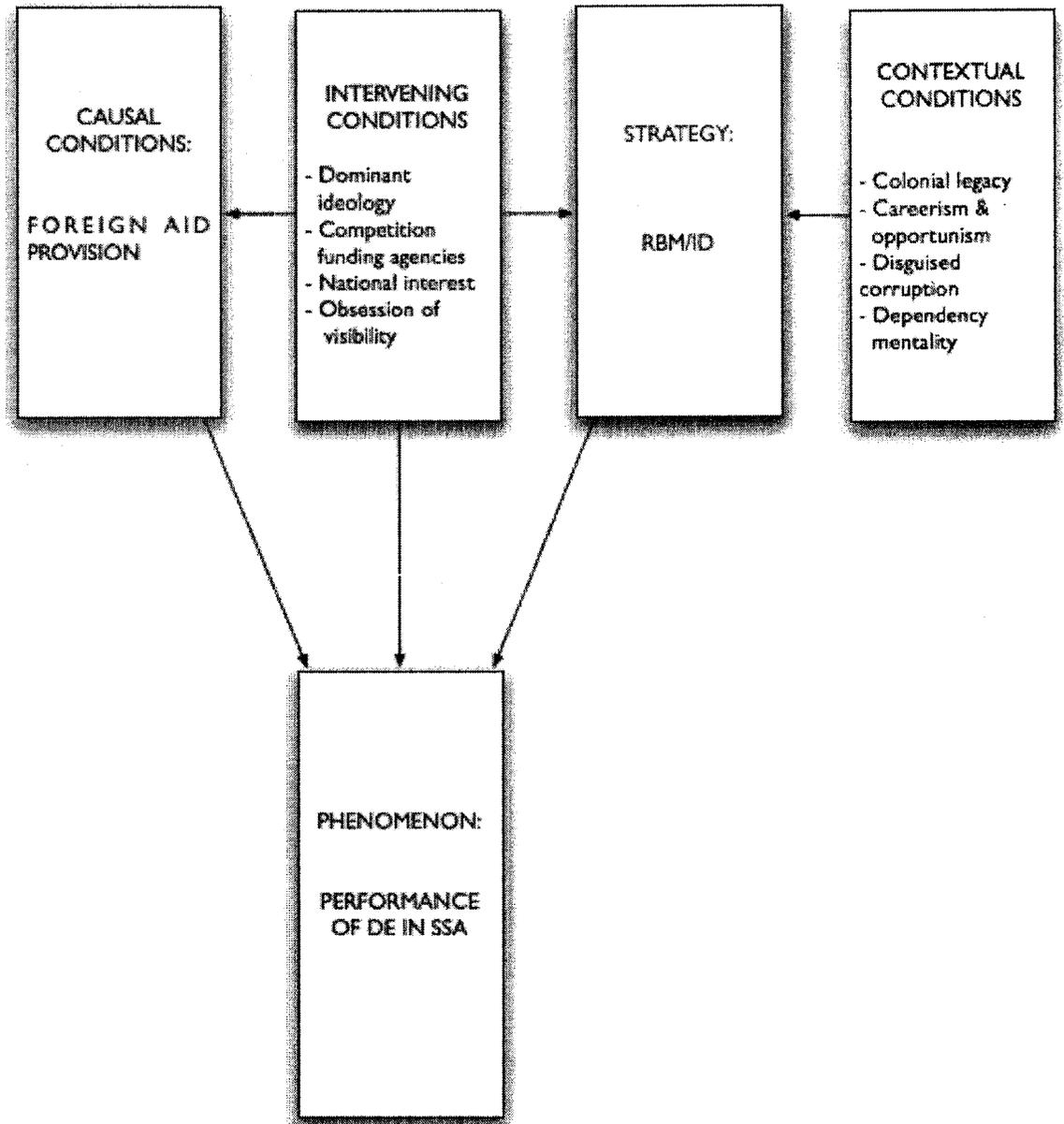
#### *Summary of the section*

This section focused on intervening and contextual conditions whose effects add to a flawed strategy to mitigate the performance of DE projects in SSA. Dominant neo-liberal ideology has been identified as the backdrop of the competition between projects and funding agencies for the most strategic sites and visibility. Despite all their other stated motivations, it looks like the introduction of DE and the competition among projects to position themselves is only a preview of an imminent and bigger scramble to share the cake of the privatization of a higher education system that was still considered to be a free of charge public service inherited from the colonial era. The introduction of

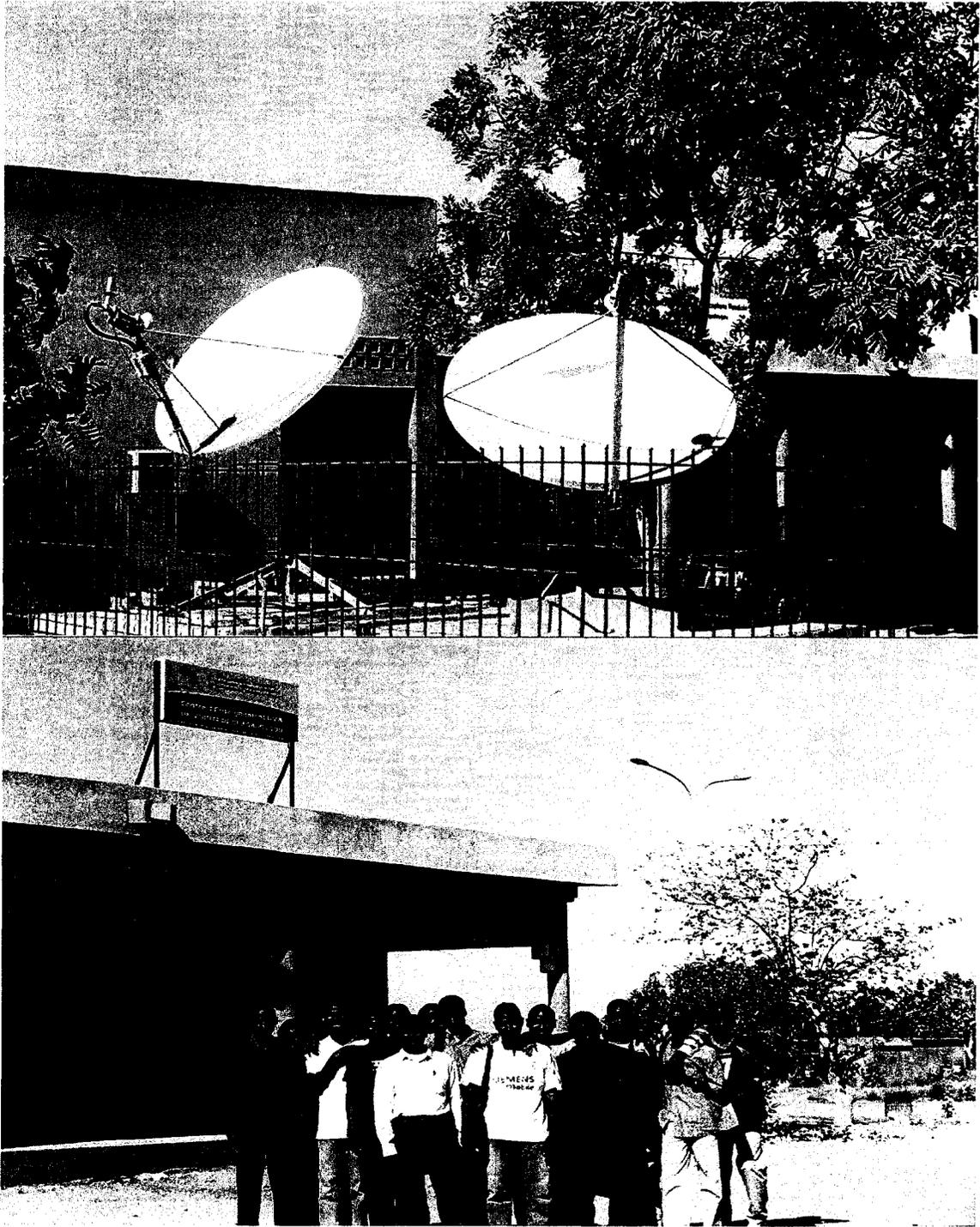
a more global higher education system (LMD) points to that direction. On national and on individual levels information grounded in the data suggests that countries are more motivated by national interest, and by individuals with careerist considerations rather than the officially stated development rationale. Consistent with the grounded theory framework, Figure 3 is a partial representation of the model of the performance of DE projects in SSA illustrating intervening and contextual conditions discussed at length in this section.

Figure 3.

Partial theoretical model : intervening and contextual conditions



Photograph 1. The same building, one VSAT for the AVU, another for the UNFM  
Photograph 2. Students in computer science at UVA-Ouagadougou



#### **Section four: Consequences**

The last component of a grounded theory paradigm is also the most intuitive. Consequences are the end result of group members' actions and interactions after causal conditions, strategies, and intervening and contextual conditions have been factored in a particular situation. Strauss and Corbin (1998) argue that "Delineating these consequences, as well as explaining how they alter the situation and affect the phenomenon in question provides for more complete explanations" (p. 134). This last section is an attempt to do just that.

##### *An unbearable workload*

Now that participants' voices have told the reader about their poor learning, teaching, tutoring and management conditions, one could safely infer how formidable a task it is to work with the foreign aid-funded DE projects in SSA. Instead of the promised cost-effectiveness and cost-efficiency, students, parents and extended families found themselves struggling to raise the equivalent of many hundreds of dollars for tuition fees, photocopies, transportation, cyber café fees, and more. In these countries, some of the poorest in the world, where the majority of the population live on one dollar a day, even one hundred dollars is a fortune.

To make a bad situation even worse, in addition to students' daunting financial efforts, participants were almost totally unprepared for the new DE reality. Students had to consent to an even greater mental effort to come to grips with second hand course materials primarily designed for Western learners' face-to-face classes and reflecting totally different socio-economical and cultural realities.

When I arrived in Ouagadougou for my fieldwork around Christmas 2005, online courses in computer science from Canada had begun on October 17, almost a month and a half later than the Canadian schedule. As one participant explained in greater detail earlier in this study, it was the first time for many students using a computer keyboard. The programming compiler was a mystery for many of them. After only two months of courses, students were nonetheless preparing for their first evaluation to comply with the Canadian schedule. I was a little sceptical when one informant told me that many students were spending the night in the computer lab, the only place they could find the necessary equipment to study. I had rented a room in an on-campus guesthouse situated a few hundred meters away. One night, after a late social activity downtown, I decided to drop by the computer lab to see what was going on.

The night was very quiet on the dusty campus streets. The outside December temperature was unusually cool. There were nine male students scattered in the room behind computer monitors. The normally humming air conditioning was turned off. Wearing headsets distilling strident and cacophonous lectures one could hear from a distance, students were busy reviewing their programming courses just by listening to course WebCT backups. Three of them were sleeping bent forward on their workstation with their headsets on.

As I entered the room, one student looked at me with a pair of sleepy and reddened eyes. Before I had a chance to ask how it was going, he shouted more than he said: "Monsieur, on ne comprend rien. C'est du Chinois pour nous!"

I encouraged this student by telling him that the beginning of programming courses required a lot of practice, that they should be fine. A few years earlier, I had myself tried (and dropped) a course in Java programming at Université de Montréal. I

had not finished my sentence when another student weighed in with another question. He wanted to know if their programming course was as difficult in Canada as it was for them: “Monsieur, est-ce que c’est aussi difficile pour les étudiants au Canada?”

I found this one tough. Students were worried and discouraged. As more students joined the conversation with more questions, I took the opportunity to orient the lively discussion in the sense of gaining a first understanding of why these students found their DE courses so difficult. This nighttime conversation proved to be a useful impromptu exploratory focus group upon which I built subsequent interview and observation protocols.

I left the lab around 3 am. The following morning, I wrote down a longer version of this report of my late night visit to the lab in my field notebook. Based on my own experience in SSA, the report was tainted by pessimism:

Some twenty years ago, way further down south on the continent, my schoolmates and I had some hard times figuring out how to solve math problems dealing with train speeds between Paris and Brussels. We did not have a clue of what a train was, let alone the slightest idea of what these European capitals looked like. We did not know better and thought this was the way math problems were supposed to be abstract and remote to students’ realities. It looks like this was no big deal compared to the learning task these guys are confronted with. And this is called development. One can always celebrate the legendary African resilience, but there is a limit to what people can handle to learn successfully and usefully online. (Field notes, Ouagadougou, 27 Dec. 2005)

Results from the test confirmed everybody’s apprehensions. They were catastrophic, especially in the infamous algorithm and programming course, the most important course of the computer program from Canada.

In addition to the complexity of courses and their inappropriate design to synchronous online delivery, students complained about the course workload. One student complains that it is her biggest problem. She has the impression that she has entire books to read every day:

Je dirais que les plus grosses difficultés se situent au niveau du volume des cours. Les cours sont très, très volumineux. Si tu regardes le contenu d'un seul module, c'est comme si tu avais des bouquins à lire chaque jour. Si tu n'arrives pas à lire le contenu d'un module, la semaine suivante, le prof va entamer un autre module. Donc tu es obligé de lire le contenu d'un module avant que le prof ne commence le suivant. Ça pose beaucoup de problèmes.

One year on, one could assume that some learning problems, particularly those due to the lack of familiarity with computers have improved over time. But the most fundamental pedagogical and contextual aspects of DE projects in SSA are not likely to have changed. After cost-effectiveness and cost-efficiency, the promised economy of scale and sustainability are fraught with the danger of failure.

#### *The lack of local ownership*

One of the most direct consequences of the aid mentality we dealt with in the previous section is the lack of local ownership of projects. In turn, this results in a situation where projects that are intended to improve local populations' lives are designed and carried out with local people representatives playing only minor, non decision-making roles. For example, one participant contends that funding agencies make all the decisions regarding African universities. He worries that this situation might result in the collapse of the African higher education system:

**Participant:** Cela va de soi que les choses sont décidées ailleurs qu'au sein de l'université elle-même... Donc, pour répondre plus directement à votre question, les décisions sont prises ailleurs qu'au sein de l'université.

**Question :** Ailleurs, où ? Hors du pays lui-même?

**Participant:** Mais... cela va de soi! Le problème c'est quoi? Je disais tantôt que si nous continuons comme ça le système risque d'aller à l'eau. Pourquoi? Parce que nous Africains, généralement nous ne décidons de rien de ce que nous devons faire. Malheureusement, on dépend en beaucoup de points de ceux-là qui financent les projets.

One FOAD student predicts that most of the DE students will need additional training after their graduation in order to contextualize what they will have learned to local realities. He argues that these DE courses would be more useful if instructional designers who are acquainted with African realities designed them:

Les cours à distance qui sont entrain de se donner chez nous viennent soit de la France, soit du Canada. Est ce que ceux qui élaborent ces contenus-là sont au courant de nos réalités africaines ? Non. Donc, si l'élaboration de ces programmes de formation pouvaient se faire sur place par nos propres techniciens, nos propres spécialistes qui sont au courant de nos réalités de tous les jours, cela donnerait des programmes plus réalistes, des programmes dont l'assimilation permettrait aux bénéficiaires d'être plus utiles sans beaucoup trop d'efforts à leur pays et à leurs communautés. Sinon, tu es formé, oui ; tu as ton diplôme d'accord, mais tu es obligé de te recycler pour pouvoir être réellement productif. Pour moi, cela n'a pas tellement de sens.

During the past several decades, various advocacy groups have repeatedly denounced the top-down structure of foreign aid-funded projects and the subsequent

lack of local ownership this situation provokes. Funding agencies came to acknowledge that the lack of local ownership was one of the major reasons why development projects fail to achieve their goals so often. Funding agencies pledged to create conditions to allow local communities to be more involved in the design of development projects. Alas, according to participants, the case of the DE projects in SSA suggests that the situation remained unchanged. This situation prompted one participant to conclude that nothing will improve the quality of DE in SSA until Africans begin to rely on their own efforts:

Tant que nous n'avons pas fourni cet effort à notre propre niveau, c'est sûr et certain, ceux-là qui se disent être là pour nous aider, ne nous prendront jamais au sérieux. Et ils ne vont jamais mettre les moyens qu'il faut en place pour que cet enseignement soit réellement développé.

This courageous statement of counting on SSA's own efforts seems to be easier to voice than to put into practice.

#### *Scepticism, resignation and surrender*

Many participants' outlook about DE in SSA is tainted by scepticism and resignation. On the individual level, one AUF student does not know what she will do with her degree. She is not even sure about what her field of study entails. She claims that even law experts on the continent do not know what "droit du cyber-espace africain" she is studying is all about:

Je ne sais pas... Je me demande souvent : « est ce que ce que je suis entrain d'apprendre va me servir pour ma carrière? » Donc souvent j'ai des doutes...

Mais je me disais qu'on allait être les premiers à former une société de l'information. Donc ça me motive à poursuivre ma formation en droit du cyberspace africain. Même si les spécialistes en droit ne savent pas trop de quoi il s'agit.

On the national and regional level, one senior manager admits that no single African country can afford to finance alone a viable DE system inside its higher education system. According to this manager, DE in SSA is doomed to rely on foreign aid.

Ça va être très difficile pour qu'un état africain tout seul réussisse à instaurer au sein de son système d'enseignement supérieur l'EAD. Ça va être très difficile. Je crois que nous serons toujours dépendant de l'occident. C'est là que je dis que le partenariat multilatéral va jouer un très grand rôle dans la mise en place de ce type d'enseignement.

Regardless of DE initiatives being developed on a regional level within the Union monétaire Ouest Africain (UEMOA) and la Communauté économique des états de l'Afrique de l'Ouest (CEDEAO), this participant confirms the aid dependency mentality that was discussed earlier in this study. The following participant's arguments seem to justify the previous participant's scepticism on financial grounds. He argues that given the endemic lack of financial resources in the region, the promises of DE will remain an illusion, a dream that will be hard to materialize:

Nous savons tous dans quelles conditions nous évoluons dans nos systèmes éducatifs. Ce n'est pas facile. L'EAD demande un équipement. Et l'équipement si tu en parles, il faut parler aussi des finances. Sur le plan financier, nos pays ne sont pas bien lotis. Nos pays n'étant pas bien nantis, il va de soi que les systèmes d'enseignement, surtout d'enseignement supérieur ne sont pas bien épaulés. Cela étant, nos structures de formation ne sont pas du tout équipés. Et à défaut d'équipement, nous parlons d'EAD comme dans un rêve.

Despite the ambient development and sustainability rhetoric, it could be argued that the apparent lack of any kind of instructional or managerial strategy to deliver quality DE in SSA as observed throughout this study is a sign of the lack of genuine interest on the part of funding agencies in such a positive outcome for poor countries. One participant underscores the contradiction between DE promises of flexibility and its financial and technological requirements:

A court terme, je ne pense pas que cela puisse être possible. Parce que actuellement, ceux qui peuvent réussir en EAD, c'est vraiment les gens qui ont les moyens. Alors que l'un des objectifs de l'EAD c'est de permettre à ceux qui n'ont pas les moyens de pouvoir étudier à partir de chez eux.

Recently, many globalization critics and anti-poverty activists have forcefully argued that foreign aid has deviated from its original development role to become a mere stratagem for developed countries to outweigh poor countries and perpetuate their political domination and economic exploitation. In the case of SSA, the foreign aid trap yields results that go way beyond mere scepticism and shrugs of resignation. Abugre (2006) laments that it leads to nothing less than a “willful abandonment, to donors, of sovereignty won at the cost of lives in the anti-colonial struggle” (p. 2). In the absence of promised economic development, foreign aid resorts to an efficient public relations (PR) strategy.

### *More efficient PR than results*

During recent decades, international development organizations have tailored their communication patterns to those of leading private corporations. Leading development economists (Easterly, 2006; Stiglitz, 2006) argue that borrowing from the efficiency and accountability from the corporate world to fight against poverty would have delivered far more convincing benefits for developing countries. But this is clearly not the case. As Easterly aptly puts it, “The Rich have markets, the Poor have Bureaucrats”.

International development PR strategy is manifest in donors’ abundant promotional literature, news media wide coverage of the announcements of multimillion plans such as the Millennium Development Goals (MDGs), NEPAD, Poverty Reduction Plans (PRPs), among others. Yet, concerted efforts to create synergy and to establish accountability standards in the implementation of these badly needed initiatives are scarce, to say the least. For example, as it was shown throughout this study, among DE selling propositions in SSA were cost-efficiency, cost-effectiveness resulting in economy of scale and sustainability. One participant called attention to the gap between the buzz around DE and the insignificance of the actual DE projects in the field:

Quand on parle de quelque chose, on en parle de façon tellement idéale mais dans la pratique nous aboutissons à quoi?... Vous-mêmes vous avez visité les structures qui abritent les institutions dont j'ai parlées. Le campus numérique, vous l'avez vu? Il se résume à quoi? L'Académie CISCO ? L'UNFM? Bof!... Je ne parle meme pas de l'UVA! Vous voyez, quand on entend parler de ces choses-là, on se dit que c'est tout un monde qui est là. Mais à la vue même de la chose on se pose la question de savoir si nous sommes vraiment sérieux. C'est malheureux, mais c'est comme ça!

News media coverage allows PR campaigns to trickle down. The media, especially in SSA, extensively covers achievements of foreign aid-funded projects: projects' inaugurations, numerous workshops starts or wrap-ups, field visits of delegations from donor countries abound in the news coverage. As was shown earlier in this study, all opportunities are seized to invite high ranking officials to preside over these activities, no matter how insignificant they might be. This creates a win-win situation that ensures the visibility for both the project and the politicians in the most credible manner. Local politicians take advantage of the opportunity to network with the powerful international development expatriates and get in their good graces all the while showing to their electorate that they are doing their job by being associated with development initiatives that ultimately benefit the population.

When project field staff seeks to show public display they are usually helped with the PR task by their funding agencies back home. Lacking the time and cultural background to research their stories, well-oriented by project field staff who take extra care as to emphasize their success stories and downplay their failures, development journalists are more likely to perpetuate a romanticized idea of an altruistic foreign aid system in their countries public consciousness.

#### *Perpetuating low self-esteem*

In the public eye, both in developed and in poor countries, rich countries spend billions in helping poor countries. They deploy battalions of experts and consultants all over poor countries to help in development projects. How come so many projects fail? In the case of DE projects in SSA, one participant predicts that these projects are

doomed to failure due to their top-down exogenous design. He regrets that regardless of the responsibility of the project promoters who did not factor in the human and technological constraints of local contexts, the failure of these projects will be blamed on the incapacity of local people to 'absorb' them:

Au bout du compte, les bailleurs de fonds diront qu'ils ont investi autant d'argent mais les résultats sont pratiquement inexistantes... Malheureusement on dira toujours que le projet a échoué parce que les bénéficiaires n'ont pas été capables de l'absorber alors qu'en réalité, c'est parce qu'il a été conçu de façon exogène en se basant sur des réalités qui ne sont pas adaptées au contexte.

Whatever the degree of responsibility local people might have in the failure of development projects, they are the only ones who take the blame most of the time. This conveys a collective mindset of failure that trickles down on an individual level. When asked about his motivation in enrolling in the UVA computer science program, one student replied that he was looking forward to becoming a researcher even though he did not think an African could be a successful researcher:

L'informatique c'est quelque chose qui me passionne beaucoup. C'est un domaine aussi dans lequel il faut beaucoup chercher. Il y a toujours des choses à trouver au niveau des nouveaux logiciels et autres. *On ne peut pas dire qu'un Africain puisse trouver mais pourquoi pas? J'aimerais essayer.*

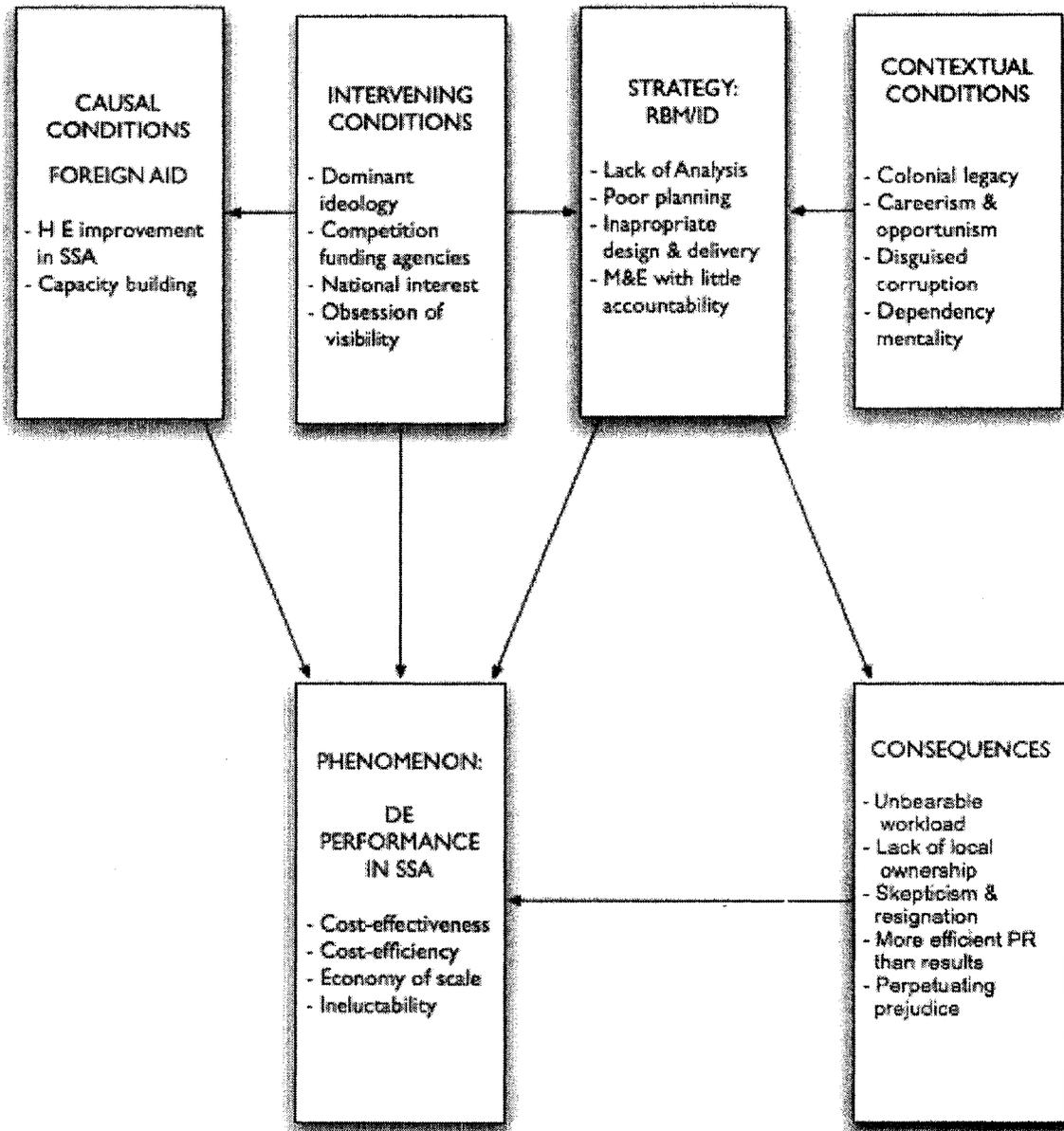
#### *Summary of the section*

This last section dealt with the effects and consequences of the interplay between the contextual and intervening conditions on the performance of foreign aid-funded DE projects in SSA. Based on participants' experience, it was argued that given contextual

and intervening conditions analyzed in the previous section, DE projects impose a formidable workload on students. The top-down nature of these projects and their subsequent lack of local ownership make many participants sceptical about the projects' intentions and their effectiveness, but they dare not speak out. No one wants to antagonize donors either by fear of punishment or because they covet highly desirable professional prospects. Many participants also implied that DE projects perform better PR than actual quality distance education. The need of quality DE is, by and large, real and would be very useful to solve the overarching problems plaguing education in general and higher education in particular in SSA. However, promises of cost-efficiency, cost-effectiveness, economy of scale relentlessly chanted throughout the region are bound to remain just promises for needy populations in SSA yet good PR for project promoters. Figure 4 represents the full model of the performance of DE projects in SSA.

Figure 4.

Full theoretical representation of the performance of foreign aid-funded DE projects in SSA



## CHAPTER FIVE

### DISCUSSION AND CONCLUSION

#### **Chapter overview and study's limitations**

This study set out to explore how well foreign aid-funded DE projects in SSA comply with ID/HPT and LFA/RBM principles. As shown throughout the preceding chapter these projects do not conform to ID/HPT and LFA/RBM principles. As a result, their plans to deliver the promised cost-effectiveness, cost-efficiency and economy of scale to educational and training systems in SSA seem doomed to failure. In this concluding chapter, I piece together the different concepts that emerged from the data and attempt to build a substantive theory of the performance of foreign aid-funded DE projects in SSA. The overall picture resulting from this study shows that poor needs analysis constitutes a springboard for a vicious circle that ends up strangling the performance of DE projects in SSA.

Prior to delving further into the following discussion, I want to acknowledge some of this study's limitations. I was not able to interview FOAD administrators and lecturers based in France, due to time and resource constraints. Also, the UNFM was at its very beginning and had no past administrative records to examine when I conducted fieldwork. Also, I could not use some of current literature relevant to this study because it is "gray" unpublished or not widely disseminated literature.

In addition, despite the fact that I spent more than 20 months in the field and had enough time to build excellent rapport with participants, the impact of potential framed answers to interview questions (participants telling the researcher what they think he or

she wants to hear) cannot be completely overlooked. Lastly, there is the gender issue. Reflecting the composition of DE population in SSA, the overwhelming majority of participants to this study were men. This situation prevented the study from hearing the voices of women who might have lived different experiences with DE in SSA.

Despite these limitations, it is my hope that this exploratory study will pave the way to more in-depth research efforts that will contribute to the improvement of the performance of foreign aid-funded DE projects in SSA and other development projects.

### **Needs analysis as a springboard for the performance of DE projects**

Over the last few decades, the impact of needs analysis on the overall performance of learning and training activities has been highlighted. In formal learning and training environments, a good understanding of the potential learners, their learning context, their prerequisites, their needs and capabilities and the envisioned learning task they are called upon to perform has proven to be one of the most important cornerstones on which to build viable learning and training programs (Dick, Carey & Carey, 2005; Jonassen, Ragan & Smith, 2000; Rosett, 1987). In performance improvement, the influence of environmental factors such as government, economy and culture on the three alignment levels (organizational, process and performer/job level) has been well documented (Enos, 2007; Rummler, 1990; Rummler & Brache, 1998). In international development, sector analysis is considered to be the cornerstone of RBM/LFA initiatives (UNESCO 2006). It entails the analysis of macro-economic, socio-demographic, potential risks and other environmental variables that might have a bearing on the projects' expected outcomes.

The most salient feature of this study suggests that the quality of needs analysis accounts for much of the performance of DE projects in SSA. Poor analysis has translated into the failure to use proven ID strategies such as sequencing and scaffolding in the design of learning and training materials. As a result, rather than using technology as a tool to enhance the quality of DE programs, it was resorted to as the “Unique Selling Proposition to attract the customers” (AVU Business Review 2004, p. 2). Some of the programs “did not make sense in the African context” (p. 8) and their delivery mode was inappropriate.

For example, most of the programs privileged a costly synchronous delivery mode despite the dismayingly poor Internet connectivity in SSA (see literature review chapter for details). Yet, Bernard, Abrami et al. (2004) and Lou, Bernard and Abrami (2006) suggest that asynchronous DE is preferable when it is possible, but that synchronous can be useful, but probably less effective, when DE classrooms must be linked to pre-existing traditional classroom groups.

### **Secondary factors of the performance of DE in SSA**

Given the foregoing, one may rightly wonder why scarce resources have been dedicated to funding unsustainable DE project situated in such an inauspicious environment as the one described above? Over the last half-century, most development projects were initiated based on “massive assumptions” (Foster, 1967) of donor countries. Most of the DE projects in SSA were initiated during the heydays of the “Internet bubble” and the rise of neo-liberalism to the status of dominant ideology in early nineties. During that period speculations about DEs substantial business prospects

ran high. 'Webucation' was predicted to become the "next greatest growth opportunity" (Drucker, 2000).

Higher education institutions from most developed countries invested substantial resources in technology equipment and infrastructure at home. Thanks to funding from bilateral and multilateral funding institutions, a number of higher education institutions from rich countries set out to provide educational content developed with their own audience in mind to a foreign audience in poor countries they knew little about in the name of "bridging the digital divide".

These programs suffered tremendously from the combined effects of the lack of content contextualization they delivered and the lack of coordination of initiatives from multiple and often competing international actors. Careerism and national interest took precedence over the stated intentions of improving higher education and building capacity in SSA. These intentions were relegated to the status of high profile public relation arguments to preserve the polished and trendy, yet deceptive image of ICTs as they are currently used in education and training settings.

Historical reasons related to colonial legacy have also played an important role in the rivalry between DE initiatives in SSA. The World Bank-funded AVU was initially welcomed with much hope and enthusiasm in francophone SSA. Riding on the promotional wave of technology-based higher education leaping the world over and the popularity of the Anglo-Saxon higher education system perceived as more forward-looking and more professionalizing than the French system, the AVU was eagerly welcomed in francophone countries as a viable alternative for change. The academic and managerial formalism of the French higher education system inherited from colonization

was blamed for the pityful shape of higher education in most of francophone countries in SSA.

In reaction to the AVUs unwarranted intrusion in the 'French backyard', the AUF and the Fondapol staged a coordinated retaliation effort. The AUF set up a comprehensive DE program of its own, offering a wider range of FOAD programs from mostly French and a few Canadian Universities. Its efficient marketing strategy consisted in offering financial incentives (allocations) to selected students in order to help them to cover part of their tuition fees. When a high profile CEO of the AVU was unceremoniously fired, reportedly for insubordination, the Fondapol jumped on the opportunity and supported his Malian-based Pathfinder Foundation for Education and Development to start the UNFM

### **The 'one-eye approach' vs self-flagellation**

The atmosphere of jockeying for influence and visibility described above distracted further DE projects in SSA from sound management practices and pedagogy. This situation resulted in an uneasy tension between project recipients' original high DE expectations and their day-to-day reality made of frequent Internet disconnections or, when the Internet connection cooperates, the procession of dull talking heads, delivering overwhelming lectures through hardly audible sound and hardly readable web pages.

The complicity between slick public relations campaigns and casual if not inconsequential monitoring and evaluation reports closed the vicious cycle started by poor needs analysis. It broke the feedback loop that should exist between politicians, funding agencies officials and project field staff on the one hand and public opinions in donor countries on the other hand whose tax moneys are used to fund these projects.

The misleading positive image and results of DE initiatives are usually taken at face value. They caress public opinions and stir up national pride in donor countries. Thus, tough questions pertaining to accountability are swept under the rug. The few times they manage to surface, the ready-made, convenient answer is to blame recipient countries for their low “absorption capacity” (Svensson, 2005) and/or their lack of “appropriate policies” (UNCTAD, 2007). Yet, as the UNCTAD points out:

By emphasizing the importance of recipients’ policies, the role of donors’ policies in the effectiveness of aid was left out of the picture. In effect, there was a ‘one-eyed approach’ to aid effectiveness. (Chapter 5, para 2). This ‘one eye approach’ aggravates and perpetuates prejudices inherited from centuries of slavery, colonization and modern media bashing of SSA. When students, lecturers and local tutors are submitted to an unbearable workload from DE programs they tend to take the blame or lay it squarely on the inefficiency of their own institutions, which perpetuates their low self-esteem and confidence in their own institutions. The lack of confidence in their own institutions was fully displayed when African universities adamantly rejected the idea of one ‘Principal University’ to serve as the focal point to take over from the Canadian HE institution at the end of the VISAF project in 2009.

Despite all the downsides of the DE projects analyzed throughout this study, African universities still preferred DE programs designed by and delivered from Western higher education institutions rather than attempting to collaborate in the design and the delivery of their own DE programs. This may be indicative of low self-worth, resignation and surrender. The attempt to overcome these perennial negative sentiments creates a conflict which is captured by one student who expressed his interest in pursuing a

research career in software development but readily cast doubt on the ability of an African to become a successful researcher.

The summation of poor needs analysis and the complementary categories discussed above resulted in the predictable demise of the AVU. Since last year, the World Bank-initiated DE project and VISAF, its CIDA-funded subsidiary, are on their deathbeds after ten years of a costly life for the former and four years for the later. Their DE adventure in SSA will be terminated in 2009. They have failed to live up to their promises. The worldwide ambitions of the UNFM seem to have stalled. Three years after its inception, only one additional country (Congo Brazzaville) has joined the two original participant countries. The AUF's figures indicate that enrolments have been growing steadily since the inception of its DE programs in SSA in 2004-2005. Whether or not enrolment figures are indicative of a promising future for the FOAD programs remains to be seen. In the final analysis, if needs analysis plays a paramount role in the performance of DE initiatives in developed countries, it becomes essential for DE projects in poor regions such as SSA.

### **From “new techniques” to ICTs: when history repeats itself in SSA**

In the final analysis, findings from this study epitomize how poor analysis hurts the performance of DE projects in SSA. A closer look at the recent history of educational technology in SSA shows a recurrent pattern of tantalizing promises that were rarely kept. For example, during the heydays of mass media (press, radio, film and television) in the early sixties, their “vital potential role as aid to education” was underscored in emphatic terms (UNESCO, 1962). The regional meeting convened in

Addis Ababa in 1962 to discuss ways to help African countries to take advantage of the “new techniques” convincingly argued that:

The African countries were acquiring their independence at a time when technological advances were transforming communication and teaching techniques. Thus, it was expected that within a few years, communication satellites would be able to transmit radio and television programs at low cost over an area as large as West Africa ... Projectors, which use the sun as their source of light, could be used to screen filmstrips in remote, non-electrified areas. And self-teaching devices (“teaching machines”) could enable children to carry out the greater part of school instruction by themselves, thus “multiplying” the number of teachers in a country or a community (UNESCO, 1962 p. 11).

It looks like the history of technology-based education has been repeating itself in SSA. The current ICT-based rhetoric repeats exactly the same cost-effectiveness, cost-efficiency and economy of scale arguments from almost half a century ago.

Unfortunately, the hype for “new techniques” overshadowed the huge educational potential of radio, by far the most affordable and the most consistent with African orality and ways of knowing. While these tantalizing promises about ‘new techniques’ were being made, educational radio was on death row. Developed countries switched to ‘new techniques’ between the two world wars (Maskow, 2000). Even in the few instances of foreign aid-funded radio projects, technology took precedence over content (Head 1974):

On the whole vast continent of Africa, no one was doing any research. Various governments and Colonial Offices were now starting to pour tens of thousands of pounds into new transmitters and studios, but nobody thought it worthwhile to spend a penny to find out what was understood. (p. 322)

The educational use of subsequent technologies such as video suffered the same fate (Sy, 2004). Overall, the history of educational technology in SSA seems to qualify to all six obstacles to successful educational reform identified by Mayer (2005). It has been based on slogans, doctrine or political agendas. In addition, it does not seem to be concerned either with setting appropriate measurable goals, nor base its investigations on sound methodology or educationally relevant theory of learning. Yet, as Shavelson and Towne (cited in Mayer, 2005) argue that: “one cannot expect reform efforts in education to have significant effects without research-based knowledge to guide them.” (p. 68).

Many participants have aptly referred to the introduction of DE in SSA as ‘a revolution’. Given the fact that, in addition, foreign aid-funded DE programs are designed for and delivered from developed countries, they may be nothing less than an earthquake, whose magnitude is hard to grasp. They bring to bear hidden socio-cultural, historical, political, religious, philosophical differences in worldviews and ways of knowing that are even more difficult to bridge than the more visible geographical distances.

## **Looking to the future: A systems approach to DE projects in SSA**

Although this study was conducted in francophone countries in West Africa and devoted its analytic attention to DE projects benefiting from bilateral and multilateral funding, Perkins (2003) and Wamey (2004) came to the same conclusions of poor performance due to poor needs analysis by foreign aid-funded DE projects respectively in Malawi, an Anglophone country situated in the southern part of Africa, and in Cameroon, a bilingual central African nation. Researchers from several areas of the social sciences have amply documented how the various aspects of needs analysis discussed earlier in this study have been overlooked during the process of technology integration in developing countries (Assié-Lumumba, 2004; Butcher & Roberts, 2004; Mackintosh, 2005; Ruth & Shi, 2001).

Even in rich countries, to the notable exception of the case reported by Robinson (2003), technology integration in teaching and learning, whether in DE, in blended or in face to face modes, has by and large failed to come up with solid evidence, that it lives up to its promises (Dynarski, Agodini, Heavyside, Novak, Carey, Campuzano 2007; Fitzner, Freidhoff, Fritzen, Heintz, Koehler, Mishra, 2007 ; OECD/CERI, 2005 ; Rockman, 2003). Therefore, sound research efforts aiming at improving DE both in developed and in developing countries are badly needed.

One of the main challenges faced by reserchers in the field of educational technology arises from “Moore’s law”. This law predicts that the power of technology doubles every 18 months while the price stays constant or even decreases. Although it is controversial (see Gordon, 2000; Tuomi, 2002), technology trends over the last few decades seems to have moved in the direction Moore’s law has predicted. In these circumstances, conducting sound research in technology integration in education

becomes as challenging as aiming at a moving target because “educational technology keeps changing along with its power” (Zucker, 2004, p. 380). In developing countries, this challenge is compounded not only by the time lapse it takes for technology to diffuse from rich to poor countries but also by all the environmental, technological and socio-cultural difficulties discussed throughout this study.

Therefore, one promising research paradigm in DE and in technology integration in general would be to move from focusing on the promises of technology integration and its accruing effects to more holistic models such as Banathy’s systems model (1992, 1996) and Bronfenbrenner’s ecological one (1979, 1992). One important common tenet of these two systems approaches is they recognize the complexity of social systems and their indeterministic, unpredictable, nonlinear nature. These two paradigms would strengthen the procedural nature of both ID and RBM frameworks dealt with earlier in this study. Such a holistic approach seeks not only to understand *why* social phenomena occur but also how they occur. For example, commenting Banathy’s three-lens approach Walton (2004) points out that “in business contexts, there is a tendency to think in terms of deliverables... and forget to think *how* those deliverables are created” (p. 267) Also, Bronfenbrenner (2005) appreciates findings from a study of environmental factors that influence pregnant women to have low-birth-weight babies. But he adds:

Informative as such findings are, they do not tell us what it is about mother’s education, place of residence, marital status, or age and race that affect the weight of the babies they bear. In other words, how does a given combination of environmental and personal features characterizing a particular ecological niche operate to influence human development?” p. 112

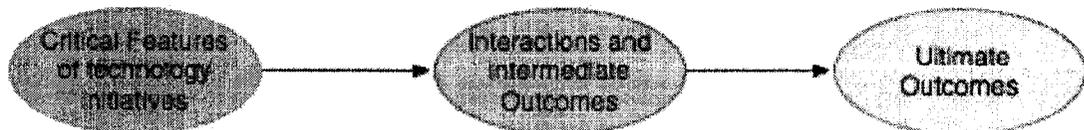
Zucker (2004) applies this research paradigm to the field of Educational Technology when he writes:

Proponents of the most rigorous studies, focusing on student achievement agree that understanding *why* some outcomes occur is important... Research needs to focus on *how* teachers and students work with computers, not just the results of their efforts. (p. 374)

With this approach in mind Zucker (2004) developed a framework for research in technology integration in education (see Figure 5 below) that can be useful to develop a research agenda addressing the source of most of the many shortcomings of DE in SSA identified in this study. Now that this study has shown the many DE shortcomings in SSA, the next step should be to further document the process of how some of the situations documented in this study happened in order to address them.

Figure 5.

Zucker's framework for research on 1:1 computing



Note. From Zucker (2004)<sup>6</sup>

---

<sup>6</sup> 1:1 stands for one on one.

Fortunately, most of the categories and subcategories of the model developed in this study are consistent with the categories of Zucker's framework. For example, "critical features of technology" is concerned with the nature of DE delivery technology, the setting, the implementation plan, goals and objectives. Interactions and intermediate outcomes point to teaching and instructional methods, school leadership, infrastructure and support, school-community relations, cost and funding. The ultimate outcomes are the intended goals of technology integration.

Given the current lack of evidence-based information about DE challenges and opportunities in SSA, although each of the points mentioned above constitute a worthwhile research focus, the following points should be given priority in order to improve DE in SSA:

- Conducting sound needs analysis (NA) will provide invaluable information about existing resources (material, financial, equipment, infrastructure, human) and stakeholders' feelings about technology integration. This information will help policy makers and funding sources set realistic DE goals based on available resources (Rosett, 1987).
- Aligning DE program with these determined goals
- Conducting policy dialogue with key stakeholders inside and outside the school system about these DE goals
- Building teachers' technical and pedagogical (curriculum) capacity in using technology
- Building strong leadership and accountability culture at all levels

Besides the obvious need of providing the appropriate technology and equipment according to the existing infrastructure and general ecology, these are only a

few preliminary points a systems approach to sustainable technology integration should take care of. These points of research interest are concerned with the microsystem, mesosystem and macrosystem levels (Bronfenbrenner, 1979) of the ecological environments in which DE initiatives or technology integration in education in general are to be implemented. In addition, they can be linked to the “three lenses” of a systemic analysis defined by Banathy (1992).

A systems approach seems to be the best way to avoid the many failures that have plagued many technological innovations, especially in developing countries’ complex environments. As Rowland (2004) puts it: “taking a direct action based on a simple and static view of a complex system has as much, perhaps more potential to do harm as good.” (p. 290)

This is consistent with the view of The Working Group on Canada’s Policy with Regard to Agricultural Biotechnology and Developing Countries (2005) which contends that the top-down introduction of agricultural biotechnology in SSA has contributed to Africa’s agricultural under-development over the last sixty years. Its call for more contextualization of technological interventions in developing countries aptly captures this study’s general conclusion. In its own words:

There is no doubt that science and technology have an important role to play in international development. As with most interventions, however, “context” is everything. If new technologies are introduced in a foreign environment in the absence of a clearly understood demand and careful preparation—including the right of the recipients to say “no”—there is every risk that the tool will take priority over the purpose. (p.1)

## BIBLIOGRAPHY

- Abderkader, A. (2002, mars). En Afrique, l'enseignement supérieur sacrifié. *Le Monde Diplomatique*, p. 20. Retrieved January 2008 from <http://www.monde-diplomatique.fr/2002/03/ABDELKADER/16299>.
- Groupe de travail sur l'apprentissage à distance et l'enseignement libre (GTEDAL) (2003). *Enseignement à distance et apprentissage libre en Afrique Subsaharienne: Etat des lieux dans les pays francophones*. Paris: ADEA
- Akilagpa, S. (2002). *Challenges facing African universities*. Accra, Ghana: Association of African Universities ([www.aau.org/english/documents/asa-challenges.pdf](http://www.aau.org/english/documents/asa-challenges.pdf)).
- Anderson, G. (1998). *Fundamentals of educational research*. London: Falmer.
- Apple, M. (1991). The new technology: Is it part of the solution or part of the problem in education? *Computers in Schools* 8(1/2/3) pp.59-81.
- Assié-Lumumba, N. T. (2004). (Ed.). Cyberspace, distance education and higher education in developing countries: Old and emergent issues of access, pedagogy and knowledge production. *International Studies in Sociology and Social Anthropology* (94) Leiden : Brill
- AVU (2004, June 25). Draft business review - Aide memoire. Nairobi: Author.
- Banathy, B. H. (1992). *Systems design of education: Concepts and principles for effective practice*. Englewood Cliffs, CA : Educational Technology Publications.
- Banathy, B. H. (1996). *Designing social systems in a changing world*. New York: Plenum.
- Barker, R. G. (1989). *Ecological psychology*. Stanford, Calif.: Stanford University Press.
- Bateman, P. (2004). *A position paper for the instructional technology and design unit at the AVU*. Nairobi: The AVU
- Bayala, S. (2004). The AVU current programs : The case of computer science. Francophone. presentation to the Academic and Technology Committee. Nairobi: The AVU
- Bernard, R. M., Abrami, P. C., Lou, Y., Borokhovski, E., Wade, A., Wozney, L. et Al. (2004). How Does Distance Education compare with classroom instruction? A Meta-Analysis of the Empirical Literature. *Review of Educational Research* 7(3), 379-439.

- Bollag, B. (2004). *Improving tertiary education in sub-Saharan Africa: Things that work!* The International Bank for Reconstruction and Development. Washington, DC: World Bank.
- Bowers, C.A. (2000). *Let them eat data: How computers affect education, cultural diversity and prospects of ecological sustainability*. Athens: University of Georgia Press.
- Bowers, C.A. (2005). *The false promises of constructivist theories of learning: A global and ecological critique*. New York: P. Lang.
- Bransford, J.D., Brown, A.L., & Cocking, R.R. (Eds.) (2000). *How people Learn: Brain, mind, experience and school*. Commission on Developments in the Science of Learning, National Research Council. Washington, D.C.: National Academy Press.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Bronfenbrenner, U. (1992). Ecological systems theory. In R. Vasta (Ed.). *Six theories of child development : Revised formulations and current issues* (pp 187-249). London: Jessica Kingsley.
- Bronfenbrenner, U. (2005). *Making human beings human: Bioecological perspectives on human development*. London: Sage Publications.
- Butcher, N. & Roberts, N. (2004). Costs, effectiveness and efficiency : A guide for sound investment. In H. Perraton & H. Lentell (Eds), *Policy for open and distance learning*. London : Routledge Falmer.
- Central Intelligence Agency (2008). The World Factbook. Retrieved January 2008 from <https://www.cia.gov/library/publications/the-world-factbook/geos/ml.html#Comm>
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. London: Sage Publications
- Clark, R. E. (1983). Reconsidering research on learning from media. *Review of Educational Research*. 53 (4), 445-459.
- Clark, R. E. (1985). Confounding in educational computing research. *Journal of Educational Computing Research*, 1(2), 137-148.

- Clark, R. E. (1994a). Media and method. The media influence debate: Read the fine print, but don't lose sight of the big picture. *Educational Technology, Research & Development*, 42(2), 7-10.
- Clark, R. E. (1994b). Media will never influence learning. *Educational Technology, Research & Development*, 42(2), 21-29.
- Clark, R. E. (1983). Reconsidering research on learning from media. *Review of Educational Research*. 53(4), 445-459
- Clark, R. E. (1985). Confounding in educational computing research. *Journal of Educational Computing Research*, 1(2), 137-148.
- Cleghorn, A. (2004). Language issues in African school settings: Problems and prospects for literacy for all. In A. Peacock & A. Cleghorn (Eds.). *Missing the meaning: the development and the use of print and non-print text materials in diverse school settings*. New York: Palgrave Macmillan.
- Conseil des ministres de l'éducation du Canada (1972). *Séminaire sur les techniques de transmission en éducation*. Toronto: CMEC.
- Cresswell, J. W. (2002). *Educational research. planning, conducting and evaluating quantitative and qualitative research*. Upper Saddle River, New Jersey: Merrill Prentice Hall.
- Cuban, L. (1986). *Teachers and machines: the classroom uses of technology since 1920*. New York: Teachers College Press.
- Cuban, L. (2001). *Oversold and underused: Computers in the classroom*. Cambridge, Mass.: Harvard University Press
- Cupp, E.L. (2001). The RSVP Unibrowser: Bringing humanness interactivity to e-learning. International Conference on Advanced Technologies. Madison, WI.
- Cusworth, J. W. & Frank, T.R. (1993). *Managing projects in developing countries*. New York: John Wiley & Sons.
- Cyrs, T.E. (1997a). Teaching and learning at a distance: What it takes to effectively design, deliver and evaluate programs. In T.E. Cyrs (Ed.). *New directions for teaching and learning*. San Francisco: Jossey Bass.
- Cyrs, T.E. (1997b). *Teaching at a distance with merging technologies : An instructional systems approach*. Center for Educational Development. New Mexico: New Mexico State University Press.
- Daniel (J. S.) (1996). *Mega-universities and knowledge media. Technology strategies for higher education*. London: Routledge.

- Darkwa, O. & Mazibuko, F. (2000). Creating virtual learning communities in Africa: Challenges and prospects. *First Monday*, 5(5).
- Dey, I. (1993). *Qualitative data analysis: A user-friendly guide for social scientists*. New York: Routledge.
- Dick, W. Carey, L. & Carey, J. O. (2005). *The systematic design of instruction* (6<sup>th</sup> ed.). Boston: Pearson/Allyn & Bacon.
- Douglas, S. (1985). *The Computer in education: A critical perspective*. New York: Teachers College Press.
- Drew, C.J., Hardman, M.L. & Hart, A.W. (1996). *Designing and conducting research. Inquiry in education and social science* (2<sup>nd</sup> edition). Boston: Allyn and Bacon.
- Drucker, P. (1954). *The practice of management*. New York: Harper & Brothers.
- Drucker, P. (2000). Putting more into knowledge. *Forbes Magazine*. Retrieved Dec. 2007 from <http://www.epibiz.com/forbes/>
- Dynarski, M., Agodini, R., Heavyside, S., Novak, T., Carey, N., Campuzano, L. et al. (2007). Effectiveness of reading and mathematic software products: findings from the first students cohort (Publication N°.2007-4005). Retrieved January 2008 from the Institute of Education Sciences, U.S. Department of Education Web site : <http://ies.ed.gov/ncee/pdf/20074005.pdf>
- Easterly, W. (2006). *The White Man's burden: Why the West's efforts to help the rest have done so much ill and so little good*. New York: Pinguin Press.
- Enos, D. (2007). *Performance improvement: Making it happen*. Boca Raton, Fla: Auerbach.
- Fitzer, K.M., Freidhoff, J.R., Fritzen, A., Heintz, A., Koehler, J., Mishra, P., Ratcliffe, J., Zhang, T., Zheng, J. & Zhou, W. (2007). [Guest editorial] More questions than answers : Responding to the reading and mathematics software effectiveness study. *Contemporary Issues in Technology and Teachers Education*. Online serial 7(2). Retrieved January 2008 from <http://www.citejournal.org/vol7/iss2/editorial/article1.cfm>
- Fleming, M., & Levie, W. H. (1993). *Instructional message design: Principles from the behavioral and cognitive sciences*. 2nd Edition. Educational Technology Publications. Englewood Cliffs, NJ.
- Flood, J. (2002). The future of learning : Learning in a virtual world? *Turkish Online Journal of Distance Education* 3(3). Retrieved June 2004 from [http://tojde.anadolu.edu.tr/tojde7/notes\\_for\\_editor/jim3.htm](http://tojde.anadolu.edu.tr/tojde7/notes_for_editor/jim3.htm)

- Foster, G. (1967). *Applied Anthropology*. Boston : Little, Brown and Company.
- Frick, T. W. (1991). *Restructuring education through technology* (Faster back service No. 326). Bloomington IN: Phi Delta Kappa Educational Foundation.
- Gakio, K. (2006). *African tertiary institutions connectivity survey (ATICS) report*. Ottawa: IDRC-CRDI.
- Garfinker, H. (2002). *Ethnomethodology's program*. York: Rowman & Littlefield.
- Gibson, J. J. (1979). *An ecological approach to visual perception*. Boston: Houghton Mifflin.
- Glaser, B. G. & Strauss, A. L. (1967). *The discovery of grounded theory*. Chicago: Aldine.
- Gordon, R.J. (2000). Does the "New Economy" measure up to the great inventions of the past? *Journal of Economic Perspectives* 14(4), 49-74.
- Greenagel, F. L. (2002). *The illusion of e-learning: Why we are missing out on the promise of Technology?* Paper presented at the National Educational Computing conference, Chicago, IL.
- Gunder-Frank, A. (1993). *The under-development of development*. Athens: Gordios Publishers.
- Hamilton, P. & Southwood, R. (2005). Balancing act: Voice and data bandwidth forecasts (2005-2008). Via Africa: Creating local and regional IXPs to save money and bandwidth. Draft discussion paper prepared for the the IDRC and ITU for the 5<sup>th</sup> annual global symposium of regulators. Ottawa: ON
- Head, S. W. (1974) (Ed.). *Broadcasting in Africa: A continental survey of radio and television*. Philadelphia: Temple University Press.
- Heydenrych, J.F., Higgs, P & Van Niekerk (2004). Implementing the online learning community in Africa : A Unisa case study. In N. T. Assié-Lumumba (ed.). *Cyberspace, distance education and higher education in developing countries: Old and emergent issues of access, pedagogy and knowledge production*. *International Studies in Sociology and Social Anthropology*, 94. 91-143,
- Hill, C.E., Thomson, B.J., & Williams, E.N. (1997). A guide to conducting consensual qualitative research. *The Counseling Psychologist*, 25, 512-572.
- Jonassen, D. H., Campbell, J. P., & Davidson, M. E. (1994). Learning with media: Restructuring the debate. *Educational Technology, Research & Development*, 42(2), 21-39.
- Jonassen, D.H., Tessmer, M., & Hannum, W.H. (1999). *Task analysis methods for instructional design*. Mahwah, N.J.: L. Erlbaum Associates.

- Kozma, R. B. (1991). Learning with media. *Review of Educational Research*, 61(2), 179-211.
- Kozma, R. B. (1994a). A reply: Media and methods. *Educational Technology, Research & Development*, 42(2), 11-14.
- Kozma, R. B. (1994b). Will media influence learning? Reframing the debate. *Educational Technology, Research & Development*, 42(2), 7-19.
- Lakatos, I. (1982). The methodology of scientific research programs. Philosophical papers: Volume I. Cambridge: Cambridge University Press.
- Latulippe, J.G. (2004). VISAF I: Le Virtuel au service de l'Afrique francophone: Évaluation du projet VISAF. Ottawa: AUCC/ACDI
- Laurillard, D. (2002). *Rethinking university teaching: A conversational framework for the effective use of learning technologies* (2<sup>nd</sup> Ed.) London: Routledge
- Lave, J. & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge, UK: Cambridge University Press.
- LeCompte M.D. & Goetz, J.P. (1982). Problems of reliability and validity in ethnographic research. *Review of Educational Research*, 52, 31-60.
- Lincoln, Y. S. & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.
- Loiret, P.- J. (2005). L'Université virtuelle africaine, histoire d'une mise en scène. Mémoire de maîtrise non publié. Université de Rouen, France.
- Lou, Y., Bernard, R.M., & Abrami, P.C. (2006). Media and pedagogy in undergraduate distance education: A theory-based meta-analysis of empirical literature. *Educational Technology Research & Development*, 54(2), 141-176.
- Mackintosh, W. (2005). Can you lead from behind?: Critical reflexions on the rhetoric of e-learning, open and distance learning and ICTs for development in sub-saharan Africa. In A. Carr-Chellman (Ed.). *Global perspectives on e-Learning: rhetoric and reality*. Thousand Oak, Calif.: Sage Publications.
- Mager, R. F. (1984). *Goal analysis* (2nd ed.). Belmont, CA: Lake.
- Marshall, C. & Rossman, G.B. (1995). *Designing qualitative research* (2<sup>nd</sup> edition). Thousand Oak, CA: Sage Publications.
- Martinez, M. (2003). High attrition rates in e-Learning : Challenges, predictors and solutions. *The e-Learning Developer's Journal*. Retrieved June 15, 2004 from <http://www.elearningguild.com/pdf/2/071403MGT-L.pdf>

- Maskow, M. (2000). Radio as a learning technology. In E.J. Burge, (Ed.). *The strategical use of learning technologies*. San Francisco: Jossey-Bass.
- Matthewson, C. (1994). Whose development, whose needs? Distance education practice and politics in the South Pacific. *Journal of Distance Education/ Journal de l'Enseignement à Distance* 9, (2).
- Maxwell, J.A. (1996). *Qualitative research design: an interactive approach*. Thousand Oaks, CA: Sage Publications.
- Mayer, R. E. (2005). The failure of educational research to impact educational practice: Six obstacles to educational reforms. In G. D. Phye, D. H. Robinson, J. R. Levin (Eds.). *Empirical Methods for Evaluating Educational Interventions* (pp. 67-81). San Diego, CA: Elsevier Academic Press.
- Miles, M. B. & Huberman, A.M. (1994). *Qualitative data analysis. An expanded sourcebook*. (2<sup>nd</sup> ed.). Thousand Oak, CA: Sage.
- Moodie, T. (2003) Alternative ways of knowing. Doing justice to non-Western intellectual traditions in a postmodern era. *Journal of Education* no 31. Retrieved March 2006 from <http://www.ukzn.ac.za/joel/joepdfs/joe%2031%20moodie.pdf>
- Ngimwa, P. and Bayala, S (2004). Strategic Contribution to the AVU Vision and Mission. A position paper presented to the Academic and Technology Committee. Nairobi: The African Virtual University.
- Noble, D. F. (2001). *Digital diploma mills: The automation of higher education*. New York : Monthly Review Press.
- Norman, D. A. (1988). *The psychology of everyday things*. New York: Basic Books.
- OECD (2002), Glossary of Key Terms in Evaluation and Results Based Management. Retrieved March 2007 from <http://www.oecd.org/dataoecd/29/21/2754804.pdf>
- OECD/CERI (2005). Learning in tertiary education : Where do we stand? *Education and Skills*, 2005 (4). Retrieved November 2007 from <http://www.oecd.org/dataoecd/54/58/34899903.pdf>
- Ortiz, E. F. et Al (2004). *Implementation of Results-Based Management in the United Nations Organizations*. [ Series on Managing for Results in the United Nations System]. Part I. Geneva: Joint Inspection Unit.
- Papert, S. (1980). *Mindstorms: Children, computers and powerful ideas*. New York: Basic Books.
- Peppi, D. & Sheurman, G. (1996). The emperor's new computer: a critical look on our

- appetite for computer technology. *Journal of Teacher Education*, 47 (3).
- Perkins, Ross A. (2003). The role of context in instructional design: A case study examining the re-purposing of Web-based master's degree courses for use in Malawi. Ph.D. dissertation, Virginia Polytechnic Institute and State University, United States -- Virginia. Retrieved January 11, 2008, from ProQuest Digital Dissertations database. (Publication No. AAT 3255326).
- Pidgeon, N. & Henwood, K. (1996). Grounded theory: Practical implementation. In T.E. Richardson (Ed.). *Handbook of qualitative methods for psychology and the social sciences* (pp 86-101). Leicester : British Psychological Society.
- Postman, N. (1993). *Technopoly: the surrender of culture to technology*. New York: Vintage Books.
- Ragan, T.J. & Smith, P. (2000). *Instructional Design*. New York: Willy & Sons.
- Reigeluth, C. M. & Frick, T. W. (1999). Formative research: A methodology for creating and improving design theories. In C. M. Reigeluth (Ed.). *Instructional design theories and models: A new paradigm of instructional theory*. (pp. 5-29). Hillsdale, NJ: Lawrence Erlbaum
- Ritchie, B.S. et al (1997). Persistence, connection and passion: A qualitative study of the career development of highly achieving African American. *Journal of Counselling psychology*, 44, 133-148.
- Robinson, D.G. & Robinson, J.C., (1998). (Eds). *Moving from Training to Performance. A Practical Guidebook*. San Francisco, CA: ASDT & Hohler.
- Robinson, H. (2003). *Expecting and Achieving Excellence: W.L. Parks Middle School*. Georgia Public Policy Foundation. Retrieved March 2008 from [http://www.gppf.org/article.asp?RT=5&p=pub/Education/parks\\_middle.htm](http://www.gppf.org/article.asp?RT=5&p=pub/Education/parks_middle.htm)
- Rockman, S. (2003). Learning from Laptops. *Threshold*, 1(1), 24-28.
- Rosett, A. (1987). *Training needs assessment*. Englewood Cliffs, N.J.: Educational Technology Publications.
- Rostow, W. W. (1960). *The stages of Economic Growth: A Non-Communist Manifesto*. Cambridge: Cambridge University Press.
- Rowland, G. (2004). The Concept of Sustainability in the Evolutionary Guidance of an Educational Institution. *Systemic Practice and Action Research*. 17(4), 285-296.
- Rumelhart, D., McClelland, J. L., & the PDP Research Group (1986). *Parallel distributed processing: Explorations in the microstructure of cognition*. vols. 1 & 2. Cambridge, MA: MIT Press.

- Rummler, G. A. & Brache, A.P. (1998). The three levels of alignment. In D.G. Robinson, & J.C. Robinson, (Eds). *Moving from training to performance. A practical guidebook*. San Francisco, CA : ASDT & Kohler.
- Rummler, G. A. (1990). *Improving performance: How to manage the white space on the organization chart*. San Francisco: Jossey-Bass Publishers.
- Ruth, S. & Shi, M. (2001). Distance learning in developing countries: Is anyone measuring cost-benefits? *Techknowlogia*. May/June 35-38.
- Sehoole, C. T. & Moja, T. (2004). Pedagogical issues and gender in cyberspace education: distance education in South Africa. In N. T. Assié-Lumumba, (Ed.). *Cyberspace, distance education and higher education in developing countries: old and emergent issues of access, pedagogy and knowledge production* (pp 145-166). Leiden: Brill
- Shujaa, M. (1997). Transformation of researcher working toward liberation. In N.K. Denzin, & Y. S. Lincoln (Eds.). (2000). *Handbook of qualitative research*. London: Sage Publications.
- Siemens, G. (2005). Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance education*, 2 (1), 3-10.
- Smith, B. & Hesse-Biber, S. (1996). Users' experience with qualitative data analysis software : Neither Frankenstein's monster nor muse. *Social Computer Review* 14 (4), 423-432.
- Steiner, R., Nyaska, T., Jensen, M. and Karanja, G. (2004). *African tertiary institution connectivity survey (ATICS)*. Washington, DC: The World Bank Institute. Retrieved February 2007 from <http://www.dgroups.org/groups/cgiar/InternetAfrica/docs/ATICS2004Report.pdf?ois=no>
- Stiglitz, J. E. (2003). *Globalization and its discontents*. New York: W.W. Norton & Company.
- Stiglitz, J. E. (2006). *Making globalization work*. New York: W.W. Norton & Company.
- Strauss, A. L. and Corbin, J. (1998). *Basics of qualitative research*. Newbury Park CA: Sage.
- Svensson, J. (2005). *Absorption Capacity and Disbursement Constraints*. Paper prepared for the AFD-EUDN Conference. Paris, France. Retrieved Dec. 2007 from <http://www.eudnet.net/download/Svensson.pdf>

- Sy, J. H. (2004). Partnership in higher education in Africa: Communication implications beyond the 2000s. In N. T. Assié-Lumumba, (Ed.). *Cyberspace, distance education and higher education in developing countries: old and emergent issues of access, pedagogy and knowledge production* (pp 57-90). Leiden: Brill.
- Tedga, P.J.M. (1988). *L'enseignement supérieur en Afrique noire francophone: La catastrophe?* Paris: L'Harmattan.
- Tessmer, M. (2007). *Analysing the instructional setting: Environmental analysis*. London: Taylor & Francis Group.
- The Working Group on Canada's Policy with Regard to Agricultural Biotechnology and Developing Countries. (2005). *No more technological "silver bullets": A policy brief on Canada's role in Africa's agricultural underdevelopment*. Retrieved March 2008 from [http://www.inter pares.ca/en/publications/pdf/no\\_more\\_silver\\_bullets.pdf](http://www.inter pares.ca/en/publications/pdf/no_more_silver_bullets.pdf)
- Tuomi, I. (2002). The Lives and Death of Moore's Law. *First Monday* 7 (11) (November). Retrieved March 2008 from [http://firstmonday.org/issues/issue7\\_11/tuomi/index.html](http://firstmonday.org/issues/issue7_11/tuomi/index.html)
- UNCTAD (2007). *The least developed countries report 2007: Knowledge, technological learning and innovation for development*. Vienna: United Nations Services.
- UNESCO (1962). *Reports and papers on mass communication N° 37: Developing information media in Africa: Press, radio, film, television*. Paris: UNESCO
- UNESCO & The World Bank (2000). *Higher Education in Developing Countries: Perils and promises*. [Task force on higher education and society]. Washington DC: World Bank.
- UNESCO (2006). *National education sector development plan: A results-based planning handbook*. Paris: UNESCO.
- UNFPA (2003). *Country profiles for population and reproductive health: Policy developments and indicators 2003*. Retrieved March 2006 from <http://www.unfpa.org/profile/>
- Vaughn, D. (1992). Theory elaboration: the heuristics of case analysis. In H. Becker & C. Ragin (Eds.). *What is a case?* (pp.173-202). New York: Cambridge University Press.
- Wamey, Beatrice S. (2004) A case study of instructional design processes for a distance education program in an African university. Ph.D. dissertation, Indiana University, United States -- Indiana. Retrieved January 11, 2008, from ProQuest Digital Dissertations database. (Publication No. AAT 3183928).
- Wiley, D.A. (2002)(Ed). *The instructional use of learning objects*. Bloomington, IN: Association for Educational Communications & Technology.

World Bank. (1998). *Assessing aid : What works, what doesn't and why?* [A World Bank policy research report]. Washington, DC: Oxford University Press.

Zucker, A. (2004). Developing a research agenda for ubiquitous computing in schools. *Journal for Educational Computing Research* 30 (4) pp. 371-386.

## APPENDIXES

### APPENDIX A:

#### Guide d'entretien: Étudiants, tuteurs locaux, chargés de cours, concepteurs de la formation

PROJET DE RECHERCHE :

#### La performance des projets d'enseignement en ligne financés par la coopération internationale en en Afrique sub-Saharienne.

DATE : \_\_\_\_\_

HEURE : \_\_\_\_\_

SEXE : \_\_\_\_\_ F \_\_\_\_\_ M

NIVEAU DE FORMATION :  
\_\_\_\_\_

DOMAINE DE FORMATION :  
\_\_\_\_\_

INSTITUTION : \_\_\_\_\_ LAVAL

\_\_\_\_\_ UVA \_\_\_\_\_ UNFM \_\_\_\_\_ FOAD

CAMPUS : \_\_\_\_\_ BAMAKO \_\_\_\_\_ OUAGA

OCCUPATION : \_\_\_\_\_ Étudiant \_\_\_\_\_ Tuteur \_\_\_\_\_ Chargé de cours Technicien

DEGRÉ DE FAMILIARITÉ AVEC LES NOUVELLES TECHNOLOGIES (En nombre  
d'années d'utilisation)

\_\_\_\_\_ 0 - 1 AN \_\_\_\_\_ 2 - 5 ANS \_\_\_\_\_ 6 - 9 ANS \_\_\_\_\_ 10 ANS ET  
PLUS

## QUESTIONS

1. Que pensez-vous de ce projet d'EAD?
2. Parlez-moi de vos débuts dans ce projet. Comment vous êtes vous préparé ou avez-vous été préparé (e)?
3. Quelle est votre motivation ? Quelles sont vos attentes ?
4. Pensez-vous que vos attentes seront comblées/ vos objectifs atteints?
5. Comparé à l'enseignement traditionnel en classe, quels sont les avantages de l'EAD? Quels sont ses inconvénients?
6. Que pensez-vous:
  - a. Du contenu des cours (structure et accessibilité)?
  - b. Des différents modes de transmissions utilisés:
    - i. Des sessions synchrones,
    - ii. Des play back sur WebCT,
  - c. De la qualité de leur livraison par le chargé de cours?
  - d. De la participation des apprenants,
  - e. De la qualité de leurs interactions
    - i. Entre eux
    - ii. Avec les tuteurs locaux (s'il y en a),
    - iii. Entre eux et le chargé de cours
  - f. Du soutien qu'ils reçoivent ? De la technologie (équipement informatique et de l'infrastructure)?
  - g. De la documentation?
  - h. Du soutien que les étudiants reçoivent

- i. Des travaux dirigés, des travaux pratiques de l'évaluation des apprentissages ?
7. Quels sont les plus grands problèmes auxquels vous faites face en EAD ?
8. Quels sont les opportunités et les problèmes futurs que vous entrevoyez ?
9. Que faudrait-il faire pour corriger les problèmes et renforcer les opportunités de l'EAD?
10. Que faudrait-il faire pour améliorer les cours à distance que vous suivez ?
11. Pensez-vous que l'EAD arrivera à résoudre les problèmes auxquels fait face l'enseignement supérieur en Afrique noire comme promis par les bailleurs de fonds?. Pourquoi?

## **APPENDIX B:**

### **Guide d'entretien: Administrateurs**

PROJET DE RECHERCHE :

**La performance des projets d'enseignement en ligne financés par la coopération internationale en en Afrique sub-Saharienne.**

DATE : \_\_\_\_\_

HEURE : \_\_\_\_\_

INSTITUTION : \_\_\_\_\_ LAVAL

\_\_\_\_\_ UVA

\_\_\_\_\_ UNFM

\_\_\_\_\_ FOAD

CAMPUS : \_\_\_\_\_ BAMAKO

\_\_\_\_\_ OUAGA

OCCUPATION : \_\_\_\_\_ Directeur du centre EAD \_\_\_\_\_ Responsable service  
Université

\_\_\_\_\_ Responsable organisation internationale

DEGRÉ DE FAMILIARITÉ AVEC LES NOUVELLES TECHNOLOGIES (En nombre  
d'années d'utilisation)

1. Que pensez-vous de ce projet d'EAD ?
2. En quoi est-il important pour votre institution, pour votre pays?
3. Qu'attendez-vous de ce projet d'EAD?
4. Parlez-moi de ses débuts. Comment vous êtes-vous impliqué dans la préparation  
de son
5. lancement Comment avez-vous recruté et préparé les étudiants et les tuteurs  
locaux?
6. Parlez-moi de vos relations avec les bailleurs de fonds de ce (s) projets ?

7. Quelles sont vos premières impressions à ce stade-ci de la mise en œuvre du projet?
8. Quels sont les plus grandes opportunités offertes par ce nouveau mode d'enseignement et d'apprentissage?
9. Quelles sont les plus grands obstacles liés à l'environnement particulier à votre institution faudra-t-il surmonter pour réussir le virage EAD?
10. Votre pronostic de réussite de l'EAD sur le continent en ASS ?

## Appendix F

### Coding categories, subcategories and their properties.

CATEGORIES	SUBCATEGORIES	PROPERTIES
<b>SECTOR ANALYSIS (S.A.)</b>	<p><b>MACRO-ECONOMIC &amp; SOCIODEMOGRAPHIC (SA-Macrosodem)</b></p> <p>Analysis of main aspects and features of the socio-economic context of the field in so far as they can have an impact on the project</p>	<p style="text-align: center;"><b>Demography and manpower (SA-Macrosodem- demanpwr)</b></p> <p>Demographic aspects of the past and coming few years in the field population and project beneficiaries</p> <p>Macro-economic and budgetary framework (SA-Macrosodem-budfrmwk)</p> <p>Past trends and possible developments of macroeconomic indicators e.g. public expenditures, private/community funding, external funding</p> <p><b>Socio-cultural analysis</b> (SA-Macrosodem-sociocultanlys) Demographic composition, socio-cultural, religious structure, cultural traditions, schooling and school performance of minorities, boys/girls, etc.</p> <p><b>Politico-institutional analysis</b> (SA-Macrosodem-pollnstitutanlys) Involves the functioning mode of the State and local/public authorities but also the reforms in view and their consequences</p>

<p><b>ACCESS TO AND PARTICIPATION IN EDUCATION (SA-Aped)</b></p> <p>This code concerns analyzing the access and participation, the internal efficiency and the disparities in education</p>	<p><b>Access to education</b></p> <p>(SA-Aped-acceduc) Intake, transition, registration</p> <p><b>Participation in education</b> (SA-Aped-participeduc) gross/net/age specific participation ratio</p> <p><b>Internal efficiency (SA-Aped-internefficiency)</b> The number of years it takes to complete a particular cycle of education. It is calculated based to the following flow rates (promotion, repetition and drop-out rate, etc)</p> <p><b>Disparities (SA-Aped-disparities)</b> Service coverage by gender, administrative area, population density, socio-cultural groupings</p>
<p><b>QUALITY OF EDUCATION (SA-Qualed)</b></p> <p>This category should deal with educational inputs, outputs and outcomes. However, because outcomes are difficult to measure, planners and managers rely on internal efficiency indicators (e.g. promotion, repetition, drop-out rates) to measure the quality of education</p> <p>There are three broad categories of educational inputs: personnel, facilities, methods and materials</p>	<p><b>Educational Personnel</b></p> <p>(SA-Qualed-educpersonnel) To be trained, to be recruited, salary</p> <p><b>Educational Facilities</b></p> <p>(SA-Qualed-educfacilities) Computer labs, students-computers ratio, computer lab space/time utilization rate, Internet connectivity</p> <p><b>Instructional Methods, Processes and Output</b> (SA-Qualed-methprocop)</p> <p>The status (or availability) and the relevance of the school programmes, pedagogical methods and instructional materials</p>

	<p><b>EDUCATIONAL OUTCOME AND EXTERNAL EFFECTIVENESS</b></p> <p>(SA-Eduoutcomeeexteff)</p> <p>This is about the performance of graduates in active social and economic life, i.e. the social and economic benefits individual and society benefit from project investment</p>	<p><b>N/A</b></p>
	<p><b>EDUCATIONAL COST AND FINANCE</b></p> <p>(SA-Costfin)</p> <p>This code deals with questions about project financing and spending: how much money are available, who pays, how resources are allocated and whether they are used effectively and efficiently</p>	<p><b>Cost of education</b></p> <p>(SA-Costfin-costeduc)</p> <p>Recurrent costs</p> <p>Capital costs</p> <p><b>Educational finance</b></p> <p>(SA-Costfin-educfin)</p> <p>Project financing by state, local authority, families, other national agents, external agencies for recurrent or capital costs</p> <p><b>Use of resources</b></p> <p>(SA-Costfin-useresrces)</p> <p>Analysis of how resources are allocated and used</p>
	<p><b>I.6. MANAGERIAL AND INSTITUTIONAL ASPECTS</b></p> <p>(SA-MngmtInstitut)</p> <p>This is the question of relating normative aspects of the system to the institutional and organizational management practices of the sector with a view to identifying strengths and weaknesses in order to bring about improvements</p>	<p>Planning and administrative function</p> <p><b>(SA-MngmtInstitut-planadmin)</b></p> <p>Programming and distributing resources (budget, personnel, buildings, instructional materials, etc)</p> <p><b>Pedagogical function</b></p> <p>(SA-MngmtInstitut-pedfonction)</p> <p>Actual management and transformation of resources into end-products (graduates, learning achievements, individual and social benefits)</p>

<p style="text-align: center;"><b>POLICY AND STRATEGY FORMULATION (POLSTRA)</b></p>	<p><b>POLICY DIALOGUE</b> (POLSTRA- PolDialogue)</p> <p>Refers to the consultation between stakeholders affected by and/or involved in the formulation and the implementation of the sector policy in order to 'sing on the same sheet of music'</p> <p><b>Goal/Purpose formulation</b> (POLSTRA-GoalPurpose)</p> <p>A policy is a set of goals and purposes (also called specific objective or target).</p>	<p><b>Stakeholders analysis</b></p> <p>Access, participation, gender/equity issues</p> <p style="text-align: center;"><b>Quality</b></p> <p>(POLSTRA- PolDialogue-quality Internal efficiency, relevance External effectiveness</p> <p><b>Management</b> (POLSTRA- PolDialogue-mngmt) Governance Decentralization Resources management</p> <p><b>Goal/purpose definition</b> (POLSTRA-GoalPurpose-definition) Setting up specific objectives or targets</p> <p style="text-align: center;"><b>Sustainability</b></p> <p>(POLSTRA-GoalPurpose-sustainability)</p>
<p style="text-align: center;"><b>PROGRAMME OF ACTION (PA)</b></p>	<p><b>IMPLEMENTATION PLAN</b> <b>(PA-ImplePlan)</b></p> <p>It is meant to translate into operational terms the policy directions into a given time span.</p>	<p><b>Strategy of implementation</b> (PA-ImplePlan-straimplementn) A policy should establish the framework for its implementation by giving the main goals, priorities and the strategies to achieve them.</p> <p>Confidence in human and financial resources (PA-ImplePlan-humfinresources)</p> <p><b>Operationalization</b> (PA-ImplePlan-operationalizatn) Translating specific objectives in actions and activities</p> <p><b>Timeliness</b> (PA-ImplePlan-timeliness)</p>

<b>MONITORING AND EVALUATION (M-E)</b>	<p style="text-align: center;"><b>MONITORING</b></p> <p>(M-E-Mntrng) Is a regular assessment of the status of each level of the program to see how the uses of the means allocated are helping to deliver the expected results.</p> <p style="text-align: center;"><b>EVALUATION</b></p> <p>(M.-E.-Evaltn) is about an external assessment of objectives attainment.</p>	<p>Evaluation answers the following questions:</p> <p><b>Relevance</b> (M.-E.-Evaltn-relevance) Does the project address identified needs?</p> <p><b>Efficiency</b> (M.-E.-Evaltn-efficiency) Are we using the available resources wisely?</p> <p><b>(M.-E.-Evaltn-effectiveness)</b> <b>are results being delivered?</b></p> <p>Impact: <b>(M.-E.-Evaltn-Impact)</b> <b>What changes have occurred for individuals or in the targeted communities?</b></p> <p>Sustainability: <b>(M.-E.-Evaltn-sustainability)</b> Will the impact be sustainable?</p>
<b>COST ESTIMATION (COSTEST)</b>	<p>Financial resources made available to every planned activity. A policy should be credible that human and financial resources are available for carrying out the results</p>	