M.A. THESIS

HOW CAN ICTS AND NEW/SOCIAL MEDIA REMEDY THE PROBLEM OF VITAL STATISTICS DEFICIENCIES IN GHANA? (THE CASE OF GHANA BIRTHS AND DEATHS REGISTRY DEPARTMENT):

A THESIS PRESENTED TO THE SCHOOL OF ARTS AND COMMUNICATION, Malmö UNIVERSITY; IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF ARTS (M.A.) DEGREE.

BY

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ii. DECLARATION:

I declare that I, under the supervision of Ms. Helen Hambly Odame(PhD) professor at Guelph University in Canada, have personally undertaken the studies herein submitted for examination by the appropriate authorities of Malmo University in Sweden, leading to the award of master of arts(M.A.) degree in communication for development.

Sign..........................................................

Stephen Baidoo

iii. DEDICATION

THIS WORK IS DEDICATED TO MY BELOVED KIDS: THYWILL; RABBI; & ECCLESIA.
iv. ACKNOWLEDGEMENTS

If I have been able to reach the top, it is because I stood on the shoulders of a strong man. My strong man in this achievement (humanly speaking) is the collective responsibility and the relentless efforts of my Comdev staff, namely, Oscar Hemer, Anders Hög Hansen, Ylva Ekström, Micke Rundberg, Hugo and the host of visiting lecturers from around the world who, for 2 consecutive years, patiently and relentlessly discharged the duty of teaching and guidance, not only to help clean my choked and rusty academic labyrinth but also to further polish and propel my academic steps to this enviable stage. In addition to that, this lovely cohort led me to the financial doorsteps of SPIDER for the much needed travel grant based on which this project became more possible within the stipulated time frame. Thank you Comdev staff, thank you SPIDER GRANT.

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I cannot forget the services of national and regional offices of Ghana births and deaths registry (department), but particularly Mr. Kingsley Asare-Addo, and Mrs. Enyonam Tanu-Ato of Accra and Tema respectively for their enormous assistance as collaborators, in terms of their time, who led me throughout my weeks of research in Ghana. Mr adotey Alotey of Vodafone Ghana and the senior staff of Ghana National Communications Authority (NCA) also deserve mention. Whatever glory and honour I receive from this work I share with you. To all of you, I say BRAVO!!!
v. PREFACE

THE two most important events in every man’s Earth life are birth and death. Each of these events happens once in a life time. Every individual comes into the world at a certain time on one particular day. In the same way, every person leaves this world on one particular day at a certain time. The interaction of these two important events define, to a large extent, the totality of global population at any given time period. Whether there is population boom/explosion or collapse in the world as a whole depends on these two natural sources. Some demographers, however, classify migration (i.e. emigration and immigration or in-migration and out-migration) as part of the sources of population growth.

Recording these events as and when they occur is not for fun or an end to itself, but rather as a means to an end. Population affects every aspect of human life, namely: economic, political, legal, social, cultural, environmental, health, etc. It is for these and other equally important reasons that people of vision such as John Graunt (1620-1674); Thomas Malthus (1766-1834); Sir James Steuart (1713-1780); William Godwin (1756-1836); and the like sought, in those early days, to give recognition to population issues. This establishes the fact that although the formal field of demography is a relatively recent innovation, people have long been concerned about the size and characteristics of their territorial populations for a very long time. In spite of its enormous importance, it appears that little time and resources are channeled into population management in contemporary times.

In Ghana, as in many developing countries, very little attention has been given the field by successive governments. This low-profile attitude towards population issues has, over the years, adversely affected the country’s socio-economic and political progress. I may not be too wrong to postulate that true development has eluded most African countries and the developing world at large mainly because in all of these countries proper attention has not been given to population matters. Is it not true that lack of proper method and resources are the main causes of leaders’ seemingly care-free attitude towards population issues in these developing countries in the past? Even though it may seem that many waters have passed under the bridge and that, things seem to have fallen apart (Chinua Achibe) there is always a window of escape when all doors are closed.

Information and Communication Technologies (ICTs) are the new generation of windows and escape routes out of many hitherto insurmountable problems. Therefore, in this thesis, I would like to explore and examine how ICTs and the famous new/social media may help alleviate the problem of non-registration or inadequate registration of vital events in Ghana.

My research method in pursuance of this goal shall be one of observation and participatory interviews with carefully selected samples of relevant public establishments. By this, I hope to combine personal experience through observation, and discussions using semi-structured interview format to gather qualitative data for analysis.
As a clue, readers should expect six chapters in this work beginning with general introduction comprising of background history, goal and objectives of the study. Chapter two deals with theoretical and conceptual framework of the research topic, while chapter three covers the literature review. Chapter four presents a systematic/methodological approach to the study linking it to a concise picture of the field work undertaken. Findings from this study open the crucial analysis chapter (chapter 5) in which emerging facts, figures supporting data, both primary and secondary, are critically examined.

In the final chapter (chapter 6) VRS, with particular reference to B&D is justified with elaborate advantages and contrasted with constraints as far as Ghana is concerned. Besides offering recommendations in this same concluding chapter, I managed to demonstrate strong initiative drive by presenting possible new ways of applying ICT tools such as Mobile phones, computer and social media to assist in improving vital registration rates in Ghana. With more critiques and questions popping up as a result of arguments, assertions, recommendations and conclusions, this study lends itself for further studies in the wider academic spectrum, including political, economic, social, health etc. etc.
CHAPTER 1. INTRODUCTION

1.0. GENERAL INTRODUCTION

On the website of Ghana births and deaths registry department of the ministry of local government are some affirmative captions including this one which says: “A road map of hope for the Ghanaian Child..., providing accurate and reliable information on all births and deaths occurring in Ghana for socio-economic development.” (www.bdrghana.gov.gh). If this was the basic goal for the establishment of this government department then, perhaps the most fundamental but complex question to ask is: ‘why is the department still unable to register all births and deaths occurring in the country every year; hence the deficiencies in the country’s vital statistics records?’ Meanwhile, immediately following the above quoted caption is another short caption “Computerization of the registration system.” And with this, yet more complex questions emerge in the mind of the critical reader. Is this idea of “providing accurate and reliable information... for socio-economic development” a latent goal borne out of the computerization initiative? If this is the case, then what are the department’s original goals, aims and objectives? And if it holds the same goal as the one quoted herein above, how does it hope to achieve it now with the computer factor? This is where my interest lies. In this thesis, I am going to explore the possible role of new Information and Communication Technologies(ICTs) such as computers, internet and mobile phones as well as new social media such as Facebook, Skype, YouTube, Twitter, MySpace, etc in achieving accurate and reliable information in the two most important vital events (births and deaths) in Ghana.

1.1. PREVIOUS STUDY:

In 1994, I undertook and presented a similar project (a dissertation) as part of my bachelor’s degree requirements. The theme for that project was: “THE PROBLEM OF BIRTHS AND DEATHS REGISTRATION-vital statistics- IN GHANA. A Case Study of Upper Denkyira District. The aim of this initial project was to find out why the people of Upper Denkyira District were not registering their neonatal births, and deaths.

At the end of that research, I identified two main problems and that the responsibility for these two problems lay on the part of the general public. The first problem involved public misconceptions and superstitions. There was (and even still is) the misconception that any demographic statistics the government attempts to collect, such as births and deaths registration as well as population censuses are used for taxation purposes.

Experience has shown that Ghanaians do not want to pay tax to the government because they think that tax money and other national incomes are not judiciously applied in the interest of the nation and its people. Of course, Ghanaians are not the only people in this world who despise the tax concept. Many well-to-do individuals and corporations have sought ways to evade taxes on many instances in many advanced countries. For example, a Deutsche Post (German Post) CEO was reported to have resigned in 2008 over tax evasion. On February 16, 2008, “Spiegel Online international” an online news paper reported the
popular “The Liechtenstein Connection” in which massive tax scandal in Germany was reported to have been unearthed. (www.spiegel.de/international). As a counter measure, many countries have enacted legislation that criminalises tax evasions. In the case of Ghana, rich individuals as well as corporate bodies ‘normally’ evade taxes and get away with it just because the basic personal and corporate identification systems are woefully deficient. Eg. The Stallion Industries & Investment Ltd; Russian woman in tax scandal at Tema, etc. (www.modernghana.com; www.financialtaskforce.org).

The second problem that accounts for non-registration of vital events, especially births and deaths, is the superstition that when people are counted they experience untold frequent death rates. For this reason, in some of the Akan traditional enclaves such as Asante, Denkyira, Fante, Akuapem and Wassu, cobs of corn are used to represent people when there is an inevitable need to say the number of children a family has (eg. Brodua mienu, Brodua miensa//two or three cobs of corn etc. The onus of erasing these erroneous impressions lies with government services which should educate the people through various ministries and departments including Birth and Death department which operate under the ministry of Local Government. In the past, educational campaigns toward B&D registration were possible only through face-to-face encounter with the people.

Even these days, face-to-face public education is still very difficult (if not impossible) as lack of sufficient vehicles coupled with poor roads in the countryside make attempts at reaching the people quite difficult and time consuming. Also in the past, traditional communication media such as Radio, TV, and Print Media (news Papers) had limited reach due to factors such as low individual incomes; and illiteracy, as far as news Papers are concerned. The best educational media campaign I personally witnessed in the early 1990s was some sporadic broadcasting of a Radio advertisement that came with a family planning programme pursued as part of the then government’s structural adjustment programme. This short advertisement outlined only a few advantages of registering one’s newly born baby and ended it with what sounded like a plain threat against non registration of both births and deaths occurring within 3-6 weeks.
1.2. CURRENT STUDY:

The gloomy picture above notwithstanding, Ghana is capable of telling a new story and that story could be quite different this time around. For in the era of ICTs such as Mobile phones, computers, Internet and web 2.0 applications associated with social media (Facebook, Twitter, MySpace, YouTube, etc; these may be potential and more popular ways of engaging people to learn about the importance of Birth/death registration and to take action. In other words, modern information and communication technologies (ICTs) could be employed not only to educate the people as a way of demystifying birth/death registration and demographic reporting activities, but can also be actively used in the vital registration processes. But how could this be done? And if it cannot, what constraints are apparent and how might they be overcome?

In Ghana, the B&D department is solely responsible for registering births and deaths and issuing of certificates accordingly. It is also required to report to the government and/or other government agencies such as Ghana Statistical Service and Ghana Population Council at any given time. But since the inception of this exercise in 1888(Kpedekpo, G.M.K. 1962; 1967) births and deaths records collection, collation and dissemination have been managed manually, carrying with it problems such as lack of quality records to meet information needs; lack of quality records to support population-oriented policies; absence of performance assessment; absence of standards in operation and the big issue of multiple registrations etc. It is worth noting that births and deaths registration in Ghana has always been viewed as a purely social matter rather than science, and therefore has always been approached sociologically. Isn’t it about time that this important government body, its ministerial/administrative placement under the ministry of local government as well as its mode of operation was given a second look? In sum, the problem is that Births and Deaths registration rates in the whole of Ghana are very low. Poor registration rates are due to constraints in both the government system (supply-side\(^1\)) and the general population (demand-side\(^2\)).

\(^{NB:}\) Prem Mony et al failed to explain what they meant by the government as “supply side” and general population as “demand side”. My deduction is that:

\(^1\)Government supply the legal and operational framework as well as personnel and logistics adequacies for registration activities.

\(^2\)The people demand these supplies in order to act appropriately by way of Vital events reporting and registering.
1.3. THE GOAL OF THIS STUDY

The goal of this project is to use new information and communication technologies and new social media to promote the culture of records keeping, especially vital statistics in the Ghanaian society. This project is coming at a time when information and communication processes- gathering, dissemination, storage and retrieval- have been made incredibly simplified by the use of information and communication technologies (ICTs). I think that drawing the peoples’ attention onto the importance of data recording using hi-tech, and as well demonstrating the simplified manner of statistical reporting as against the hitherto crude and cumbersome processes may help the country improve on the quality of its vital records leading to improved results in development planning and policies.

1.4. RESEARCH OBJECTIVES

The main objectives of this study are threefold; this is expressed in figure 1.1 below:

FIGURE 1.1: RESEARCH OBJECTIVES

To explore the role of ICTs and new media in vital registration system (B&D)

To determine comparative advantages of digital over manual registration method

To identify ICT organisational culture of the B&D registry.
1.2. RESEARCH QUESTIONS/HYPOTHESES

My research questions in this thesis develop the two-face application of ICTs and new/social media in VRS: i.e. for education and for recording and archiving. This is expressed in figure 1.2 below.

1. ICTs FOR RECORDING
   • What methods of VR data collection are currently in use in Ghana?
   • Which recording method is easier, faster and reliable; manual or digital?
   • How equipped is the B&D registry in ICTs: computers, Internet and intra networks for eg.?
   • Are B&D reporting via sms, telephone, e-mails viewed reliable and acceptable?

2. ICTs FOR CAMPAIGNING
   • How often does the department hold awareness campaigns, by what means?
   • How does the department transfer information among its branches and other relevant agencies?
   • How exposed are the B&D personnel to ICTs and new media?
   • How can ICT tools be used to fight socio-cultural misconceptions and superstitions?

FIGURE 1.2. RESEARCH QUESTIONS

1.6. IMPORTANCE OF THIS STUDY:

Vital statistics are perhaps the most widely used national, state, and local data for identifying and addressing major public health issues” (Gale Encyclopedia of Public Health: Vital Statistics). It is one of the three major sources of data for the analysis of fertility; the other two being censuses and sample surveys, (Weinstein and Pillai, 2001;132).

In the United States for example, the registration of births, marriages, and deaths has a long history, beginning with registration laws enacted by the Grand Assembly of Virginia in 1632 and the General Court of the Massachusetts Bay Colony in 1639. (http://www.answers.com) In the Gold Coast, now Ghana, this started in 1888 with the current births and deaths registry department of the ministry of local government operating under Act 301 of 1965 legislation, (Baidoo, 1994).

Weinstein and Pillai (2001.ix) believe that Population affects nearly every aspect of our social lives, including economic, politics, environment down to our ethics and morality.
The importance of accurate (or near accurate) population figures in every country underpins its development policies. Therefore, seeing that there is a problem in the recording of these important demographic variables in Ghana provides an opportunity to study it intellectually.

1.7. PROJECT RELEVANCE TO COMDEV:

This study is vitally relevant to the Comdev discipline and Comdev field. As the global population reportedly hits its 7 billionth mark on October 31, 2011, according to Population Action International (PAI), and world population data sheet puts Ghana’s 1996-1998 population at 18.9 million (www.prb.org), one very important question needs to be asked by all: How accurate and reliable are these figures, knowing that most developing countries, including Ghana, lack reliable population Registers? The apparent struggle by monitors of Human Development Indices (HDI) in accessing reliable national statistics gives credence to the relevance of Comdev and its role in ensuring accuracies in vital statistics.

Through effective, easily disseminated reliable information/communication, Comdev can play a vital role in an effort to reversing some developing countries’ aversion for births and deaths registration and censuses due to misconceptions and superstitions. With ICTs such as mobile phones and internet, officials of Births and deaths registry departments, hospitals, maternity centres and all relevant registration centres could exchange vital information among them through emails, chat rooms, SMS, phone calls, etc. without necessarily having to travel long distances, thereby cutting cost and avoiding inconveniences of rough rural road networks and worries of transportation and logistics unavailability.

1.8: FIELD PROBLEMS ENCOUNTERED

The first problem had to do with my inability to follow the planned time table. As indicated elsewhere, I was twice delayed in travelling to Ghana, my research field. The fact that I took ethical considerations for granted thinking that as a native I could easily walk my way through, worked against me in many respects. Apart from the headquarters where Mr. Kingsley Addo welcomed me with outstretched arms, people in all the 4 other B&D registration offices initially showed signs of disinterest and uncooperative. Unknown to me, the regional offices already had an axe to grind with the headquarters because of its handling of this ICT initiative programme since the year 2000. The people I spoke to in the 3 regional offices were very careful about the kind of information they gave. And the first question that all of them asked was “…have you been to the head office already? One other problem worth mentioning is that I wasn’t allowed to take pictures of any kind neither in the office nor around the department’s compounds.
CHAPTER 2. THEORY and CONCEPT

2.0. INTRODUCTION: This chapter presents the theories and the conceptual frame work of the topic under review specifying clearly where births and deaths registration system meets ICTs and new/social media.

2.1.0 : THEORITICAL FRAMEWORK: The two fields of VRS and ICTs have their separate discourses as they are different in nature but practically collaborative in purpose. Therefore, in this section I will look at the theories and/or discourses existing in the separate fields of VRS and ICTs against the background note that their togetherness, as being proposed in this project work, is but a novelty. The much global attention that population issues (demography) have gathered makes it imperative for it to be linked with new tools known to be engines of development and change (ICTs. & New social media).

2.1.1. VITAL REGISTRATION SYSTEM (B & D HISTORICAL BACKGROUND)

From the dawn of civilization, when perhaps 5 million people inhabited the Earth, to the present day, with the world total now in its 7 billionth mark, the study of the size and other characteristics of populations have been viewed as one of the highest social and political priorities (Weinstein and Pillai, 2001:52). In their book, “Demography, the science of population” Weinstein and Pillai confirm the fears in the Ghanaian populace that all government activities concerning population, such as censuses and registrations are basically meant for taxation. They talk about the word census as having come from a Sanskrit word meaning assess or tax (ibid, p.25). However, the said Sanskrit word was not revealed in their book. The authors also discuss demography to the closest detail as they trace population studies and its importance to the pre-modern era when populations were counted to assess a nation’s military might as well as its wealth through taxation. In fact, the word census was coined from a Latin word censere meaning to assess (The New International Webster’s Comprehensive Dictionary, p.215). As the people were counted, their respective properties were assessed so that the government (Rulers) could tax them properly. They mention civilizations such as Egypt, Sumeria, Babylon and Israel that included demographic information in their written records as far back as 5000 years, (ibid).

As their populations grew to great numerical sizes and the vital statistics thereof propelled into gargantuan complexities, even in those earliest times, the need to regularly count their subjects forced rulers to devise methods of keeping track of these accounts thereby resulting in the systems of numerals and writing itself.

Today, this need is overtly manifest, especially in developing countries including Ghana. The importance of accurate population characteristics such as age, sex, fertility, mortality, employment, migration, etc affecting every country (no matter what) as a result of inevitable globalizing trend, necessitates that new interests need to be developed and new ways be found to track these accounts to serve their purposes. Discussing the empires of Egypt, Mesopotamia, Rome, Tokugawa-Japan and Manchu-China, William
Petersen (1975:395-6) cited in Weinstein and Pillai (2001:25) observed that records-keeping was a common feature among these civilisations, and with records to prove that they even conducted some kind of censuses. Weinstein and Pillai recall that the birth of Jesus Christ, as chronicled in the Christian Bible (New Testament), is said to have occurred during census period in the Ancient Roman Empire. The account of Luke chapter 2:1-7 states: “In those days Caesar Augustus issued a decree that a census should be taken of the entire Roman world. (This was the first census that took place while Quirinius was governor of Syria). And everyone went to his own town to register”.

The story continues thus: “So Joseph also went up from the town of Nazareth in Galilee to Judea, to Bethlehem the town of David, because he belonged to the house and line of David. He went there to register with Mary who...... was expecting a child. While they were there, She gave birth to her first born, a son.....”

The Hebrew Bible (Torah), also called the Old Testament has another striking account of population registration from the ancient times. The 4th book of Moses (Numbers 1:1-2) has this to say: “The Lord spoke to Moses in the Tent of Meeting in the desert of Sinai on the first day of the second month of the second year after the Israelites came out of Egypt. He said: “Take a census of the whole Israelite community by their clans and families, listing every man by name, one by one”.

All the above, no doubt, point to the fact that vital registration for various purposes has been with humankind since time immemorial. But other questions come up such as; what method or methods were used at that time? Did they succeed; and if not, what were the constraints, and how were they resolved? A reflection of what is happening in most developing countries today where ICTs are less popular in their daily administrative functions perhaps give the indication that some crude manual method using, for example, papyrus reed and ink-bowl in writing the then less developed alphabets and figures was the order of the day. A system whereby citizens had to travel around to converge in few legally selected cities in order to be registered and countered was one that could be said to be slow and cumbersome. Whether the laws and commandments succeeded in obtaining full benefits intended at that time could only be assessed by the methods used as compared to that expected to be achieved using ICTs today.

Civil registration in our (modern) times is considered the optimal source of statistics on vital events (i.e. births and deaths). This ensures the registered child his right of citizenship and provides nations with firm planning base. Thus in theory, vital registration system provides a good basis for overall coordination, direction, technical guidance and standards for birth and death statistics, though in reality (as in the case of developing countries) the situation tends to be different because of numerous constraints that prevent effective registration processes from taking place.

2.1.2. ICT AND NEW MEDIA THEORY:

Theories surrounding Information and Communication Technologies (ICTs) and new/social media applications are fast expanding as more and more communication and media scholars, as well as experts emerge from both the academic and professional fields. ICTs have been widely asserted as
having positive impacts on the economic, social and political development of nations and communities. However, Professors Richard Taylor and Bin Zhan\(^3\) of Institute for Information Policy, Pennsylvania State University, and School of Economics and management, Beijing University of Posts and Telecommunications respectively, argue that “while it is easy to assert, it is far from easy to quantify it in a way that yields an explanatory and predictive theoretical understanding which can be applied to information policies” (Sept. 2007). They nonetheless, admit that, their above view notwithstanding, “many international organisations and economies consider this a critical foundation for effective information policy-making”, and that governments around the world are investing huge amounts of precious capital in an attempt to realizing ICT benefits while working to ensure a widespread access to their networks and their applications. The duo further argues that the level of empirically-based policy guidance in ICT use is low. In this report paper, they reflected first on how the measurement of information indicators to understand modern reality has been a constant theme in academic and policy discourses in the last forty years, raising the question what exactly is being “measured”. This has created a current surge of international projects in ICT field and the underlying reasons for supporting governmental programs.

According to Hoper (2007) ICTs and digital media have become the reigning catalysts of contemporary communication. ICTs simply mean technologies to convey information and communicate among individuals. They are the means by which numerical, pictorial, textual and vocal information are acquired, processed, stored and disseminated. In its modern sense, ICTs reveal themselves mainly in microelectronics-based combination of computing and telecommunication, among other digitalia\(^4\). A sound knowledge of ICT infrastructure is characterized by knowledge of the basics of what computers are used for, how they are used in businesses, governments and other establishments, what kinds of hardware are used and why, what kinds of networks are used and why, how to deploy software across networks, how PCs work, what a "backup" is and why you would use one, how inter and intranets work and how they are managed, how computer security works and how to impose it, etc. The list goes on to cover all the operational and support matters you need to think about to purchase, build, install, run and manage computer systems in organisations and government systems.


\(^4\) I coined the term digitalia as the digital language equivalence of inter alia.
Originally called Information Technology (IT), the term first appeared in a 1958 article published in the *Harvard Business Review*, in which authors Leavitt and Whisler (1958) commented that “The new technology does not yet have a single established name. We shall call it information technology (IT)”. Since then, IT has been seen as unequivocally synonymous to growth, development and change in all human endeavours. In Dale W. Jorgenson’s article in the American Economic Review (1999), while writing about information technologies and growth under the topic “Productivity growth: current recovery and long-term trends” he said that “the rapid diffusion of information technology (IT) is a direct consequence of the swift decline in the price of computer-related equipment, which has led to a vast and continuing substitution of IT equipment for other forms of capital and labour”.

Harnessing digital means to meet public ends has thus become a global order of the day. Recent advances in the ICT domain offer enormous prospects for augmenting management efforts in key areas of government, international, private and civil programmes. The most beneficiary of these are data management groups and organisations such as ARMA International and International Records Management Trust (IRMT). But the fact is that every sector of today’s human endeavour is open to ICT and social media use, with guarantees of benefiting more than any previous method application. There is now truly a world culture as predicted by Bill Gates (Chairman of software giant Microsoft) when he said that “...the information highway is going to break down barriers and may promote a world culture, or at least a sharing of cultural activities and values” (Hedley 1998:205, quoted in Schech and Haggis 2000:193). A buttressing view to this is found in Hemer and Tufte’s (2005) assertion that globalisation is fast erasing (annihilating) distance. There is today the world culture of widespread mobile phones, i-phones, i-pods and i-pads. People of all walks of life carry these devices with them and operate them in the streets and on public transports. From these devices users are able to access internet sites and engage in effective communication irrespective of their locations. ICTs and New Media are the driving forces of the globalisation phenomena as socio-cultural practices and consumables as well as information in any form are easily transferred within and beyond borders, thereby cutting cost and, in the case of developing countries, avoiding inconveniences of rough rural road networks and worries of transportation and logistics unavailability. Talking about the magic of the internet, Schech and Haggis said, “What is revolutionary about these technologies is the way they variously enable the flexible and rapid transfer of information in a variety of forms”. They point to the ability of microprocessors and optic fiber which now “make possible global circuits of knowledge exchange and data processing”, and also indicated that in the finance sector vast sums of money can now be quickly transferred at the behest of investors. Countries such as India and Nepal are forcefully applying ICTs in e-government and e-commerce programmes towards poverty alleviation and overall development (Ramesh Adhikari; Suresh D hoj Shrestha, 2007).
The question is, if ICTs have these potentials and provide such enormous opportunities in life, why can’t they be applied, probably in combination with the old system, in the recording of vital statistics in Ghana as in many advanced countries? If national borders and the bounds of distance have collapsed in the face of the internet, mobile phones, fax machines, modems, and the social media, how much more easily will VRS be if these tools are fully applied?

2.1.3: THE DIGITAL DIVIDE THEORY AND AFRICA

It may be argued that developing countries, such as in Africa and Ghana in particular, regarded as digitally disadvantaged under the ‘Digital Divide’ discourse can impossibly use these ICT tools for the purpose being explored here because they are simply inaccessible to them. But this argument may swiftly be debunked looking at the rapidly evolving trend of internet and mobile use in Africa since 2002. Judging from this development and the ongoing realities, I am tempted to posit that Africa is out of the ‘digital divide’ domain if only access is the catchword in the definition of the concept. As far as ICTs spread in Africa is concerned, South Africa, Nigeria, Egypt and Morocco, for instance are believed to be rubbing shoulders with some European countries as well as the Americas. Kenya, mentioned in the above case study is said to be forth placed as shown in the chart below.

**FIGURE 2.1: AFRICA 10 TOP INTERNET COUNTRIES AS AT DECEMBER 31, 2011**

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nigeria</td>
<td>45.0</td>
</tr>
<tr>
<td>Egypt</td>
<td>21.7</td>
</tr>
<tr>
<td>Morocco</td>
<td>15.7</td>
</tr>
<tr>
<td>Kenya</td>
<td>10.7</td>
</tr>
<tr>
<td>S. Africa</td>
<td>6.8</td>
</tr>
<tr>
<td>Tanzania</td>
<td>4.9</td>
</tr>
<tr>
<td>Algeria</td>
<td>4.7</td>
</tr>
<tr>
<td>Uganda</td>
<td>4.2</td>
</tr>
<tr>
<td>Sudan</td>
<td>4.2</td>
</tr>
<tr>
<td>Tunisia</td>
<td>3.9</td>
</tr>
</tbody>
</table>

In a report entitled ‘African Mobile Fact Book 2008’, one could observe a rapidly evolving mobile landscape in Africa. This growth has been fueled in large part by the liberalization effort resulting in the formation of independent regulatory bodies and increased competition in the market. Combining this with the numerous grassroots efforts to empower the poor by providing access to knowledge through technology reveals the beginning of a true revolution, in an area that is typically disregarded in terms of technological growth for obvious reasons. In their mobile market overview story, the publishers of this report had the following to say:

“The African mobile market has grown at a slow pace primarily limited by restrictive regulatory policies, closed markets, high entry barriers, and a shortage of local skills in information and communication technologies. However, the region has seen rapid growth in the last three years due to liberalization effort resulting in formation of independent regulatory bodies and increased competition in the market. Africa has become the fastest
growing mobile market in the world with mobile penetration in the region ranging from 100% to 30% and in most countries exceeding the fixed line penetration. For example, in South Africa, while the penetration of fixed-line telephony at end-March 2007 was approximately 9.8 percent, mobile penetration had far exceeded this, reaching approximately 84 percent by the end of 2007. Several key markets, such as Nigeria, South Africa, and Egypt, have emerged as the primary areas of growth; South Africa is a relatively mature market, while Nigeria and Egypt have immense potential for growth. 3G services are picking up in Africa and are expected to create more opportunities for mobile operators”.

This report reveals staggering figures about the actual and expected mobile phone growth rate in the region. For example,

1. The total African mobile subscriber base in 2007 was roughly 280.7 million people (30% of total) having emerged from a humble 49.10 million in 2002. It was then projected to reach 561 million (53.5%) by 2012.

2. By 2007 South Africa had achieved a mobile penetration rate of 84%.

3. South Africa, Nigeria, Morocco, Egypt, Algeria and Kenya constitute the key mobile markets in Africa in terms of potential growth.

4. At least 15 operators had already announced plans of introducing 3G voice and data services (including among others, Tanzania, Kenya and Nigeria).

5. SMS is being used in innovative ways such as pricing information for agricultural products (Srinivasan, 2011); mobile banking (in more developed regions); and human rights abuse notifications, (www.internetworldstats.com).

6. Social media has gained popularity with Facebook being used extensively among students and public officials.
2.1.4: THE STATE OF ICT IN GHANA:

Though Ghana is not listed here among Africa's high INTERMOB favorites, current developments put the West African nation of about 24 million people on the map of digitally awaken countries in the world and more particularly in Africa today. From a humble beginning with the first cellular network in Ghana, Mobitel (now Tigo) in 1992 followed by Spacefone network (now MTN) Ghana can now boast of more than five high-profile mobile network providers namely: Vodafone, MTN, Zain, Tigo and Expresso/glo, competing keenly for the subscriber market in the country. This is exemplified in table 2.1 below.

Table 2.1: MOBILE/FIXED PHONE SUBSCRIBER BASE IN GHANA AS AT FEBRUARY 2012

<table>
<thead>
<tr>
<th>MOBILE PHONE OPERATORS</th>
<th>Mkt. Share JANUARY</th>
<th>Mkt. Share FEBRUARY</th>
<th>VARIANCE +/-</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXPRESSO</td>
<td>183,607</td>
<td>183,670</td>
<td>63</td>
</tr>
<tr>
<td>TIGO</td>
<td>3,766,538</td>
<td>3,693,999</td>
<td>-72,539</td>
</tr>
<tr>
<td>MTN</td>
<td>10,249,528</td>
<td>10,323,334</td>
<td>73,806</td>
</tr>
<tr>
<td>VODAFONE</td>
<td>4,340,905</td>
<td>4,366,536</td>
<td>25,631</td>
</tr>
<tr>
<td>AIRTEL MOB.</td>
<td>2,725,128</td>
<td>2,813,598</td>
<td>88,470</td>
</tr>
<tr>
<td>TOTAL MOBILE</td>
<td>21,265,706</td>
<td>21,381,137</td>
<td>115,431</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FIXED LINE OPERATORS</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>VODAFONE</td>
<td>266,045</td>
<td>279,756</td>
<td>13,711</td>
</tr>
<tr>
<td>AIRTEL</td>
<td>10,763</td>
<td>10,114</td>
<td>-649</td>
</tr>
<tr>
<td>Fixed total</td>
<td>276,808</td>
<td>289,870</td>
<td>13,062</td>
</tr>
</tbody>
</table>

5 This is my own coined terminology referring to the simultaneous growth of Internet and Mobile phone use in Africa.
What competition like this brought into the Ghanaian communication system are the drastic reductions in prices of mobile phone services to the point of reaching affordable levels even for the luggage-carriers in the city markets, locally known as “kayayoo”, throughout the country. Beside the huge providers’ imports of mobile phone sets into Ghana and Africa as whole, family members in Diaspora also contribute immensely in making the device readily accessible to the indigenous. In Ghana today, the widespread use of mobile phones and internet is forcing most post offices to close down because the citizens/residents and their relations in Diaspora connect basically and more frequently on telephones and on the web than post mails. The post offices and post mails are fast losing their relevance in the information and communication domain.

A news article on Ghanaweb.com, published on 19th October 2011 had the following caption: “Airtel subscribers can pay "trotro" fare with phones”. Airtel(previously called Zain) is a mobile and fix phone network provider operating in Ghana that has gone to the extent of introducing e-commerce in the country. At a seminar with journalists, Airtel Sales Director, Luck Ochieng said “Our goal...is to make communications, banking, payments and infotainment affordable and accessible to all in Africa and especially in Ghana through Airtel Money. We have created safety by initiating a cashless society....”. (Ghanaweb home page, October 19, 2011). This Airtel mobile programme is already a success in Kenya where it was first introduced in 2004.The fact that Kenyans first, and now over 2million Ghanaians can pay lorry fares and transact other businesses via their mobile phones is a great ICT breakthrough for Africa.

The situation in Ghana today is a sharp contrast of what it used to be before 1992 when the whole nation had to rely on Ghana Broadcasting Corporation (GBC 1 & 2) radio stations and GTV for both world and local news. News was wholly under the control of the existing regime, usually military, and news censorship was the order of the day. In those days Ghana Telecom (GT) was the sole provider of expensive fixed telephone lines which only government functionaries, businesses and very rich individuals could afford. In those days, hardly would you find a personal computer (PC) or office computer, let alone laptops and Note-books in display at government offices, in companies and educational institutions. Nowadays, from school children up to the university undergraduates, each either owns a computer device, or at worse could patronize one in a nearby internet café. Mobile phones are commonplace even to the remotest villages of Domiabra and Aboaboso. Today it is cheaper to make a phone call from Ghana to Europe than the vise-versa. This has been made possible as a result of government’s gradual liberalisation and deregulation efforts in information and communication practices in the country. In view of the foregoing, we cannot still talk about digital divide in terms of access in Africa, not even in Ghana.
Granted that ICT tools and digital infrastructure are accessible, as afore said, it is how and what the people use these tools for that matters. It is from this perspective that we can talk about digital divide. In the words of Granqvist (2005) “From a social viewpoint, access or infrastructure as such can hardly be regarded as categorically beneficial”, since resources are not but they become (emphasis mine). We can talk about how Africans appropriate the ICT devices available to them, the internet and mobile phones especially. Are they using them to chart development course such as in trade and commerce, education and learning, research and security, democracy and participation, or are they using them for destruction in crimes such as murder plots, armed robbery and the popular West Africa 419 mastery?

In my view, with proper measures and control mechanisms, mobile phones and internet in the hands of majority of African youths and adults, otherwise called “digital natives”(Shah Nishan, 2011) including Ghanaians, are capable of becoming useful tools to improve vital registration system through instant reporting and recording of same. They could be employed effectively in educational campaigns aimed at expelling distrust, misconceptions and unwanted traditions that present serious impediments in the way of effective VRS.

Permit me to conclude that apart from some initiatives by the WSIS, the ITU, the OECD etc, there is hardly any applicable meta-theory in the ICT field. But, Taylor and Zhan (2007) believe that despite all the challenges and limitations, useful and practical policies can be developed using available tools, citing China as an example.

2.2.1. CONCEPTUAL FRAMEWORK

This conceptual frame work builds on the assumption that People are every nation’s primary resource and resources base. It is therefore a matter of providence, even an imperative on the part of the nation’s managers to maintain consistent records of each and every aspect of them as and when they are produced(born) or lost(dead). It is evident that nations with credible vital statistics stemming from full-fledged vital registration systems have palpable development face. Reliable vital statistics based on births and deaths are necessary for population health assessment, epidemiological research, health planning and programme evaluation (Prem Mony et al 2011). If the people would count in the development processes of a nation then there is the need to count them.

In Ghana, however, recording of births and deaths has been practiced since 1888(Kpedekpo, G.M.K. 1962, 1967). Yet, improvement in registration with regards to numbers has always been low. An overview of registration trends in Ghana over 5-year period, beginning from 2000 to 2004, showed a steady decrease in coverage for the first 3 years. For example, in the year 2000, only 31% of newly born babies were registered, falling to 27% in 2001 and to an all time low of around 17% in 2002. According to this report some remedial interventions were initiated, as a result of the consistent downward trend, to improve the system’s efficiency and this resulted in the figure rising slightly to 28% in 2003 and as at November 2004, the figure stood at 48.9%. (Registry of Births and Deaths -2004, Accra).
TABLE 2.2 (Ghana’s birth statistics in 5 years-2000-2004)

<table>
<thead>
<tr>
<th>Year</th>
<th>Registration Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>31%</td>
</tr>
<tr>
<td>2001</td>
<td>27%</td>
</tr>
<tr>
<td>2002</td>
<td>17%</td>
</tr>
<tr>
<td>2003</td>
<td>28%</td>
</tr>
<tr>
<td>2004</td>
<td>48%</td>
</tr>
</tbody>
</table>

A look at the table and/or the analysis above prompts some important questions: Why such low registration coverage in Ghana of births? What was the nature of the so called “remedial interventions” and how effective were they? A previous study I undertook in 1994 in one district (Upper Denkyira in the Central region) showed that B&D reporting levels are seriously low, in the region of 16% and 18%. Now with national figures (up to 2004) still ranging between 17% and 48%; and even still in the region of 65% births and 25% deaths as at 2011, there is every reason to look at the situation in a more academic lens trying to identify and locate problem areas in order to find ways of tackling them. Is it the people who are not reporting their vital events as they happen (demand side) or is it the registration officials and government agencies that are unable to discharge their duties due to certain mitigating factors (supply side)? If so, what are these factors and what may be done to resolve them? As it were, some reasons have always been assigned for such low records of vital statistics in Ghana including illiteracy, superstitions, misconceptions, political, administrative, economic (manifested in lack of logistical support), inaccessible rural communities and many more.

2.2.2. THE INDIAN EXAMPLE

Up to this point, I can say that the situation in Ghana compares perfectly with that of India. For in each case,

(1) Registration rates are very low. India had an average of 41% registration rate between 2000 and 2006, and death registration rate of 25% between the same period, (Prem, Mony, et al 2011). And

(2) In each case, several and almost the same constraints are identified as being responsible for the problems of low registrations. In India, some of the reasons assigned for incomplete, inaccurate and untimely registration of births and deaths included political, administrative, economic and legislative barriers, as well as neglect of cultural and community realities, (ibid). What is different, however, is that India embarked on sustained measures to arrest the problem. Their approach sought (i) the involvement of a non-profit organization as an interface between the government and the community; (ii) conducted supply-side interventions such as sensitization workshops for government officials, training for hospital staff and building data-sharing partnerships between stakeholders; (iii) monitoring for vital events by active surveillance through lay-informants; and (iv) conducting demand-side interventions such as publicity campaigns, education of families and assistance with registration. In one of these intervention measures codenamed “Strengthening of Local Vital Event Registration (SOLVER)” they included a nongovernmental organization that worked with the government and the public, serving as an interface, at a sub-district level in southern India, (ibid). In this exercise, the said NGO and the Indian government employed varieties of media tools in their educational campaigns. Some of the media tools they used included pamphlets, audio announcements via village drummer, digitally recorded messages, and brief jingles on local cable television, (ibid). Apart from the project staff
entering households (a method with limited reach) they used the above mentioned technologies to educate the people on the juridical and statistical benefits of vital events registration.

In India some of the Juridical benefits include establishing nationality, legal rights, ration card/identity card/passport, access to education, welfare schemes and utility services. Registration also has the statistical purpose of enabling measurement and monitoring of the health status of the population. Prem Mony et al (2011) report that at the end of this exercise 78% (i.e. 3322 out of 4259) families in the affected district were encouraged successfully to proceed with birth registration. They added that the exercise worked even more significantly in the overall rural (80%) than urban areas (70%). The Indian example presupposes that no problems are insurmountable and that, Ghana using ICTs in its vital registration exercise is capable of bringing improvements in registration rates thereby ensuring positive social change and a movement towards development.

2.2.3. TRIGGERS FOR ICT USE:
The raging socio-economic, political, legal and technological triggers in the world today calling for the integration of records management in ICT systems are so sweeping and authoritative that no single country can gloss over. It is estimated that more than 90% of the records being created in the world today are electronic. (www.arma.org/Electronic records and E-Discovery). FIGURE 2.2 below summarizes these triggers.

FIGURE 2.2: Triggers for integrating ICTs with records management.

![Figure showing triggers for integrating ICTs with records management](https://example.com/figure2.2.png)
So compelling are these triggers that Ghana’s preparedness or not to embark on this technical integration seems to pose no question since this is now a global imperative. It is also for the fact that more dangers lie ahead should Ghana fail to adopt a system that would ensure full coverage of its citizens in the registration system?

Evidence abounds to show that Ghana stands to lose a great deal if it fails to take a more proactive stance towards full vital registration. See figure below.

**figure 2.3: Possible dangers due to non-registration of vital events:**

- Without accurate population figures as well as empirical evidence for growth forecast, distribution of the national cake in Ghana is likely to result in disparities. Health facilities and other infrastructure are likely to be misallocated. High rate of tax evasions and uncontrolled crimes.

- Legitimate citizens may be disenfranchised due to identity doubts.
- Foreigners playing smart cards may gain the opportunity to meddle in political affairs reserved for citizens.

- Nationality fraud has high probability of occurring.
- There is high propensity for double registration and multiple passport acquisition by both nationals and defrauding foreigners.

A typical test case is when Ghana was preparing to come out of military rule syndrome in 1992. The Interim National electoral Commission (INEC)(the independent body established to conduct the first democratic election in about 12 years) had the biggest issue of not only establishing peoples nationalities/identities but also the ages of many of the people who went forward to register as potential voters.

This problem arose because for instance, people from Lome, Togo and nearby towns and villages bordering Ghana in the East who speak the same language as the Ghanaians from the Volta region (Ewes and Anglos), were accused of having been imported en-mass into the country to vote for the incumbent’s party of National Democratic Congress (NDC) whose founder and candidate (Flt. Lt. J. J. Rawlings) hails from the Volta region. The NDC had been calved out of PNDC (Provisional National Defence Council) the group which overthrew Ghana’s constitutional government on 31st December 1981. This regime was then metamorphosing into a democratic one, therefore it was feared that it would do anything to remain in power. This vote rigging allegation raged so high between the opposition parties and the incumbent party that in the end the election results (overwhelmingly won by NDC) was utterly rejected and challenged in court by the opposition. When the opposition party spearheading the challenge (New Patriotic Party-NPP) lost the case in court due to “Lack of
evidence” according to the Supreme Court, the party leaders authored a book about the conduct of that election. It was entitled “The Stolen Verdict”. A case such as this, with a high propensity to paralyse a nation or throw it into filthy confusion such as civil war could have been avoided if there was a proper birth register in the country. On the other hand, a refusal by INEC to register suspected individuals due to opposition allegations could as well mean a potential denial of a legitimate citizen’s franchise.

There are cases of fraudulent nationality claims by nationals from neighbouring countries such as Nigeria, Togo, Cote D’Ivoire and Burkina Faso who managed to acquire Ghana Passports and travelled around the world with. Some engaged in dubious deals abroad and when they were arrested they claimed Ghanaian origins with their passports to support. How could this happen? It is all because anybody (grown-up persons) could approach the births and deaths registry office and claim to be Ghanaian. The only evidence required of him or her is the ability to speak at least one Ghanaian language well. As soon as the person is able to maneuver his way through to obtain a birth certificate that person is due for a Ghanaian national passport.

Concerning deaths, the inability of this department to register and get accurate statistics for the government to update its employment records results in many instances of ghost names on government payrolls in many of the civil and public services. If proper government policies and projections are designed with both current and future population levels in view a lot of such lapses could be avoided and moneys going down the drain could be profitably channeled.

In 1994, two years after this fragile electoral incident, I decided to look for the problems affecting vital statistics in Ghana, especially Births and Deaths registration, in a dissertation as part of my Bachelor degree requirements. There I discovered that the people’s unwillingness to register their births and deaths were based on misconceptions, superstitions and traditional beliefs coupled with illiteracy, lack of proper information through educational campaigns. The government department responsible for registering births and deaths was not well equipped to discharge its duties properly; hence births and deaths go unnoticed thereby affecting day to day population figures in the country.

2.2.4: FAILURE OF THE TRADITIONAL MEDIA

One may well argue that if the traditional media such as Radio and TV as well as the public sphere were unable to aid in educating the public, ICTs and new media may not do any better. While this appears to be a sound logical deduction, I find it inconclusive and perhaps of the kind of argument described as hasty generalisation due to the following reasons as in Figure 2.4 below:
I want to assume that the traditional media (Radio & TV) could not help educate the people on the importance of registering births and deaths because:

a. Either the government department did not see these old school media as the proper means it could use to reach the people or it did not have the financial backing to embark on such media campaigns.

b. These gadgets might have appeared too expensive and unaffordable to majority of the citizens in the past, hence routing information through them were viewed as ineffective.

c. TV and Radio sets existing those days were too bulky and immobile. This means that information such as advertisements could easily go unnoticed when the prospective listener was at work or travelling etc. Of course a few farmers managed to carry Radio sets along with them to their farms. But did they really have time to listen? Today, radio and TV may be accessed on internet and mobile phones to the convenience of all.
d. The wave-length (especially TV) was too limited. Till today, one must erect very tall TV-antenna in order to receive TV signals in most areas of the country.

e. The information content of the little campaign they attempted to put across was disturbing and unattractive as it only emphasized on punitive measures against defaulters.

If the previously identified problems still persist, how can we apply ICTs which are in vogue these days to try and solve the problem?

In conclusion, it is evident from the forgoing that there is enough justification to explore the integration of ICTs and new media in Ghana’s VRS, knowing that these tools have the potential of ensuring accurate data recording and archiving and help propagate information on a wider scale at a relatively less human cost and risk.
CHAPTER 3. LITERATURE REVIEW:

3.0. INTRODUCTION: This chapter looks at existing literature on the topic under discussion (if any) or separately looks at literature on the concept of vital registration system, particularly births and deaths, and ICTs and new/social media. It examines previous research on this topic or a similar one and uses it as informed tool to strengthen this current study.

3.1. VITAL REGISTRATION SYSTEM (B&D):

A resource book entitled “Using law to improve African vital registration rates” was the first and, perhaps the only relevant material as far as this topic is concerned, I laid my hands on when looking for available literature on this study. This e-book which appears in three country-chapters (Ghana, Mozambique and Tanzania) emerged as a result of requests made by concerned statisticians. It was put together by Professor Ann Seidman and 3 law students of Boston University (BU) Law School’s Africa i-Parliaments Legislative Policy and Drafting Clinic in 2009-2010 and edited by Ann W. Seidman, Robert B. Seidman and Susan Morrison, professors at Boston University. Also mentioned as significant inspirers in the writing of this resource book were leading officials from two United Nations Organisations(U.N.O.). For example, “Dr. Genene Bizuneh of the United Nations Economic Commission for Africa invited one of this book’s editors to the 2009 Tanzanian Conference on Vital Statistics to discuss the potential use of law to improve the collection and registration of vital statistics”(Seidman et al 2010). This is a clear sign of how important vital statistics is to the world at large. The book comprised of research reports that justified bills designed to improve the collection and registration of birth data in rural areas of Africa. According to Ann Seidman(2012), “the book aimed to provide evidence to explain why, on the average, African governments register only 6% of their nation’s rural births”. She added that scenarios such as this are “a serious impediment to planning relating to population growth—eg for schools, housing, roads, food, etc. – which inevitably requires facts”. Been in close contacts with collaborators in each one’s country the student writers were able to gather valuable evidence on birth and death registration efforts. In their acknowledgment, the editors revealed that the BU-African Parliamentary Knowledge Network (APKN) undertakes projects such as this at the request of concerned Africans; most likely, referring to African leaders. At a glance, it is easy to wonder how three African countries (perhaps more) would concurrently think that they needed bills and laws rather than any other tool to improve B&D registration rates and for that matter make requests of this nature to that effect?

The reason may stem from what Seidman et’tal believe in when they said that “An effective vital statistics system requires the use of law to change an existing vital statistics institution – the “repetitive patterns of social behavior” – that perpetuates deficient registration of any set of essential statistics”. In their resource book under review, the editors argued that Law can change a defective registration institution only by altering the behaviours of those responsible for gathering and registering the relevant statistics – i.e. registry officials – and those responsible for providing those statistics.

I have a big problem understanding and, for that matter, agreeing to this assertion in that, the proponents here failed to describe how the law can effect this change of people’s
behaviour: is it by coercion (through threat of punishment resulting from failure to comply) or the institution of some formula, or still maybe, by the provision of financial and material needs, persuasion and encouragement?

For the purpose of this thesis and, more especially the topic under discussion, I will concentrate more on the country chapter concerning Ghana. In chapter 5 of this resource book, student writer Joshua Tosney who wrote on Ghana introduced his draft bill by providing an excerpt touching on the biggest problem of inadequate birth registration in Ghana. He made particular mention of what happened in 2008 when he said that about half of the children born in Ghana in that year were not registered and so did not receive birth certificates.

“Because they lack birth certificates, these children will face difficulties accessing social programmes such as health care and education. Because poor registration coverage contributes to inaccurate vital statistics, Ghana’s policymakers have difficulty ensuring and verifying the effectiveness of their policies”(Tosney, J. 2011) quoted in Seidmann et al. With this and many other socio-economic setbacks resulting from non-registration of births and deaths Tosney believed that a new and perhaps more stringent bill when passed into law by Ghana’s parliament could help alter the problematic behaviours of role occupants to bring about increased birth registration rates. He buttressed the law’s potency by quoting a Ghanaian editorialist; Kwame Twumasi-Fofie’s striking utterance which he thinks captures important Communication critique.

“There must be a law somewhere making it mandatory for people to register births and deaths because I cannot believe that the Registry was established only on the assumption that the good people of Ghana would, on their own, make good use of it”(ibid). I believe that these laws have always been in existence. Therefore, if we are looking for answers to the question, why registration rates are still not encouraging in African countries, we should not simply go back to the law, or write a new mandatory law somewhere and expect to achieve the results the old law could not achieve. Mandatory laws (as being requested by Twumasi Fofie) would only scare the people rather than encourage them.

But ICTs like mobile phones, internet and Facebook which convey fun and prestige to the people are more likely to draw instead of repel them. These inherent centrifugal and centripetal characteristics of law and ICTs respectively, are cardinal issues that need to be considered in order to make informed choice.

The writer stated that recent efforts by the registry have centered on attempts to communicate that the Act does indeed make the registration of births and deaths mandatory. But Tosney also agreed that the existing law had weaknesses and that the existence of the Law alone was not enough since many rural parents do not even know they have to register their children after birth. As he put it,

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This quote refers to my latest email correspondence (June 2012) with the retired professor (Ann Seidman), in my quest for in-depth knowledge into the draft bill she co-edited. Ann W. Seidman has very rich experience in Ghana’s socio-economic trajectory. Before writing her PhD thesis on Ghana in 1968; “The implications of Ghana’s 1941-1965 development experience for economic theory”, she had taught economics in the University of Ghana, Accra from 1962 to 1966, and many professional contributions to Ghana.
“Many parents, guardians, and relatives often do not know that the law requires registration”. What we should remember is that the law as an authority is not an end in itself. For apart from the law stipulating that some kind of registration or census must take place at a certain date or time frame, it does not specify ‘how’ or with what. Law always requires useful tools to function; else it would always remain weak, no matter how mandatory it may appear. The law must be effective and effective law is that which has tools to propel its provisions into real functions.

A Ghana-based NGO report to the UN Committee on the Implementation of the Convention on the Rights of the Child Pursuant to the Submission of the Ghana State Report on the Rights of the Child (1997-2003) noted that low registration rates were “due to gaps and weaknesses regarding the functionality of the structures put in place to do the registration.” Gladly this was significantly acknowledged by Tosney in Seidman et al. I believe that “structures” being referred to here are the provisions of the law, the mode of registration and tools available for registration. Tosney himself admitted that the underlying factor for low participation in the registration system “lies in the insufficiency of the Act itself”. He explained that the 1965 Law (Act 301) makes no provision for educating the public about the importance of birth and death registration. It does not contain specific provisions for informing the public of the means of complying with the mandate of universal registration; neither does the law provide opportunities for the registry to reach the public.

In the same resource book, Brian Hartley who wrote on Mozambique expressed similar concern about the law’s weaknesses in affording high registration rates in that country. Hartley’s research revealed that most Mozambicans, especially the rural folks, lack knowledge about the law and its provisions. He also mentioned language barrier as another impediment to registration. The student drafter therefore proposed strong communication process such as consistent awareness campaigns given in multilingual fashion. The drafter, however, fell short of prescribing the best and most effective communication tool or media to employ in order to ensure results. As I have asserted, elsewhere in this thesis, law in the books cannot speak for itself and that does not make it a tool in itself enough to affect a process.

China for instance, has a strict one-child/family law (China’s one-child policy, 1979). But as my Chinese friend (Cheng, in 2006) intimated, “This law is only partially operational in the cities; after all who monitors the rural dweller?” According to this friend, the biggest weakness of this law is that it does not embrace the rural folks. What this means is that an urban-dwelling family who wants to have more than one child could easily migrate to the rural territory and freely satisfy their ego. Apart from the rural Chinese family been unaffected, there is barely any mechanism to monitor families’ procreation rates, hence the Chinese population in its constant explosion. It is also rumoured that even in main Chinese cities and municipalities where this law was originally designed for, citizens/residents still find ways of circumventing and breaching it by having more than the legal and mandatory quota of one and refuse to register these extra children. Anita Chang of Associated Press(AP) writing after China’s 2010 population census stated that one major challenge census-takers faced were children born in violation of the country’s urban one-child policy since many of them were unregistered and therefore had no legal identity. Chang estimated that these children could number in the millions, thereby sparking the government’s rethinking to
waive penalties and allow these children to be registered and legalized (Anita Chang, AP. September 3, 2010).

Laws are good as long as they seek to chart the course of orderliness in society. But unless they are fashioned in a way that will encourage subjects and role actors to comply, their dominant face of being a centrifuge ends up negating their intended good purposes. There is a fine line between a tool and authority. Law is an authority that defines issues and activities and has the potential to supply required tools for accomplishing a defined task. In cases where the law says people born and those declared dead must be registered for reasons therewith specified, only a framework is said to have been provided. Those named (people or agency) to carry out the said task must have implements to work with. But in Africa, and Ghana in particular, it is clear that law is both authority and a tool. For this reason, many civil service establishments instituted by law remain dormant and dysfunctional; a toothless bulldog (can bark but cannot bite). It is like a king without a crown.

In China’s case above, the law could have ordered a huge budgetary allocation for some scientific research leading to the invention of a sophisticated communication device for child-birth surveillance. A device capable of detecting where and when a new child has been born could enable authorities follow every event and put them in their appropriate classes. Only then can the law be said to be effective because people would have very little or no space to manipulate and violate the law.

3.1.2: PROBLEMATIC BEHAVIOURS

Apart from the law being weak in its provisions and therefore could not achieve its aims, Tosney, J. identified other major obstacles confronting registration efforts. These include:

1. Individual citizen’s failure to comply with registration requirements. Unfortunately, he did not attribute this failure to any cause in order to inform his choice of solution. However, I know from previous study and experience that superstitions and misconceptions mentioned elsewhere in the earlier chapters of this thesis are responsible. In this regard, evidence-based public education through the use of modern communication media (ICTs) would go a long way to dispel such problems.

2. Tosney mentioned that problematic behaviours of the officials of Ghana’s Registration System and the Ghana Statistical Service also contribute to the wide gap that seems to persist between those responsible for providing the essential data on births, and those registering that data. He believes that the Registry officials do not adequately cover rural areas. The writer did not assign any reason to this but I know from experience that this inadequate coverage is due to lack of transportation means and logistics. With only 7 vehicles (3 of them stationed at the headquarters) serving 10 regions nationwide, it is clear that some regions will have nothing to move staff to and fro as and when duty requires. This is where mobile phones and emails could play important role to solve the problem, especially where personal appearance of officers is not necessarily required.

3. That the Registry officials process information too slowly. This is one major obstacle besetting the registry, the fact that registration forms, paper cards and calculations all have to be done by hand. Besides, the bureaucratic bottlenecks and red-tapeism associated with the procedure drags the system so slowly that informants lose interest and find ways of avoiding such system. “Traditionally, assistants submit forms to regional offices, which subsequently process and send the forms to the central registry office in Accra to assemble a national database” (Tosney 2010). This process could be facilitated by the application of computers and internet. An attempt to this effect was initiated in 2003, where the Registry
began to automate its registration process with the installation of 10 IBM servers at the headquarters. Included in this programme was a set target of having computers in all B&D offices throughout the country by 2008. The programme, unfortunately, stalled along the way for no apparent reason.

4. That Registry officials do not promote the Registry’s activities enough, neither do they engage in proper community outreach. Similar to argument number 2 above, the Registry’s inability to promote its activities has been due to lack of means of transport and logistic support. The fact that distant campaign programmes via Radio and television cannot be sponsored by the registry, or TV coverage still unavailable in the rural areas of Ghana, poses great limitation on effective education regarding B&D importance, the existence of any law and its requirements. As Tosney acknowledged, in 2004, the Registry initiated what seemed to be a welcome awareness campaign that culminated in the institution of September 1 each year as “Births and Deaths Registration Day” and the waving of registration fees for children up to 12 months. This initiative produced an increase in birth registration rate of 49%, up from 28% in 2003. Whether this will be sustained with improvements bringing in the internet, social media and mobile phones to facilitate the activities thereof is a matter of time.

5. That the Registry officials fail to utilise opportunities for collaboration with other agencies, organizations and individuals capable of assisting with registration. This was a very important issue raised by Tosney. Thinking in the same direction, I personally identified institutions such as hospitals, maternity homes, schools and government offices such as labour, passport office, pension/social security office, Electoral Commission, National Identification authority, driver and vehicle licensing offices and the likes, where personal data counts in their day to day administration. These institutions offer massive opportunities for B&D registration exercise to be taken seriously provided collaboration efforts would be ignited between them that would require such institutions to insist on the production of genuine identification (ID) before attending to the service these clients may require. birth or death certificates, as the case may require.

6. Lack of effective supervisory role accounts for low registration, asserts Tosney. It is believed that the Ghana Statistical Service (GSS) which has the responsibility of overseeing accurate reporting by the nation’s statistics-related institutions is itself not sufficiently equipped, particularly in ICT tools and personnel quality, hence its inability to coordinate and control the timely generation and accuracy of data including especially births and deaths. “...the GSS does not assist with training efforts to enhance the capacity of registration workers and deputize non-staffers to assist with registration efforts”(Tosney).

### 3.1.3: COMMUNICATION AND TECHNOLOGY

A very relevant part of Tosney’s work, as far as this literature review is concerned, is where he touched on Communication and Technology. It was refreshing to read that the man who sought to improve Ghana’s vital events registration through laws could also identify communication and communication technologies as very essential components in efforts to improving vital registration rates. In his paper, Tosney firmly underscored the need to adopt computerisation in the registry’s activities, saying that “A computerised system allows registry staff to scan information into a central database”(Seidman et al: p. 197). However, I think that he acted too hastily in praise of the department when he said that, the registry had worked to increase its efficiency by computerizing the registration process. I wonder what the state of this computerisation initiative was at the time Tosney was writing. For all I
know, after the computerisation hype in the first few years from 2003/2004, UNICEF and PLAN GHANA (the 2 partner organisations in this project), withdrew having finished playing their parts by providing the necessary initial capital and manpower training. The registering department then began experiencing problems such as lack of funds to manage and sustain the programme, apathy towards government projects and disinterest in civil service work, a common culture in Ghana. This explains why they resorted to increasing birth registration fees by 400% in 2009, high enough to capture press attention: a matter captured by Tosney himself (Tosney, in Seidman et al; e-book p. 176). From this time hence, the well-intentioned programme did not only stall but also the people were deterred by the new high fees.

Concluding his analysis, the writer acknowledged that “… in the last half century, Ghana’s law makers have made significant efforts to improve the nation’s birth registration system, as well as its methods of providing the full range of vital statistics. Nevertheless, the efforts of those responsible for providing birth data to the relevant implementing agencies are… not sufficient”. By this the two of us agree that socio-economic planning in Ghana aided by vital statistics suffers a great deal.

3.1.4: OTHER EXAMPLES
Many countries have applied the law to address vital registration problems and are still holding on firmly to it. In Africa, Tanzania (one of the 3-country chapters in this book), Kenya, South Africa etc. all have sweeping legislations dating back to the early 20th century or even earlier in some cases.

(A) TANZANIA: Civil registration in Tanzania, for example, dates back to 1917, when Tanzania(previously Tanganyika), then under the German colonial power, enacted a law for the registration of the births and deaths of its citizens and residents.’ After World War I, the British took control of the Tanganyika mainland. They retained the German birth and death registration efforts, re-writing it as the Births and Deaths Registration Ordinance, Cap.108 (1920). It is said that neither colonial government, required the registration of Africans who lived in rural areas though they were the majority. In 2006, the Tanzanian government officially launched the Registration Insolvency and Trusteeship Agency, ‘RITA.’ As its stated aim, it sought to achieve effective and efficient management of information on key life events, incorporation of trustees, safeguarding properties under trust of deceased persons, insolvents, and minors to enable the law to take its course. (index mundi/Tanzania birth rate).

The Tanzanian Government established RITA to take over a number of functions, including those that fall within the Births and Deaths Registration Act Cap. 108 (2002) – the responsibility for implementing the laws prescribed in the Act.

The question is whether Tanzania has, up to date, been able to achieve any enviable vital registration target using laws, Acts and executive provisions. In their resource book (Using Law to improve African Birth Registration Rate) Shemane Amin(2009).

(B) KENYA: Kenya on the other hand, commenced its B&D registration on 9th June, 1928. At this time an Act of parliament to provide for the notification and registration of births and deaths and other matters incidental thereto was issued to the country. Chapter (CAP) 149 of this Act (1968 & 1972, revised 2010) defined birth as “the issuing forth of any child from its mother after the expiration of the twenty-eighth week of pregnancy, whether alive or dead”(www.kenyalaws.org).
To show strict compliance of B&D reporting and registration in Kenya, the country’s B&D registration laws also provided for deadlines or limited period within which to register a birth or death. For example, Section 15 of the 1961 B&D registration Act; Section 14 of the 1971 B&D Act and section 7 of the 1990 B&D Act, all revised under CAP 149 of the 2010 B&D registration Act of parliament provides in section 8 as follows: “A registrar shall not register a birth or death after the expiration of six months from the date of such birth or death, except upon receiving the written authority of the principal registrar issued in accordance with the rules, and upon payment of the prescribed fee”. In the case of births, Part 3(General Registration Procedure) of section 29 of the births and deaths registration rules sub-section 6 provides for 3 months within which to report a birth. The time within which the notice of the birth of any child is to be given under section 11 of the Act to the registrar of the registration area in which the birth occurs shall be three months from the date of birth). (www.kenyalaws.org).

The foregoing legislations indicate that Kenya has a long history concerning B&D registration. However, as communication for development student my critique probes deeper into how this elaborate legislation was communicated to the masses, especially those in the rural areas. What is the tool defined to propel this elaborate legislation to ensure its full success? Could ICTs and new social media have been mentioned in this revised Act(2010) as the main engines for dissemination and actual implementation of the provisions of the Act, making available such modern communication tools or ICTs as computers and internet, mobile phones, Fax machines, especially when registrations were made compulsory throughout the country? Could the law have recognised distant reporting via phone calls (mobile phones esp.), text messages, e-mails and Fax, or better still, using internet blogs and social media sites to pursue the lofty agenda?

3.1.5. CONCLUSION

From the forgoing, it is clear that though more African countries like Ghana, Kenya, Tanzania, Uganda etc, have long depended on Laws and legislations in an attempt to get vital registration system on course, there is every indication that they have not succeeded. For while it has taken Kenya several years to implement nationwide compulsory registration system, and still struggling with it(www.kenyalaws.org), Tanzania can only boast of 6% coverage of rural births leaving a whopping 94% unregistered. Ghana’s rural coverage is no exception according official figures received during this research.

Seidman et’al have argued that Law can change a defective registration institution only by altering the behaviors of those responsible for gathering and registering the relevant statistics – i.e. registry officials – and those responsible for providing those statistics (i.e., the relevant citizens, together referred to as the ‘role occupants’). But as to whether behavioural change occasioned by law, without modern ICT complements, can truly provide reports and statistics consistent with realities on the ground is enough food for thought to those who put their trust in law to do the magic. This is so because laws in the books have no chance of communicating with the public unless they are carried through a medium. The experience of Ghana shows that laws have always been used to alter the people’s behaviour and attitude toward the exercise but the nation is still yet to have anything to show for. Meanwhile, how have modern information and communication technologies (ICTs) got anything to do with an ancient activity such as VRS which has existed and thrived for centuries and even millennia without the former? This indeed, is a critical and mind-boggling
question which I neither claim to have a straightforward answer to nor attempting to solve such a complex question in this thesis. It is just proper to give something else a trial, and ICTs seem to be the likely option.

From this review I believe that it pays to conclude that the law alone can hardly fight this battle of Africa’s vital events registration inadequacies, except supported by modern communication tools widely known to be engines of economic development and social change.

3.2.1. ICT4D

The impact of information and communication technologies (ICTs) on vital registration system may not have been tested yet in any empirical research. Nonetheless, the impact of these communication tools are overwhelming in other development areas, hence they are widely branded tools for development and change.

In a study published on his ICT4DBlog (June 26, 2011) Richard Heeks posed this question: “Do ICTs contribute to economic growth in developing countries?” A background rationale for this question might have been the ‘digital divide’ discourse that places Africa, among other regions, at a digital disadvantage.

The writer began examining this question by referring to Robert Solow’s 1980s trigger of the idea of “productivity paradox” which states, “you can see the computer age everywhere but in the productivity statistics” (Heeks, 2011). He then formulated a similar version of Solow’s paradox for Africa, saying “And for many years there was a similar developing country growth paradox: that you could increasingly see ICTs in developing countries except in the economic growth data”. Heeks asserted that this is still largely true of computers and to some extent the internet, but less true to a certain extent because of the fact that mobile phones have become the dominant form of ICTs in development. He quoted major studies such as Waverman et al (2005), Lee et al (2009) and Qiang (2009) and said that these have all demonstrated that there is a clear connection between mobiles and economic growth as well as a general social change.

A case in point is Kenya’s economic development indicators in the recent edition of Kenya Economic Update (December 2010)(3rd ed). In this particular report, ICTs especially in the form of investments in mobile phones, subscription and use of them is said to have grown to an average of 20% per annum, between 1999-2009. The report estimates that mobile ownership is at a tipping point of 1 to 1 adult, in 2010, up from 1 to 1000 adults in 1999, while internet usage rate for 2010 is around 4 per 10 adults. Furthermore, person-to-person mobile money transactions at the end of 2010 were around 20% of GDP. Mobile phone has created a culture of electronic transaction in Kenya with about 15 million adults (2 out of every 3) on record of actively accessing mobile money.

So like I have stated elsewhere in this document, it is not which tools are available or not but what the people use these tools for that matters.

3.2.2. CONCLUSION:

It is about time Ghana sought diverse ways of applying its relatively huge mobile subscription base in order to help benefit its social strata, the economy and the political system for overall development. With over 21 million mobile phone users in Ghana I believe that an initiative to conduct vital registration and campaigning using mobile phones could be very effective and successful at less government cost. This may start in a very small way. But at the tipping point its impact could be significantly rated high percentages among the country’s socio-economic development indicators.
CHAPTER 4: METHODOLOGY

4.0. Introduction:

A method is the way, rather than means, by which a target is reached or a vision advanced. My epistemological considerations towards exploring the role of ICTs in the Ghanaian vital registration system (VRS) suggested a participatory study to arrive at the set goal. For this reason I employed observation and discursive method approaches intended to gather qualitative data for analysis. In the words of Samy Tayie (2005) “Science is empirical” explaining that researchers are more interested in a knowable and potentially measureable world. The word “empiricism” is derived from Latin “empiricus” and Greek “empeirikos” both meaning “experience” or “observation” through the senses: i.e. seeing, touching, smelling, hearing, etc. In effect, this combined approaches helped to gather mainly Primary data, while online materials and consultation of archives and databases offered secondary data which overlap to complement each other for healthy analysis in this research work. (See FIGURE 4.1 below).

FIGURE 4.1(converging arrows showing Primary-secondary-data-overlap complementing each other for research analysis).

4.1. PRIMARY DATA: This is first hand information or data collected through interviews or observation. Since the case under investigation is somewhat new in academic research field, questions arising and answers thereto, in my view, could be better proven by directly observing or witnessing. This view informed my decision to adopt observation method which...
comes with the opportunity of asking and discussing questions about what is there or not there and get direct answers to them. These direct answers would provide me with primary data which, of course, would need to be augmented with secondary data. For example, to get concrete answers to questions such as: which method of data collection is currently being used by the B&D department; has the department got computers to work with?; is the department connected online, etc, one can easily get ready answers to these through personal observation rather than any other method. Furthermore it is also an opportunity to engage in discussion with interviewees in order to clarify and substantiate otherwise ambiguous and tricky issues that other interview methods usually pose.

4.2. SECONDARY DATA: Secondary data on the other hand, are information from pre-existing databases and they are useful for providing excellent and convenient sources of data. The host of databases and the increasing archiving of information on computers today reveal an enlarging area for obtaining data very useful for research. In this study, I had to rely more on secondary data for the fact that information on primary data was very scanty. Secondary data are ordinarily collected by people other than the researcher himself and are independent of any specific hypothesis. Secondary data is again credited with the opportunity of observer bias being diminished. It is obvious that the use of previously collected data is efficient and comparatively inexpensive. Moreover, the data are collected in a much standardised way, permitting comparisons over time and between different time periods.

However, because the data are collected for other purposes; they sometimes are not ideally suited to the testing of the current hypothesis. Sometimes too they may be incomplete. This is usually where sampling biases result. For example, the electoral roll depends upon registration by each individual. Yet many homeless, mentally ill, and chronically sick people may not be registered. This weakness notwithstanding, I still found information from relevant databases very useful in my study. For example, statistics from organisations such as Vodafone Ghana (VGH), National communications Authority (NCA) and National Statistical Services (NSS) provided firm bases for comparisons and analysis.

4.3. OBSERVATION: In this study, I combined observation and discursive methods as the main tools to extract information and/or data from the B&D Registry and other relevant areas of interest. With qualitative observational research tool I spent 4 weeks in the field doing a one-time exploratory study on the department’s ICT applications, the extent of connectivity among the various offices at the national, regional, district and sub district levels as well as connectivity with the public vis-à-vis expected and actual response in statistical reporting. An observation with a reflective journal enables the researcher to talk to himself concerning the observed situation in the field. This informs the researcher’s deductions and conclusions over a given subject matter. Using the observational method, I observed and reflected on how the department functions: i.e. how the officials work in the
office in this ICT age (with or without computers, internet, telephones etc). Are some or all of the Officials computer literate?

I used semi-structured interview questions in a conversational/participatory approach to interview my sample groups at B&D offices, the hospitals, the labour department and 2 schools under ministry of education. For the B&D department this approach also sought to enquire about their campaigning plans and strategies. This was meant to ascertain their C4D application level aimed at imparting knowledge and understanding about vital registration system in the country. To do this effectively, I found the complement of Sample survey method worthwhile and therefore applied it as below.

4.4. SAMPLE SURVEY : This may be simply defined (in my own words) as the proportion of a total population (sample population) either randomly selected or objectively calculated. With exploratory mission in mind, I realised that it was not feasible for me to visit all the numerous B&D and other targeted offices, let alone to interview their hundreds of officers. It is also important to note that Ghana as a unitary state with centralised administration makes all its administrative units automatically centralised. Therefore it would not be too expedient to choose a huge sample from the affected institutions knowing that what affects the head office necessarily reflects in all the other branches of the same institution. In the light of this I chose, in total, 15 interviewees from three different government setups (N=15); i.e. the Births and Deaths registry, Ministry of Health and Ministry of Education.

4.5. SAMPLING METHOD

My sample area comprised of 4 carefully selected professional setups. i.e. the department of Births and Deaths under the ministry of local government and Rural Development, The Ministry of health, Labour department of the Ministry of employment, and the Ministry of education(see figure 4.2)
The above figure shows the division of the 15 selected samples among the 4 bodies. Five interviewees were chosen from 5 B&D department offices; Ministry of Health(MoH) hospitals for 4 medical practitioners (doctors and nurses---2 males, 2 females) at La Polyclinic in Accra and Dunkwa government hospital in the central region. There were 2 interviewees (male & female) chosen from 2 labour department offices in Obuasi and Dunkwa-On-Offin, and 2 head teachers each were interviewed from 4 basic schools in Dunkwa and Obuasi. It is important to note that different questionnaire structures were designed for each of the four sample groups taking into consideration their professional fields and the role they could play to help the registration process (see appendix 5).

I couldn’t get the opportunity to personally administer questionnaire to the Chief Registrar at the B&D headquarters. However, he accepted the request to answer the questions in writing, (see appendix 6). I took much interest in (and hoped to) obtaining and comparing registration data between periods before 2000 and after when the department secured An IBM AS-400 server and installed it at the headquarters (www.bdrghana.gov.gh).
Ghana is geographically divided into 10 regions. The map below shows the map of Ghana and its regional divisions. In each of these regions is a regional head office of the B&D department situated in the regional capital (designated ‘C’). The capital cities are Accra (ACC) for Greater Accra region and at the same time the national capital; Kumasi (KSI) for Ashanti Region; Sekondi (SKD) for Western; Cape Coast (CC) for Central; Tamale (TML) for Northern; Koforidua (KFD) for Eastern; Ho (HO) for Volta; Sunyani (SYN) for Brong-Ahafo; Wa (WA) for Upper West; and Bolgatanga (BOL) for Upper East region.

**FIGURE 4.3: THE MAP OF GHANA SHOWING ITS 10 REGIONS**

One would say that this division is based mainly on cultural considerations. A first-time visitor in any of the regions could easily tell that it is a unique cultural enclave, especially language wise. For example, you can find Ashantis in the Ashanti region, Ewes in the Volta region, Fantes in the central region, Bonos in the Brong-Ahafo region, etc.
Every region is subdivided into districts. At the moment there are at least 170 administrative districts, not necessarily evenly distributed among the 10 regions. Experience shows that total land area and political expediency rather than population density are the two main determining factors for the number of districts in each region. Table 4.1 below shows the administrative hierarchy of the department of B&D; top-down, ranging from the headquarters to regions, to the districts down to the “network” of 391\(^8\) local registration centres,(www.bdrghana.gov.gh).

**TABLE 4.1: THE HIERARCHY OF GHANA BIRTHS AND DEATHS REGISTRY.**

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<table>
<thead>
<tr>
<th></th>
<th>a. HEADQUARTERS-ACCRA</th>
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<tr>
<td>b. 10 REGIONAL HEAD OFFICES</td>
<td></td>
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<tr>
<td>c. ACC</td>
<td>CC</td>
</tr>
<tr>
<td>d. 10</td>
<td>17</td>
</tr>
<tr>
<td>391+ local registration offices</td>
<td></td>
</tr>
</tbody>
</table>
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“d” shows the number of district offices under each regional head office as in line “C”.

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8This figure was quoted from the department’s website which has not been updated since its creation in 2007. With the increase in the number of districts from 138 to 170, these local registration offices could be more as well.
4.6. SAMPLE SELECTION JUSTIFIED

The main reason for taking this professionally spread out sample (see figure 3.4) is to make sure I have diverse opinions and facts to present in this Thesis.

For example, the hospitals are usually the places where most births and deaths occur. So it will be interesting to talk about their own records of these events, what communication links exist between the hospitals/clinics and the B&D department as a means of collaborating to establish accurate and reliable national births and deaths register.

By interviewing personnel from the labour department my focus is on how job seekers present themselves when they go there to register for jobs. The labour laws of Ghana require that every job seeker, especially the unskilled, must hold a ‘labour card’ which may be translated as a work permit. But what kinds of personal information do job seekers give to labour officers and how, as they have mostly no birth certificates to show in order to be issued labour cards? Is there any working communication links between these two important government departments working for a common good?

Lastly I chose to interview personnel from the ministry of education, particularly Teachers (Head teachers) of basic schools, because I believe that they cannot do any proper admissions of potential pupils (school intakes) without necessarily knowing their vital statistics. The interest here is to know how many children are admitted with authentic birth certificates. Is there any communication link between basic schools and B&D department? How can ICTs be used to bridge and link these different departments to promote good vital registration system (VRS) for change and development in the country?

4.7: FIELD WORK

My trip to Ghana, as stated in my PP (see appendix 1), was twice postponed due to circumstances beyond my control, thereby changing my research schedule as shown in appendix 2. Delays notwithstanding I managed to spend the planned 4 weeks in the field.

While in the field, I managed to visit 5 B&D registration offices as indicated in my PP. These were the Headquarters in Accra; Kumasi, Cape Coast and Sekondi regional Offices and Tema district office.

My first point of contact during this exploratory mission was the national headquarters in Accra. I spent the first 3 days with my collaborator in his office (from Tue. 3rd-Thu. 5 April).
In these 3 days I had time and opportunity to observe for myself which ICT tools are in use in the Head office for data collation, for reporting the nationwide events submitted by the districts and regional offices and how information is disseminated to the branch offices, interest groups and to the nation as a whole.

Mr. Kingsley Addo, a senior officer of the department at the headquarters (joined by one female Officer) took his time to introduce the department in line with my interview questions and planned discussion. He explained the procedure for registering births and deaths as provided by law, Act 301(1965) and Registration of Births and Deaths Regulations, 1970(L.I. 653).

Mr Addo confirmed that Ghana Births and Deaths Registry department operates under the Ministry of Local Government and Rural Development. Concerning the period of the department’s existence, he said “Although vital registration started way back in 1888 in Ghana (then the Gold Coast), the Births and Deaths Registry as a department was set up in 1965 to manage the registration of births, deaths and fetal deaths in the country”. Like Tanzania and Kenya, my informant revealed that Ghana B&D registry department also derives its mandate from the Registration of B&D Act, 1965(Act301) and further supported by the registration of B&D regulations, 1970(L.I. 653).

My exploration took a cyclical order from Accra to Cape Coast, Sekondi, Kumasi and finally to Tema district office (covering 4 regions) as in figure 4.4 below.

**FIGURE 4.4: EXPLORATORY ROUTE FROM ACCRA TO TEMA**
In this journey my main motive was to see and experience, question and discuss matters bordering methods and tools for registration, drawing conclusions based mainly on personal experience rather than interviewees’ differences and judgments. I called this kind of research “INQUISITORIAL”. I aimed at studying the department as a unit by observing.

With respect to the ministries of health, education and labour department, my aim was to establish their functional relationship with the B&D registry. For this reason separately designed interview questions were administered to each as already mentioned. My discussions here centered more on their culture of records keeping as well as their relationship and professional interest in the activities of B&D registry (see appendix 4).

Even though Obuasi is a city in the Ashanti region and Dunkwa in the Central region, the two cities are geographically close and so it was easy to connect and combine research activities involving two labour offices, Dunkwa government hospital and 4 head teachers from basic schools in Dunkwa and Obuasi.

In my analysis of all these activities, findings from my observation as well as views from participants would be more projected and reflected upon in order to determine the end result of this research. This will determine what recommendations are necessary and as to whether further studies could emerge from this.
CHAPTER 5. FINDINGS AND ANALYSIS

5.0. INTRODUCTION
This section analyses the findings from my 4-week long field work in Ghana. It follows closely the methodological approaches (observation, participatory and discursive) used to collect both primary and secondary data. It begins with outlining of vital registration requirements and procedures as provided by the law and examines a few of the provisions concerning their effectiveness and relevance in this digital age. The analysis reveals, in particular, the weaknesses of the existing manual method as being anachronistic, hence a new wave of technology is needed either to complement it or overthrow it completely.

5.1. MAIN FINDINGS:
My research conducted in accordance with my research questions revealed, among other things, the following:

1. Dominant Legal Provisions. The B&D registry has specified requirements and strict procedures provided by the law that established the department (Act 301) 1965 for both birth and death registrations.
2. I found that manual method rather than digital is still in use for there were scarcely any computers in use. What this means is that the department is not yet online. According to the head office a new website is yet to be launched (see appendix 5 ) However, efforts are being made to introduce digital method as a complement. It uses separate forms (A&B) for its manual method to register the two events.
3. 11 out of 15 interviewees think that the department is not yet ready for purely computer recording let alone E-mail, telephone and SMS reporting their viewpoint saying that the department is still dominated by old school staffs that have very little or no knowledge in computer applications.
4. Only 5 out of the 15 participants at B&D department recognise digital method as a better option. However, 10 of them think that the old method (manual) is still relevant and even preferred to the digital suggestion. This point would be better analysed using SWOT analysis in table 5.1.
5. Social Media is fast gathering momentum in Ghana meaning that internet connectivity nationwide is getting somewhere.

Footnote:
9Detailed statistics of the last national census (2010) was not officially ready during the period of my research, hence not included in the range of censuses since 1960 in support of point number 3 above. Please note that the results announced in February 2011 were only provisional. The official census results were announced by the Ag. Government statistician Dr. Philomena Nyarko on Thursday, 31st May 2012. The official results put the total national population figure at 24,658,823: slightly higher than the provisional figure of 24, 223, 431.(Source:GSS May 31, 2012; www.ghanaweb.com June 1, 2012)
5. Educational campaigns have been stepped up and are frequently embarked upon using radio and television to explain the importance of early event registration. This is certainly the effort of the head office only. All participants in the regions and the districts created the impression that the head office campaigns on behalf of the whole department, therefore any further campaign efforts on their part would only amount to duplication of function and a waste of scarce resources. The regions confirmed their full participation in the instituted annual birth and death registration day which falls on every 1st September.

7. Information exchange between the department and school administrations, labour department and hospitals are almost nonexistent. At La Polyclinic in Accra however, the two interviewees confirmed that staffs from the B&D registry approach them periodically to ask for data on vital events. The labour department issues labour cards to job seekers oral representations. And school intakes are still done without recourse to verifiable personal data. Here too, personal representations are the order of the day. The proprietor of Christ the king Junior and senior high school in Obuasi said that most of the parents present accurate data about their children showing that either they have birth certificates in their homes or they keep their own records without going to the birth and death registry.

8. There are doubts among some interviewees that ICTs can erase entrenched tradition and superstitions. About 8 participants at the B&D registry, in a highly pessimistic tone believed that no amount of education through any form of ICT medium can change the Ghanaian mentality concerning people counting and registration. While three of them were unsure, four of them supported by 4 hospital staffs and 2 head teachers believe that a change through regular education is possible. They however fell short of identifying any effective method of education.

5.2. **ANALYSIS:** This section analyses the above findings resulting from my exploratory mission. A critical examination, an analysis of this will help us determine which one helps or hampers, their roles and how in the activities of vital registration, in order to establish a postulation for the adoption or otherwise of ICTs in vital registration system.

5.2.1. **LEGAL PROVISIONS**

**(A) Registration Requirements - Birth**

The first rule in birth registration requirements under the law that established this department, Act 301(1965) requires that:

The birth of every child is to be registered in the district where the birth occurred. The framers of the law, perhaps, had thought that every child would be born where the parents reside. In that case they had the good intention of making sure that people are properly placed where they reside to help determine equitable resource allocation based on population densities. Unfortunately, there is a weakness of this provision, for a child born or
death occurring in transit may not have the opportunity of going back to be registered in the place of occurrence. This could be a platform for non-registration of some births and or deaths if officials insist on the letter rather than the spirit of the law. On the other hand, if registration takes place at the place of occurrence but the person does not reside there this district tends to benefit at the expense of the other in terms of resources allocation. This anomaly confirms the much talked about weaknesses of the law in my literature review and also by Tosney(2010). Nevertheless, this problem could easily be avoided if ICT tools such as computers and the Internet are used. That is to say, that with the computer registration could take place even if event occurs in transit because it is faster. It could be stored in any file format and sent to the person’s current place of residence via email.

Other requirements include:

(ii) the need for evidence of birth, such as a Child Health Record. (Usually a ‘Weighing card’) suggests that
   a. ‘hint reports’ are eliminated. Hint reporting here may be explained to mean report of a passerby/an eyewitness spotting an event where the people involved either have no interest in reporting or do not have the opportunity to report, may use his mobile phone to call the nearest registration centre or write and send an email or text message(IM/SMS).
   b. This same requirement has the tendency to delay registration because of the need to produce written evidence in the form of weighing card. In Ghana the usual practice is to send babies to hospitals for a first time weighing after three months of birth. This is equivalent to medical check-up on the new born baby. It therefore implies that birth registration cannot take place within the first three months after birth. This is a big hindrance for early birth registration which may eventually result in no registration because:
      # The rural folks scarcely send their children for weighing; and
      #The fact that weighing a baby for the first time has become a time for showing ostentations and social statuses among Ghanaian women prevents many low-income families(even in the cities) from sending their babies for weighing. Not having a weighing card for this reason means that the baby cannot be registered.

(iii) That the birth must be registered within 12 months of occurrence. Registration outside this period attracts a penalty.

I think that this provision gave too much room for incidence of non registration. I actually don’t know what benefit a 12-month time frame for registration provides except to give parents or the potential informants more room to postpone registration. For what prevents a child born in the hospital or a maternity home from being registered immediately or within the days that the mother remains in the ward before she is finally discharged? I think that this is directly linked to the above requirement whereby a weighing card is a prerequisite. Is it not enough for the B&D
registry to obtain information, including a photograph of the new born baby from the health centre where it was born through emails and other social media?

(B) Registration Procedure- Births:

In my analysis I found birth registration procedure provided by Act 301(1965), as been largely responsible for the incidence of low birth registration rates in Ghana over the years. Though the law provides for only a 3-point process in birth registration, its practical import tends to be too deterrent. The following are the 3-point provision:

a. The informant (preferably the parents) with adequate evidence of the birth (such as a weighing card) is present to give information about a birth.

b. The registration officer interviews and completes the birth report form (Form A) which must be duly signed by the informant having satisfied himself/herself as to the correctness of the information recorded.

c. The Registration Officer then makes an official record of the information in the Register of Births, which must also be signed by the informant. After this a birth certificate is issued. The law claims that this process takes approximately 30 minutes to complete.

The procedure of potential informant being present to give information is good in the eyes of the law since it affords the registration officer the opportunity to obtain direct information from the informant concerning the birth. It is also an opportunity to get the document personally signed by informant to ensure its authenticity. This eliminates the danger of forged signatures usually generated by electronic and software manipulations.

However, advantages notwithstanding, I believe that the manual aspect of this type of registration is time-consuming, both on the part of the registration official and the informant. What is the nature of the said interview and is this necessary if the informant appears with the baby (in cases where birth occurred outside a health centre) or submits a simple medical report of delivery (in cases where birth was supervised by a health officer)?

A critical examination of the above 3-point birth registration procedure reveals weaknesses that may easily be overcome by ICT tools like computer, mobile phones and internet. For example, with the internet accessed either via mobile phone (iPhone, iPads, Android-powered or any smart phone) or the personal computer, laptop, portable tablet etc., an informant with adequate knowledge of birth or death doesn’t necessarily need to go to the office of registration to present facts. To save time and resources, this may be done via Skype or email in which full details including photographs could be transmitted to their desired destination. Could the baby be presented at the registration centre instead of waiting till it is 3 months old or older when a weighing card may be obtained for it?
If it is a question of how informants could append signatures to certify the information provided, ICTs have a solution since nowadays signatures may be scanned and planted in an electronic document. Finally, if computer is used to record submitted information this procedure is likely to take lesser time than 30 minutes compared to the manual method. It could be reliably saved and retrieved at will and could be archived without the need for office space as shelf or paper file. This ensures longer document lifespan.

Another deterring factor is the centralization of the department’s administration. In my investigation, I found out that registration of births do not end with the registration assistant in the district where event occurred. I gathered that a valid birth certificate must carry two signatures: one of Mr. Samuel Arthur Sarpong, the Regional Registrar of Births and Deaths in Kumasi (in the case of Ashanti Region), who must ensure that all the information provided by the applicant is correct before he can forward the application to Accra, and the second signature of the Registrar of Births and Deaths in Accra, Mr. Samuel Pedru Ankra, who embosses the certificate with a legal seal. The law mandates that the registrar is the only person in the whole of Ghana authorised to emboss the certificate, and so all certified copies are "given under the hand and seal in Accra" of the Registrar of Births and Deaths. The certificate is then sent back to Kumasi or to the regional registration office, as the case may require, and then posted to the district headquarters of the applicant. This process takes several months to complete. Decentralising administration and issuance of certificates therefore could go a long way to boost registration rates.

(C) Registration Procedure- Deaths:

Just as birth registration procedure was found to have great negative impact on patronage, so also does death registration procedure provided by the same Act 301 affects death registration. In this procedure, the prospective informant appearing before the registering officer must not only have to have adequate information but also certified evidence of the death of the person. By this, the law is specifically referring to a medical certificate detailing the cause of death or a Coroner’s certificate.

Again like birth registration procedure, the informant of a death must be interviewed before information is entered in registration form B and for him to append his signature. After this the registration assistant enters information in the form B into the Register of Deaths, which is a book containing all registered deaths. Informant appends a signature in this register as well. Following this process is the issuance of either:

(a) Burial Permit specifying where burial should take place in the district where death occurred. Or

(b) Death certificate (for a prescribed fee) where burial is to take place outside the district of event.
Informant is required to deliver this Burial Permit to the Sexton/Manager of the Cemetery where deceased is to be buried. In the case of Death Certificate, Informant surrenders Death certificate to the Registry office nearest where deceased is to be buried for a burial permit. This is then delivered to the Sexton/Manager for burial.

Burial permits must be returned to the Registry of issue.

At the end of every month, the Registration Officer submits a statistical summary of all events registered together with the birth/death report forms to the District Registration Officer who in turn collates district summaries and also passes the forms on to the Regional Registration Officer.

(D) Weaknesses and constraints of the Law:

Two things are evident in the foregoing death registration process that explains why figures in this particular area are always abysmal.

(a) The process is too cumbersome and time-consuming. In traditional societies like Ghana’s where death is regarded unusual and tragic omen, deceased families expect the public to treat them with extreme affection and compassion in their mourning moments rather than any legal compulsion to pursue documentation processes. For this reason, when deceased families default in securing burial or death certificates the penal side of the law is usually not enforced.

(b) This law is ineffective, because it has no structures in the rural areas. In the rural areas cemeteries are completely free. There is no Sexton or cemetery manager who supervises burials. Again, most rural deaths do not occur in the hospitals where cause of death could be diagnosed and certified for onward submission to the registrar of deaths. In the face of these unbearable legal intricacies registering deaths is frowned upon with impunity.

I think that if deceased families could be allowed to send text messages or emails to the nearest registration centres, with medical reports attached (where available) it would reduce the complexities involved and encourage more registrations.

With the manual method it would take too much time to dig up old numbers, when a person applies for a new birth certificate due to loss of the old one. The fact that a person was never issued a birth certificate makes him liable to be subjected to a lengthy interview to establish the credibility of his or her claim. It is only after this will he be given special authorization by the Registrar of Births and Deaths to receive a new certificate. Digital documentations easily avoid these inconveniences in that stored files could easily be retrieved at the mention of one’s surname or date of birth.

It is a good thing to know that in recent times registration of new born babies may be done without a fee and that this is available within the child’s first year of earth life. Any birth
registration coming after the first year does not only attract a fee but also a penalty, usually a surcharge. It is good to put deterrent measures in place to check defaulters of the law. However, in matters bordering human social behaviour such as population data gathering, which have strong impact on national policy, it is more profitable to establish favourable structures such as fee-free and ICT applications to attract the targets rather than scare them.

5.2.2. PREVAILING MANUAL METHOD:
I observed that manual method rather than digital is still in use, especially in the regional and district offices. In these offices there were scarcely any computers in use. Instead, the department uses separate forms (A&B) to register births and deaths respectively. I also observed piles of dusty A&B forms as well as registers in the shelves of all the offices I visited. The implications due to manual method applications are obvious. The table 5.1 below explains this in a form of SWOT analysis.

TABLE 5.1: A SWOT ANALYSIS OF ICTs AND MANUAL METHODS OF RECORDING INFO.

<table>
<thead>
<tr>
<th>ICT or Digital recording method (strengths &amp; opportunities)</th>
<th>Manual recording method (weaknesses &amp; threats)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. It is easy/faster to record information</td>
<td>a. It takes more man hours to record</td>
</tr>
<tr>
<td>b. Mistakes could be corrected easily</td>
<td>b. This method produces low output</td>
</tr>
<tr>
<td>c. It saves space and time</td>
<td>c. Correcting writing mistakes tends to</td>
</tr>
<tr>
<td>d. Documents are more durable</td>
<td>d. Storing cards demand more space</td>
</tr>
<tr>
<td>e. Easy to retrieve documents</td>
<td>e. Difficult to search through the numerous cards when few are needed</td>
</tr>
<tr>
<td>f. It ensures high output</td>
<td>f. It is difficult to organise educational campaigns</td>
</tr>
<tr>
<td>g. Education can be done at less cost and risk</td>
<td>g. Cards and sheets tend to perish quickly</td>
</tr>
<tr>
<td>h. It conforms to international standard of information and records keeping owing to security reasons</td>
<td>h. It is less professional, especially where there are erasing and cancellations on the sheet due to human error. It does not meet International standard</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ICTs (Weaknesses and Threats )</th>
<th>Manual method (Strengths &amp;Opportunities)</th>
</tr>
</thead>
<tbody>
<tr>
<td>*ICT method requires specialized knowledge in the case of computer use</td>
<td>*One only needs to be an ordinary literate, i.e. it does not require any specialized knowledge to do.</td>
</tr>
<tr>
<td>*High cost of acquisition</td>
<td>*It is cheaper to use manual method</td>
</tr>
</tbody>
</table>
The above SWOT Matrix speaks for itself and clearly points to the fact that digital method of recording is more preferred.

On the contrary, the people interviewed appeared to still prefer the manual method. Only 5 out of the 15 participants at B&D department recognised digital method as a better option while 10 of them think that the old method (manual) is still relevant and even preferred to the digital suggestion. This explains why some of the interviewees thought that the department is dominated by old-school digital aliens. It is part of the constraints that hinder ICT development in the department. There is implicit fear in the old people of becoming redundant if ICTs thrive.

There are no “digital natives” (Shah, Nishan 2011) on the department’s staff list. However a few of the old-school staffs including Kingsley Addo, Richard Kakraba and those at the IT section have managed to migrate into the digital era wielding laptops, notebooks and iPhone with full internet connections. Normally, these should be the people to push the ICT agenda in the department. Unfortunately, they do not hold positions of great influence; hence all ICT projects have not succeeded.

5.2.3. ICT4EDUCATIONAL CAMPAIGNS:
Evidence suggested that educational campaigns had improved since the head office had taken it upon itself to step up education using radio and television to explain the importance of early event registration. This is certainly a step in the right direction.

Nevertheless, the department is still using the traditional media which should have been used many years ago to help the system. Even though Radio and TV are still good media worth applying in educational campaigns, this era has for itself better and more effective communication media such as computers, mobile phones, scanners, facsimiles, Bluetooth, digital recorders, software for media players as well as the numerous social media. Unfortunately, wielding these new media tools has been a problem for a number of reasons.

Administratively, the centralised nature of the department fosters initiative-killing process in the regions and the districts. This is exemplified by the situation where all participants in the regions and the districts (12 in number) create the impression that the head office campaigns on behalf of the whole department, therefore any further campaign efforts on their part would only amount to duplication of function and a waste of scarce resources. I believe that more initiatives in the ICT field could be devised and these may come from any of the department branches in the country.

Financial resources needed to acquire these ICT tools are not available, coupled with dominant old-school administrative staffs who, due to lack of knowledge and fear of becoming redundant in the face of ICTs, impede change including a switch from manual to digital method of registration. How ICTs may be used in educational campaigns has been outlined in section 6.3 in the concluding chapter.
5.2.4. INFORMATION EXCHANGE:
The question of information sharing between B&D department and school administrations, labour department and hospitals is almost nonexistent. This is so because any attempt to reach each other depends, as usual, on direct personal contact.

B&D versus Hospitals
At La Polyclinic in Accra, the two interviewees confirmed that staffs from the B&D registry approach them periodically to ask for data on vital events. Research has shown that Ghana has persistent unacceptably high maternal mortality ratios most recently estimated to be 540 per 100,000 live births. The report states that levels of antenatal care with a health professional reached 92% in 2003, although the increase in demand for delivery care with a health professional has been much slower, from 41% to only 47% of deliveries conducted by health professionals over the 15 years before 2003 (www.unicef.org); Ghana medical Journal, Sept. 2007. The ratios could have increased significantly by now if these figures and, in fact, all others occurring in the hands of health professionals were made constantly available to the B&D registry, hence vital registration records in Ghana would have boosted. If these two organisations could be connected through the internet, information sharing could be easier, hence the numerous births, deaths and in-patients’ data would not go unnoticed.

B&D versus Labour department:
The labour departments issue labour cards to job seekers and send out prospective employees to employers based on oral representations. This department, as far as their administrative work is concern, could be a big bolster to helping VRS to realise its aims. Unfortunately this is not happening; the question is why?

B&D versus Educational Institutions:
All the 4 head teachers in the educational institutions I visited confessed freely that school intakes are still done without recourse to verifiable personal data. The proprietor of ‘Christ the king Junior and senior high school’ in Obuasi said that most of the parents present accurate data about their children showing that either they have birth certificates in their homes or they keep their own records without going to the birth and death registry. He however agreed that their efforts (insisting on children IDs during admission periods) could help put pressure on parents to register their children.

To understand better the problematic behaviours of the above three institutions, see the section under Tradition, Culture and Superstitions as Constraints in 5.2.5.

5.2.5. CULTURE, TRADITIONS AND SUPERSTITIONS AS CONSTRAINTS:
On the question of whether ICTs could be used to erase entrenched but unwanted tradition and superstitions, about 8 participants at the B&D registry, in a highly pessimistic tone believed that no amount of education through any form of ICT
medium can change the Ghanaian mentality concerning people counting and registration.
While three were unsure, four of the interviewees supported by 4 hospital staffs and 2 head teachers believe that a change through regular education is possible. They however fell short of identifying any effective method of education.
I am aware of the existence of strange traditions and queer superstitions in most Ghanaian societies. However, since the focus of this study was particularly organisational, I had no opportunity to verify, through interviews, the continuous existence of these practices. My comments hereafter therefore are based on personal experience as a native of Ghana.
Culture played a very crucial role in distinguishing modern from traditional societies (Schech & Haggis 2000:33). However, it is important that only the right culture and traditions must be maintained, otherwise they must be discarded to avoid impeding the needed change and development in society. One traditional culture in the Ghanaian society which has always affected birth and death registration is their belief systems. For example, Ghanaians’ belief in witchcraft is overwhelming. As Kohnert (1996:1348) rightly said, Africa’s belief in Witchcraft is widespread. He noted it’s prevalence among the poor, rich, illiterate and even western-educated Africans alike (cited in Schech and Haggis, P. 33).
In Ghana, the belief that babies are more vulnerable to witchcraft attacks for various sicknesses and even deaths when revealed in their early weeks of birth compelled norms and traditions to be established. A Ghanaian woman who gave birth would, by tradition, remain indoors for 40 days before making the first attempt to expose the baby to the public. If twins, triplets, quadruplets, etc. were born, more complex rituals were demanded to show appreciation to the gods who were believed to have occasioned such unusual blessing before mothers and babies could make their first public appearance. The time and financial cost involved here are considered more important than running from one office to another to seek the child’s registration. Traditional Ghanaian societies also believed that counting of people such as registration and censuses brought ominous spells in the society. In the case of deaths, the story was not different. Registration of the dead was considered an abomination since it meant counting and encouraging more deaths. When epidemic struck resulting in widespread common sicknesses and deaths the gods, spirits and witches were held responsible instead of seeking health interpretation and solution. They prefer spending time and money in performing rituals to adhering to the provisions of any law or pursuing western wisdom. They think it is better to abide by traditional dictates and avoid being branded social deviants rather than paying heed to avoidable national law.

The extended family system in Ghana poses another serious constraint, indirectly though, in achieving high registration rate: Ghana’s cultural setup has one implicit ‘quality’ called ‘trust’. Trust means that every representation made orally by one to another is to be believed without recourse to proof or substantiation by kind of record. Trust therefore, is to be blamed for the absence of the culture of records keeping. But trust did not exist out of the blue. It developed as a result of the culture of extended family system. In this culture, almost every individual is connected to the other through another either by blood or by Language or a bond of any kind as they deem traditionally appropriate. Any attempt by the individual or nuclear family (parents and children) to live reclusively earns them the jinx of selfishness and thus regarded social
outcast. Figure 5.1. below shows the interconnectedness of Ghana’s traditional society and family structure.

**FIGURE 5.1(Ghana’s extended family system)**

In figure 5.1 above, the individual is a member of both the sibling and nuclear family groups which together form the clan. The clan is a group of related or closely associated persons, or a group of families having a common ancestor (New Int. Webster’s Student Dic. p.129). They usually trace their origin to a common ancestor and represented by a totem. Several of these clans form the big tribe such as Ashantis, Fantis, Denkyiras, etc. who speak one language or dialect.

This connection makes it unacceptable to doubt a representation made by a member of the family, especially older people. One is not expected to put his family member’s credibility in doubt. Eventually, it becomes a norm to trust members of the society on their oral representations.

It is important to conclude that Trust and Records keeping dichotomy are both cultural practices justified by time. To decide which one to keep is determined by global events of today, and without mincing words, the culture of records keeping is the order of the day.
5.2.6. CONCLUSION

Even though my sample population in the survey I conducted can nowhere be compared to representativeness, I can surmise, from my little observation that the department is not ready for a change in method.

A cursory look at the above analysis reveals a complex scenario that makes it extremely difficult to take a firm stand as to whether it is possible for manual method of VRS to be completely substituted with digital version. In the first place, the law that established this institution cannot be arbitrarily surpassed by any official, no matter one’s zeal to effect a change. Secondly, staffs of the department are predominantly old-school and not of the digital native generation. On one hand, they would have to be trained at a high cost, both financially and time wise in order to blend with the digital requirements. Unfortunately, lack of resources has always been cited as the greatest militating factor for the Ghanaian civil service. To retrench them, on the other hand, would require compensating them adequately which also boils down to financial resources.

If interviewees express reservation as to the workability of using e-mails, mobile phones IM/SMS etc. to report vital events, it is a sign that they are either not ready for such innovations, or they expect its initiation and operation side by side with the manual method they are used to..
CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.0. Introduction

Just as it has been pointed out throughout this thesis, the purpose of Ghana B&D registry is to collect and collate B&D events into vital statistics for the country. But investigations are proving that the work is not properly carried out, hence the goal of obtaining accurate and reliable vital statistics has been a problem since 1965. In this concluding chapter, I would like to examine some of the known constraints and how they may be tackled using ICTs. I will elaborate on the advantages of vital registration, the reason why Ghana should take it seriously. I will then position myself by recommending ICT method of registration and show how the various tools may be used to achieve VR goals. Finally I will offer some suggestions as part of my contribution to academic knowledge and then propose a question(s) for further studies.

6.1. MAIN CONSTRAINTS TO VRS GOALS

1. Poor records keeping culture in Ghana: Frankly speaking, the Ghanaian society has been known to be one of oral rather than written. The extended family system and communal embeddedness that have characterised their collective lifestyle from time immemorial is like a plague that have created what may best be described as ‘culture of trust’ rather than culture of documentation. Until recently, each believed what the other said without any recourse for documentation proof. However, the enormous importance of records keeping in this modern world necessitates a swift change in the orientation of the entire Ghanaian society. To change this, the people need to be informed about the changing world order including human interactions and relationships. ICTs may help in this education.

2. Poor patronage and non registration: the figures are not there because the people simply do not patronise the services of the department, simply because the importance of such records have until recently not been hammered home. In Ghana the only time you can see someone restlessly looking for a birth certificate or national passport is when the opportunity of traveling abroad is smiling at him/her. I want to assume that about 95% of all transactions (both official and private) do not require identities authentication.

3. Cumbersome registration procedure such as outlined elsewhere also accounts for non registration.

4. The civil service jinx is another factor. It is common knowledge among Ghanaians that the Ghanaian civil service has very little or nothing good to offer the public. The fact that these offices are resourced by the government from its consolidated fund, and the fact that budget allocation is too stretched every year due to limited
resources, places the civil service (perhaps the last to consider) at a disadvantage. Workers here who are the least paid therefore do not commit themselves to the work.

5. Lack of proper infrastructure and logistics. Some argue that since the civil service is not income-generating establishment accounts for its infrastructural and worker-salary woes. In some areas, the office of the officer in charge commands very little or no respect. With the poor old office table and chair, torn curtains, broken windows, dusty and cobweb-infested walls and shelves, all give the impression that records cannot last long there even if they are painstakingly generated.

6. Cultural impediments (misconceptions and superstitions) such as fear to count human beings also militated against records production and keeping.

7. Illiteracy. With Ghana’s rural literacy rate falling below 65% until 2010 (Unicef at a glance: Ghana at www.unicef.org), the problem of understanding why counting counts is a difficult task to surmount.

8. High cost of registration. The 1965 Law (Act 301) which established this department imposed 5 Cedis registration fee. As far back as 1965 this was a huge sum of money for not only the then 65% to 70% rural dwellers but also to some city poor dwellers, civil servants, teachers and many more. With time, as inflationary rates galloped in Ghana this amount increased to hundreds and thousands making it highly unaffordable.

6.2. ADVANTAGES OF VITAL REGISTRATION:

Even though critical constraints exist in attempts at achieving high vital registration rates, the numerous advantages offered by this important exercise cannot be grossed over and thus sacrifice it on the altar of constraints.

Vital statistics systems (of which birth and death registration constitutes a key component) have informed policymaking in industrialised countries with particular reference to England and the United States of America. Industrialised countries such as Germany, the Netherlands, UK, USA, Canada, Sweden, Denmark, Norway etc. that have solid vital events records, dating back centuries, have very little problems with their development programmes and indeed they are developed. They are able to track security problems and prevent them from happening or, at least, keep them to the minimum. These countries have long used vital statistics to formulate policies. England used vital statistics in the 1850s to (1) compare general welfare of different cities, and (2) engender policy debate (Seidmann et al, 2009) quoted from Prasanta Mahaptra, Kenji Shibuya, Alan D. Lopez, Francesca Coullare, Francis C. Notzon, Chalapati Rao and Simon Szreter (2007).

In the modern context, governments with strong vital statistics systems have used data generated by those systems to identify occupational carcinogens, as well as physical, social, and environmental factors linking some occupations with specific causes of deaths. In the United States, for example, several forward-looking public health campaigns depended on
analysis of vital statistics, including cures for diseases, the discovery of the link between smoking tobacco and lung cancer, legislation for seatbelts, speed limits and drunk driving (Gale Encyclopedia of Public Health/vital statistics). These initiatives led to significant and immediate improvements in social welfare. The ability to sensitively monitor demographic changes equips policymakers in these countries to agree on the existence of specific social problems. These policymakers can then monitor and evaluate the effectiveness of solutions, adjusting the solutions according to incoming data. Reliable B&D registration figures enable stakeholders and interest groups to make concrete and valid analysis and predictions about several sociological concerns such as child and infant mortality, family and national wealth (per capita), marriages and divorces rates/ratios, infant/child desertions and so on. For instance, UNICEF compares vital statistics basic indicators and demographic indicators of Ghana between three periods: 1970, 1990 and 2010 (see appendix 7) to demonstrate relative changes over the 50-year period in areas such as fertility, mortality, Health, nutrition, education, violence and crime, child and women protection, etc.

Vital statistics can help engender beneficial social transformation, and development. These two important goals reinforce each other. Indeed, I see development as a revolving factor and also the end product of Good governance which is the epicenter of collective human dream. Seidman et al believe that “An effective vital statistics system requires the use of law to change an existing vital statistics institution – the “repetitive patterns of social behavior” – that perpetuates deficient registration of any set of essential statistics”. What they implied is that, through effective B&D registration a nation is capable of reducing wasteful allocation of resources by creating an infrastructure for the reliable determination of social needs and the effectiveness of policies designed to address these needs.

A government policy may pass legitimacy only if such policies are grounded in reliable statistics. Increasing accountability and transparency of government decisions; as well as increasing public participation in policy-making are positive marks of reliable vital statistics. Having a reliable B&D data enables a government to measure the size and to follow the trajectory of the country’s population.

Civil registration of births and deaths conveys human rights to individuals and helps with economic development. Vital statistics on births and deaths, together with reliable data for cause of death, provide crucial information for policy, planning, and evaluation in all sectors of development. For instance, the South African government agreed to allocate resources for HIV/AIDS treatment only after having reliable data on the effect of the epidemic in that country. In 2007, the government had to be convinced through empirical research statistics that 17% of the world’s HIV/AIDS infection burden resided in South Africa and one of the world’s worst tuberculosis epidemic, compounded by ever increasing phenomenon of drug resistance infections of the two carcinogens (www.nhrc.org.za).

Furthermore, vital statistics, girded by comprehensive civil registration system, helps maintain aid inflows (Seidman et al). Without sufficient vital statistics no authoritative evidence may be available to show whether or not billions of dollars and Euros of aid funds are having their desired effect on epidemics, mortality or poverty in affected countries. “International commitments to fight specific diseases are now funded at levels never seen
before, and their success is often intended to be assessed on the reduction of deaths due to specific causes” (ibid). As demands to measure effectiveness of health aid grows, so are calls for good monitoring of vital events and data for cause of death. The Millennium Development Goals, in particular focuses particular attention on this issue. Donor and development agencies, multilateral development banks, and the UN, and 189 Nations committed themselves to achieving these goals when they signed the Millennium Declaration in 2000. Donors demand evidence to convince themselves that their aid is yielding fruits.

Since civil registration, with particular mention of B&D registration asserts itself as an indispensable basis for a valid vital statistics system, a strong birth registration program will help maintain and encourage aid inflows. What is again worth mentioning is that birth registration helps to protect civil and human rights. Catastrophic events underscore the crucial functions birth registration serves. Seidman et’al shared this view in their report by citing the 2005 Asian tsunami, where they said that birth registration facilitated reunification of families and identification of the lost. Countries that had readily accessible registration records, such as Thailand and Malaysia, fared much better in this respect than others, such as Indonesia, where poor civil registration made the task of reunification much more difficult. Quoting Setel et al. the Seidmans (2010) write, “reuniting children with family and extended family members in emergency situations is the best way to provide children with safety, security and care, and birth certificates and other documents of identification are essential to efforts at reuniting involuntary tearing apart of families and relationships. Birth registration again helps control the activities of predators before, during and after national disasters.

6.3. ANSWERING THE ‘HOW’

This chapter which is the sum total of the entire work places the two methods of data production (manual and ICTs) at the B&D registry in Ghana on the pendulum and tries to extract an idea out of the swing. At the same time the real ‘how’ of the ICT role is presented in this section. ICT application in VRS can take many forms depending on the type of technology in use. For the purpose of word or character limit in this thesis, I prefer to concentrate on just mobile phones, internet and social media.

My position as far as this project is concerned favours the integration and use of ICTs in records keeping in Ghana, especially in B&D records management. The following are the justifications:

6.3.1: MOBILE PHONES: According to Ghana national communications authority (NCA) mobile phone subscriber base for the five main network providers, as at February 2012 stood at 21,381,756. Now, with the population of Ghana standing at 24,223,431 according to government statistician (Dr Grace Bediako) in her February 2011 announcement of the 2010 preliminary census results,(World Bank 1 July puts the figure at 24,333million) a comparative analysis suggests that almost every youth and adult owns a mobile chip in Ghana. While I am
by no means glossing over the fact that some individuals tend to have 2 or more SIM-cards for use, the figure is still so staggering that a conjecture that Ghana is fully covered by mobile phone use will not be far from right. In this scenario, Mobile phone as an ICT tool may be effectively employed in advancing such exercises as VRS in the following ways:

i. VRS authorities acting in collaboration with network providers may employ the many potentials and uses of mobile phone technology to educate Ghanaians on the importance of B&D registration. For example, in a mass communication model, one text message (IM/SMS) such as planned campaign programmes, changes in registration procedure or cost, location/relocation of a B&D office, etc. may be distributed to many cell phone users at the same time, many of whom would read and catch the import therein.

ii. A well defined and constructed B&D jingles may be used as ringtones. As mobile phone users get attracted with it due to its message or fun. As this continuously rings in their ears it consequently becomes a campaigning message having positive impact on them and the VRS.

iii. B&D logos may be used as wallpapers and screensavers. Even though these are not pre-fixed in the hand sets, they may be distributed via Bluetooth device, and text messages or e-mail attachments.

iv. A call-in reporting regarded as preliminary reports should be encouraged. But this must be followed by personal appearance at the registration centres for confirmation and completion of all necessary documents. In such cases whereby some reporters fail to appear for confirmation the centre would still have knowledge about such events. These could be compiled together as unconfirmed reports of births or deaths to the extent that in the event of failure to confirm them there would still be an idea of what seems to be the picture.

6.3.2. COMPUTER AND INTERNET:

The use of computer to record B&D details, instead of paper cards and pen, as well as educating the public is very necessary in this era of computerisation.

1. With the use of software like MS-office which involves Word, Excel, PowerPoint, etc such important document could be nicely designed, well saved and be easily retrieved anytime the need arises.

2. A network of computers in the department will facilitate information transfer from one office to the other. When this is made possible, reports from the districts and regions could easily reach the headquarters. This avoids delays due to postage and risk of transporting.
3. The department could establish a website to publish every information about it. Such website must not be allowed to fallow but must be frequently updated with any new information. The website may be used as a medium for campaigning and advertising the department’s programmes and initiatives.

4. Blogs and forums could be established at this website for people to express their views and offer suggestions concerning the registration system or procedure.

5. The website can direct people to its numerous offices around the country by providing addresses and directions of all its centres. This will help the public easily locate a proximate registration centre to patronise it.

6.3.3. SOCIAL MEDIAS:

College students, University undergraduates and the literate public in the Ghanaian society appear well versed in social media applications, especially Facebook, Twitter, and blogs.

Social media may be best understood to mean a group of new kinds of online media, which share most or all of the following characteristics:

a*Participation: Social media encourages contributions and feedback from those who engage in it. They encourage voting, comments and the sharing of information. There are rarely any barriers to accessing and making use of content, even password-protected contents are frowned upon. The Ghanaian public may use this to share vital events information with the B&D registry the law allows it.

b*Conversation: whereas traditional media is about “broadcast” (content transmitted or distributed to an audience) social media comes as a two-way conversation. With this medium the public may be reached one-on-one basis by officials of the registry to educate them. It comes in a form of text chat or phoning via Yahoo messenger, Skype, MSN, Bambuser, etc.

c*Community: The new/social media fosters quick formation of communities and effective communication. These communities share common interests, such as political issues, photographs, favourite music and/or movies, etc. Again this can be another effective means of educating the public through the sharing of B&D jingles, logos, registration photos, educational programs, incentive giving, etc.

The main examples of social/new media at the moment are:

i**Social networks: these sites allow people to build personal web pages (usually called profiles) and then connect with friends to share content and communication. For example, Facebook, MySpace, Twitter, etc.

ii**Blogs are perhaps the best known form of social media, blogs are online journals, with entries appearing with the most recent first.

iii**Wikis websites allow people to add content to or edit the information on them. They act as communal documents or database. The best-known wiki is Wikipedia, the free encyclopaedia. The B&D registry may employ wikis to build online database which allows the public to add new verifiable information.
Podcasts make available for subscription audio and video files through services like Apple iTunes.

Forums are platforms for online discussion, often around specific topics and interests, politics, economics, environment, etc. This is another educational medium, and a place where the public can place their views, ask questions and make suggestions concerning B&D.

Content communities are those that organise and share particular kinds of content. Popular content communities tend to form around photos and videos. Examples are Flickr and YouTube respectively.

The above named new media forms have become powerfully instrumental in modern communication system. The explanations expressed under the new media forms above show that anyone of them could be used to report births and deaths, especially the wikis. But the question is, how popular are these new media sites in Ghana? When I asked about their views and experiences with Facebook, MySpace, YouTube and the other social media platforms, only 4 of them expressed good knowledge about Facebook and especially YouTube. The rest had heard about them, some had even opened profiles before but using them, all boils down to lack of personal computers and internet access which come as a result of affordability rather than availability.

With the internet in use, all forms of social media platforms could be used to inform the public and to receive information from them.

i. Like the suggested telephone call-in, a special blog may be established for people to report births and deaths as and when they happen.

ii. Social media reporting may encourage the publishing of photos, especially of newly born babies whose births are being reported. I believe that the fun of such reporting would go a long way to increase the rate of reporting.

iii. The department can use Facebook’s popularity, for instance, to reach out to a lot of people in a short possible time. With Facebook, even those who have Facebook accounts/profiles but have no intention of visiting the B&D website can still be reached on their walls.

6.4. ICT STRENGTHS AND OPPORTUNITIES

ICTs use in records generation and keeping, especially in VRS, offer a lot of advantages which are the reasons why it is recommended. This is expressed in the form of SWOT analysis, (see table 5.1). To begin with:

1. It is easy, quicker and neat to record documents using computers. With computer recording, mistakes could be corrected without defacing and blemishing the document. In manual recording however, trying to correct a mistake almost
always leaves a mark on the paper card, hence reducing the document’s authenticity and credibility.

2. It is more professional and conforms to international standard

3. It requires less man-hours and therefore ensures high output. Since some calculations and designs are easily manipulated by computer software man’s effort at counting, drawing charts and colouring shapes are eliminated.

4. Campaigning via mobile phones and internet websites gives wider reach, less cost and without risk.

5. Storing documents require less space as compared to saving paper cards in office shelves.

6. Documents are easily stored and retrieved. In the case of manual records on sheets and cards, it takes too much time to look for few needed ones out of the lot.

7. Digital documents do not perish easily like the way paper documents do. In Ghana most civil service offices are clouded with dust and cobwebs and as documents are exposed to dust their lifespan reduces drastically. Again sifting through the numerous cards and sheets everyday causes ware and tear at a rapid rate.

6.5. **ICTs WEAKNESSES AND THREATS**

According to the SWOT analysis in Table 5.1. ICTs have weaknesses and threats which need to be mentioned. These are the following:

1. It requires specialised knowledge, especially in the case of computer applications.
2. It is more expensive to acquire ICT tools such as computers and their software. Quality mobile phones have never been cheaper.
3. Personal data being sent online risk its privacy
4. Call-in and blog reporting can spark false alarm or may bloat figures when care is not taken.

**Concluding remarks:**

Since these short-comings about ICTs are not many and serious enough to dislodge the many strengths and opportunities outlined above, I assert that ICTs are a better choice to manage VRS with instead of the Manual method or at worse to combine the two.

6.6. **RECOMMENDATIONS:**

Throughout this thesis, one thing was clear; i.e. constraints and/or impediments in the way of high vital registration rates. As the chief registrar reported during
my visit to the B&D office in Accra (April 2012). “Currently, the Registry is able to capture 65% of all new births and 24% of deaths that occur in the country “(see appendix 5). These are too low and unacceptable figures looking at the long existence of the B&D department. The following constraints may be said to be major blamed-worthy for the poor performance of the registry:

a. The weaknesses of the law that established the system

b. Traditional culture impediments

c. Economic constraints due to government attitude

d. Staff composition

Based on these and other constraints a few recommendations may be offered for consideration by policy makers and interested readers alike.

To begin with:

1. There is an urgent need for a complete legislative overhaul of the law which established the department of B&D and spelt out its functions, i.e. Act 301 (1965). More specifically, the law’s requirements and procedural provisions need to be amended to bring in more attractive and friendly provisions meant to change “…an existing vital statistics institution – the “repetitive patterns of social behavior that perpetuates deficient registration of any set of essential statistics”(Seidman et al, 2010).

In the strictest sense, I will recommend that a whole new parliamentary legislation or an executive instrument establishing as mandatory, the culture of records keeping in Ghana and monitoring its compliance through incentives, the courts and the security apparatus of the country. For example, without a birth certificate, a child may not be admitted in kindergarten or any institution of learning. People must be asked to produce valid IDs in all official transactions etc, etc.

2. The strong impediments posed by traditional culture, as discussed elsewhere in this thesis, need to be reconsidered, or fine tuned to suit the dictates of the modern times or be discarded outright. It is asserted that modernization and tradition cannot coexist, for just as tradition involves the passing down from one generation to another property, knowledge, values, skills, “modernization disrupts and revolutionizes knowledge, values and social relations”, Schech, S. and Haggis, J. (2000, p. 124).

3. There must be some level of administrative autonomy given to the regional and district branches. This will enable them to design and device their own campaign strategies suitable to their localities. Decentralisation fosters
effective supervision; a point Tosney blamed GSS in his ‘problematic behaviours’ as lacking.

4. With the exceptionally high importance of population data in view, Ghana government needs to invest more in the administration and daily operations of the B&D registry. Most important areas to invest include acquisition of ICT infrastructure, namely computers; internet connections; digital cameras, Telephones, printers and fax machines etc; invest in research, educational campaigns and staff training. This will engender workers’ interest and commitment in the discharge of their duties and bring about high output.

5. In this age of computerisation and digitization, know-how has become the driving force in all endeavours. It is therefore highly recommended that prominence be given to technical knowledge and high learning during recruitment. Young staffs bring fresh blood, good knowledge, especially in computers and software applications (digital Natives) rather than the conservative old-school staffs. The young highly educated workers are receptive to change when change becomes necessary. It is incumbent on the government to provide adequate remuneration to attract these types of workers in order to realise high output and quality results.

6. To ensure high death registration rates, I recommend that all cemeteries (both in rural and urban areas) must be brought under government control and burials strictly supervised by Sextons. Under this authority, no dead body may be buried without having a certificate of death.

7. As part of my contribution to solving population data problems the world over, I suggest to the world of science and technology in collaboration with governments and the United Nations(UN) to invent a world population counter(WPC) primarily for counting births and deaths. This device, functioning like the biblical astrological star which led the three wise men-The Magi- to the birth place of Jesus Christ in Bethlehem(Matthew 2:1-6), must be able to locate events of births and deaths as they happen and send them to a national database(where applicable), or international central database(where only one WPC applies).

If we think about the fact that uncountable trillions of dollars, human and material resources have been devoted for space exploration before the first man was able to set foot on Moon in July, 1969,(www.nasa.gov) then population which affects, to a large extent, our very Earth life deserves equally huge investment.

6.7. EMERGING QUESTIONS AND FURTHER STUDIES:
Several important questions have emerged throughout this thesis. I am not sure whether I was able to answer any. But one teething question bordering Cultural tradition and Ghana’s Development excites my interest for further academic study. **“How has traditional culture affected Ghana’s socio-economic development since independence?”** It came out clearly in this thesis that Ghana has long relied on traditions such as extended family system which advocates oral culture and trust rather than proof by documentation. We also saw that this culture worked against giving much recognition to vital registration, especially Births and deaths which numerous advantages, such as for policy initiation and implementation, cannot be overemphasized. Other questions worth considering include: (1) Tracing the missing link between development and African traditional culture. (2) Over populated or under populated? Ghana’s dilemma.

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* [www bdrghana gov gh](http://www bdrghana gov gh)

* [http://www answers com](http://www answers com)
(B) APPENDICES:

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<td>Literature Review</td>
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Appendix 1— Initial project plan (abandoned).

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<th>TASKS</th>
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Appendix 2—The workable project plan.
The goal of the study/project is: To use new information and communication technologies to promote the culture of records keeping; especially vital statistics in the Ghanaian society.

<table>
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<tr>
<th>Objectives of the study/project</th>
<th>Research questions/hypotheses</th>
<th>Source(s) of Data/Methods of data collection</th>
<th>Notes for analysis (what is the test to be done on the data) what codes might be to organise your data</th>
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<tr>
<td>1. To explore the role of ICTs and new media for vital registration, specifically birth and data collection and reporting in Ghana</td>
<td>1.3 What methods of data collection are currently used for Ghana’s registration system?</td>
<td>1. Interviews: Interview 15 carefully selected respondents including 2 gatekeepers or main collaborators. Use semi-structured method of interview</td>
<td>How responsive are the people (in terms of B&amp;D reporting) before and after effective ICT-aided educational campaigns were embarked upon, if any? Consider ff. codes: B&amp;D : births and deaths Birth Rate:</td>
</tr>
<tr>
<td>2. To determine the comparative advantages and disadvantages of digital/electronic over manual</td>
<td>1.2 What ICT applications are relevant to a vital registration system?</td>
<td>1.2: Compare registration data between periods before 2000 and after when the department secured An IBM AS-400 server and installed it at the Headquarters(<a href="http://www.bdrghana.gov.gh">www.bdrghana.gov.gh</a>) Observation: Observe three years old used cards, old paper files; what are their conditions....as compared to computer-generated and stored records... etc?</td>
<td>Death Rate:</td>
</tr>
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<td></td>
<td>1.3. Are B&amp;D reporting via SMS, telephone calls and e-mails etc. acceptable and viewed as reliable by GoG data managers?</td>
<td>Headquarter's clinics website (<a href="http://www.bdrghana.gov.gh">www.bdrghana.gov.gh</a>) Observation: Observe the office equipment available. Combine with information Birth Certificate:</td>
<td>Birth Certificate:</td>
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1.2. Which recording...
method of data collection in Ghana

3. To identify the ICT organisational culture of the B&D dept.

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<thead>
<tr>
<th>Question</th>
<th>Answer</th>
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<td>2.2. Which technique is more effective at storing and archiving records and why?</td>
<td>3.1 Is the department of births and deaths registration equipped with computers for recording and storing information?</td>
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<td>3.2. Do they hold awareness campaigns?</td>
<td>3.2. Do they hold awareness campaigns?</td>
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<td>3.3. How/by which means are campaigns conducted?</td>
<td>3.3. How/by which means are campaigns conducted?</td>
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<td>3.4. How exposed are the personnel of B&amp;D to ICTs and new media?</td>
<td>3.4. How exposed are the personnel of B&amp;D to ICTs and new media?</td>
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3.2. Secondary documentation: Ask for any records of previous campaign programmes, if any. Ask for data on previous B&D reporting and registration.

Death Certificate, Vital Statistics: Deficiencies: Census: Vital Registration System GoG: Could all old registered cards (e.g. 3 yrs. and more) be found and in good conditions? Are there any old computer-stored records? When did the department acquire its PC? How many computers (if any) are in the headquarters; Regional Offices and District Offices? Are they online?
APPENDIX 4:

A SEMI-STRUCTURED INTERVIEW QUESTIONS AIMED AT EXPLORING THE TOPIC:

HOW CAN ICTs AND NEW MEDIA REMEDY THE PROBLEM OF VITAL STATISTICS DEFIENCIES IN GHANA; THE CASE OF GHANA BIRTHS AND DEATHS REGISTRY (DEPARTMENT).

Introduction of self.

Purpose of being there:

Kick-start conversation by appreciating the officer’s/interviewee’s preparedness to collaborate.

I believe that one most important government activity, all over the world, is what your department is doing, i.e. the registration of births and deaths of the citizens. May I ask you sir:

1. Under which government ministry does your department operate?
2. Do you have any idea as to how long this department has been in existence?
3. Has B&D registration in Ghana got any legal backing: which Act and Article, if any?
4. Could you tell me how your department has been collecting data since you joined the department?
5. How do you evaluate this method in terms of success in tracking births and deaths?
6. What ICT applications are currently being used?
7. Have you any intention of using some other ICT applications in your information gathering and dissemination?
8. Which registration method do you consider easier and effective at storing and archiving data: manual or digital and why?
9. Do you think that B&D reporting via E-mails, Fax, phone calls (mobile especially), SMS, Facebook etc. could be viewed as reliable by your department or GOG?
10. Is your department connected online and how reliable is this internet connection.
11. How important is internet connection for the B&D department?
12. How do you rate your personnel’s computer-literacy level: eg. Software applications and accessing the internet/browsing?
13. Do all your workers have access to office computers, telephones and Fax machines?
14. Are your workers allowed to use their private mobile phones or computers (Note Books) while in office?
15. Does your department run any educational campaigns for workers and the general public concerning VRS? How does it do this?

Possible questions to hospital interviewees:

1. What document(s) is/are required of a patient who reports at the hospital with some kind of ailment or for antenatal care?
2. What policy practice is in place at the hospital to ensure that births that occur there can be traced after many years?
3. How does the hospital record in-patients’ particulars/personal data?
4. Has the hospital any information link with the B&D department in the district or area?
5. How many years of births and deaths records are available at the moment? In what forms are they stored?
6. Who has access to computers in this hospital?
7. Other questions as they occur during the conversation.

**Possible questions to Labour office interviewees:**
1. How many job seekers do you attend to everyday?
2. Do you require any personal identification from them before proceeding with the service they require?
3. Does this office have accurate records of how many people have secured jobs or are still looking for jobs since the past 5 years?
4. How does this office record and store its information?
5. Is internet use considered important in this office?
6. Is there any link between the labour office and the B&D department?
7. Other questions as they occur during the conversation.

**Possible questions to basic school Head teachers:**
1. How do you consider personal identification document of prospective pupils in the process of their admission?
2. How do you record the particulars of your pupils/students?
3. Do you think that computer, internet, mobile phones and Fax machine will help in the school’s administration?
4. Have you ever made an official phone call to the B&D department for any reason?
5. Other questions as they arise in the course of conversation.

**Appendix 5--Abridged interview**

_Beside my interaction and discussion with Mr. Kingsley Addo and one other department staff, my collaborator suggested that a copy of my semi-structured interview questions be given to the department head (name withheld) for him to personally answer them due to implied sensitivity of some of the questions. In other words, he wanted the boss of the centre to be personally responsible for the diffusion of certain information. Fortunately, the high official did not hesitate to supply answers to the questions such as follow:_

***A SEMI-STRUCTURED INTERVIEW QUESTIONS AIMED AT EXPLORING THE TOPIC: HOW CAN ICTs AND NEW MEDIA REMEDY THE PROBLEM OF VITAL STATISTICS DEIFICIENCIES IN GHANA; THE CASE OF GHANA BIRTHS AND DEATHS REGISTRY DEPARTMENT.

I believe that one most important government activity, all over the world, is what your department does, i.e. the registration of births and deaths of the citizens. May I ask you sir?
1. Qn. -- Under which government ministry does your department operate?
   Ans. -- The Births and Deaths Registry operates the Ministry of Local Government and Rural Development

2. Qn. -- Do you have any idea as to how long this department has been in existence?
   Ans. -- Although vital registration started way back in 1888 in Ghana (then the Gold Coast), the Births and Deaths Registry as a department was set up in 1965 to manage the registration of births, deaths and fetal deaths in the country.

3. Qn. -- Has B&D registration in Ghana got any legal backing: which Act and Article, if any?
   Ans. -- The Births and Deaths Registry derives its mandate from the Registration of Births and Deaths Act, 1965 (ACT 301). This is supported by the Registration of Births and Deaths Regulations, 1970 (L.I 653)

4. Qn. -- Could you tell me how your department has been collecting data since you joined the department?
   Ans. -- Activities of the Births and Deaths Registry are coordinated from the Central Registry Office located here in Accra.
   The entire country has been divided into Registration Regions, which coincide with the political and administrative regions of the country.
   The Registration regions have been subdivided into Registration Districts, which also coincide with the country’s political administrative local authority areas.
   Below the District Office is a network of Registry offices and reporting centres located within communities where registration takes place. There are requirements to be met and a standard procedure to follow. These would be given on a different sheet later.

5. Qn. -- How do you evaluate this method in terms of success in tracking births and deaths?
   Ans. -- Currently, the Registry is able to capture 65% of all new births and 24% of deaths that occur in the country.

6. Qn. -- What ICT applications are currently being used?
   Ans. -- The Central Registry Office (Head office) has installed an SQL server (Windows based) with an OCR digital scanner and data capture software that enables the transfer of information on registered births and deaths to be entered into a central database for easy storage, retrieval and processing. Similar equipment are being installed in all the regional registration offices (work is 70% complete). This will facilitate data transfer from the regions to the central registry office when the wide area network (WAN) connectivity is activated.

7. Qn. -- Have you any intention of using some other ICT applications in your information gathering and dissemination?
   Ans. -- The Registry plans to extend the automation of the system to the district level so that data captured at the district level can be directly inputted into the central data repository. Meanwhile the possibility of equipping community based
registration operatives with laptop computers or mobile registration systems is being considered.

8. Qn.--Which registration method do you consider easier and effective at storing and archiving data: manual or digital and why?
   Ans.--Certainly the digital system for archiving and data is superior in that it is faster, very economical on space required; it makes retrieval and processing of records easier and has the huge advantage of generating back-ups.

9. Qn.--Do you think that B&D reporting via E-mails, Fax, phone calls (mobile especially), SMS, Facebook etc. could be viewed as reliable by your department or GOG?
   Ans.--Not yet because of certain legal requirements that have to be met in the registration of the individual. A mix of paper based processes and the digital storage and archiving methods will be used for some time in Ghana to maintain the personal element required.

10. Qn.--Is your department connected online and how reliable is this internet connection.
    Ans.--“The Births and Deaths Registry will soon inaugurate a reactivated web site on “bdr. gov.gh”

11. Qn.--How important is internet connection for the B&D department?
    Ans.--“A very critical need”.

12. Qn.--How do you rate your personnel’s computer-literacy level: eg. Software applications and accessing the internet/browsing?
    Ans.--“Staff at the computer section of the head office have a very firm grounding in ICT application and internet use”.

13. Qn.-- Do all your workers have access to office computers, telephones and Fax machines?
    Ans.--“No”

14. Qn.--Are your workers allowed to use their private mobile phones or computers (Note Books) while in office?
    Ans.--“Those who have are allowed”

15. Qn.--Does your department run any educational campaigns for workers and the general public concerning VRS? How does it do this?
    Ans.--For the staff, Standard Operating Procedures (SOPs) have been developed and are in use. Periodic training and refresher courses have been organized. On 16th June 2003 the Births and Deaths Registry launched a nationwide public education campaign with support from government and other partners including Plan International (PI) and UNICEF. Apart from conducting community durbars, mobile registration sessions and community based announcements a series of media programmes (Radio and television) have been undertaken to explain the importance and benefits of early registration of vital events to the citizenry. Ghana has also instituted an annual “Births and Deaths Registration Day” celebration on the 1st
September every year since 2004, to heighten public education about vital registration.

I found the above information very valuable because it encompasses all aspects of my research frame and offers a strong basis for my analysis.

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**Appendix 6:**


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<td>Rural</td>
<td>Urban</td>
<td>Rural</td>
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<td>38.7</td>
<td>14.4</td>
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<tr>
<td>Female</td>
<td>11.2</td>
<td>38.2</td>
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<td>Total</td>
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<tr>
<th>Ghana Demographic Indicators 1970-2010</th>
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<td>Population (thousands), 2010, under 18</td>
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<tr>
<td>Population (thousands), 2010, under 5</td>
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<td>Population annual growth rate (%), 1970-1990</td>
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<tr>
<td>Population annual growth rate (%), 1990-2010</td>
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<tr>
<td>Population annual growth rate (%), 2010-2030</td>
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<td>Crude death rate, 1970</td>
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<td>Crude death rate, 1990</td>
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<td>Crude death rate, 2010</td>
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<tr>
<td>Crude birth rate, 1970</td>
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<td>Crude birth rate, 2010</td>
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<td>Life expectancy at birth, 1970</td>
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<td>Life expectancy at birth, 2010</td>
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<td>Total fertility rate, 2010</td>
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<td>% of population urbanized, 2010</td>
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<td>Average annual growth rate of urban population (%), 1970-1990</td>
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<tr>
<td>Average annual growth rate of urban population (%), 1990-2010</td>
<td>4.2</td>
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<tr>
<td>Average annual growth rate of urban population (%), 2010-2030</td>
<td>3.2</td>
</tr>
</tbody>
</table>

Appendix 7: Ghana demographic indicators 1970-2010 and predictions beyond.

**Source:** UNICEF at a glance--Ghana

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(D): ABBREVIATIONS AND DEFINITIONS:

Abbreviations:
AP: Appendices
B&D: Births and Deaths.
Dic: Dictionary
GT: Ghana Telecom
GBC: Ghana Broadcasting Corporation
GTV: Ghana Television
GSS: Ghana Statistical Services
GPS: Global Positioning System
ICTs: Information and Communication Technologies.
ID: Identity
IM: Instant Message
New Media: Referring to the collective state of the art communication media of today usually provided through Web 2.0. These include the new social media such as Facebook, YouTube, MySpace, Twitter, Skype, blogs, wikis, forums, etc. Also Mobile/Smart phones, and microprocessors/chips. SMS, Navigation systems (GPS) and a host of others.

BIRTH: the event more precisely called a live birth, of a child being delivered and surviving at least momentarily. (Weinstein and Pillai 2001:162)

DEATH: The New International Webster’s Comprehensive Dictionary of the English language defines DEATH as the “Cessation of physical life” or the “Extinction of anything”. Death in this context simply implies the extinction of a human being by any cause.

BIRTH CERTIFICATE: This is the first official document issued by a recognised authority identifying a person on his/her earth life.

DEATH CERTIFICATE: This refers to the official document issued by a recognised authority certifying the final extinction of a person and with the permission to bury his/her body.

CULTURE OF RECORDSKEEPING: By this I mean the ability to adopt documentation of things and issues as an imperative norm or a lifestyle of the country, not just for documentation sake but as a means to an end.

CORONER: A public officer who seeks to determine the cause of deaths not clearly due to natural causes.