Testing the Andrews Framework of Strategy Formulation and Implementation: Case Study of the University of Cape Coast Digital Library in Ghana

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ABSTRACT

This paper investigates how strategy formulation and implementation processes used by the University of Cape Coast (UCC) in building its digital collections compare with the Andrew's strategic formulation and implementation theoretical framework. Theory-testing case study methodology was used. The data collection instruments were the key informant interview technique and document reviews. During the formulation phase, two aspects (resources and aspirations of senior management) were emergent. During the implementation phase, five aspects (achieving results, processes and behaviour, standards, motivation, personal) were emergent. All other elements of building the UCC digital collections were planned during both the formulation and implementation phases. Although the emphasis on students and learning is laudable and apt, there seems to be lack of focus on research support beyond digital collection building, despite the fact that research excellence is one of the UCC's key priorities. Opportunities exist for improving feedback mechanisms between the users, digital library staff and the university management; and inclusion of social media tools in the digital library project. Since only the experience of a single institution of higher learning is considered, it cannot be definitively stated that strategy formulation and implementation will be similar in every institutional context. However, the results provide a basis for academic digital libraries to draw lessons from this case. In African public universities, there is little earlier research on strategy formulation and implementation in digital library management. Strategy formulation and implementation is a critical issue for higher education academic libraries especially in developing countries like Ghana, due to limited financial resources and the rapid change in the information environment during the last several decades.

1. Introduction

Higher education institutions have several goals and responsibilities including enriching quality of academic programs and scholarship, improving institutional effectiveness and accountability, achiev-

ing financial stability and sustainability, infrastructure development, and enhancing local community service (Reddy, 2004). In fact, the quality of digitised collections has an impact on teaching and learning in higher education (Proffitt & Schaffner, 2008). Strategy formulation and implementation are central to the fulfilment of these obligations as each responsibility requires deployment of limited financial and human resources. The purpose of strategic planning is to give universities tools with which to manage the process of change, whether expected or unexpected. There is no single right way to undertake strategic planning: the most important is what works for the institution, taking account of its cultural needs. The procedure for building digital collections in higher education is usually embedded in digital library strategies (Proffitt & Schaffner, 2008). In public universities in Africa, where financial resources are scarce, strategy formulation and implementation is even more imperative. According to Nawe (2004), there is an increasing concern in the higher education world of Africa, over who should fund higher education in the new millennium, as the state can no longer be the sole source of higher education funding in the face of other compelling responsibilities. This mounting political concern over who should finance higher education has a strong bearing on financing libraries as components of higher education institutions. This is more so because investments in libraries are very expensive and returns are not directly visible. According to Greenstein (2010), libraries (traditional, hybrid or digital) are considered as the heart of universities, but the attention they obtain when it comes to funding is normally not proportionate with the status accorded to them (Sirat, 2010). Public university libraries in sub-Saharan Africa including Ghana epitomise this situation. Given the limited financial and human resources allocated to such libraries, it is important that they plan strategically in order to ensure judicious use of scarce resources.

The emergence of digital libraries in the African university landscape is fairly recent. Not much is known about strategic planning of digital libraries in African universities. Moreover, our under-standing of strategy formulation and implementation processes in the building of the digital collections in African public universities is rather limited. Although several theoretical frameworks of strategy formulation and implementation exist (see Al Hajiji, 2013; Birdsall & Hensley, 1994; Ellis et al., 2014; Garibay et al., 2010; Morris & Currie, 2014; Becker & Rauber, 2011) previous studies have tested only few of such frameworks. Yet, strategy formulation and implementation is a critical issue for higher education academic libraries especially in developing countries like Ghana, due to limited financial resources and the rapid change in the information environment during the last several decades. Besides, the usefulness of the model in understanding strategy formulation from the context of small organisations in the developing world is largely unexplored. This knowledge gap in the literature on digital collections in sub-Saharan Africa is what this study attempts to address. This study aims to test the Andrew theoretical framework of strategy formulation and implementation using the strategic steps employed by the UCC in building its digital library collections as empirical material. In this context, the UCC as a multi-layered institution of higher learning is complex with various hierarchies of organization that require the allocation of limited human and financial resources to various projects. Therefore, in practice, UCC is among the organizations that are most likely to make use of all types of strategic planning at different decision-making levels. The digitization project at the UCC is a specific project that requires allocation of limited time, human and financial

resources; therefore, the building of digital collections constitutes *a most-likely case scenario* for the use of the Andrews perspective as applied to strategy formulation and implementation.

2. Literature Review

The Andrew theoretical framework was chosen because the ideas on organizational configuration and design provide a particularly solid foundation for organizational research as they show different parts of organization and its relatedness at every stage. Another advantage of using Andrew's strategy formulation and implementation is that it recognizes that not every organization has the same structure; some are very "structured," while others seem to have almost *no* structure (Lemieux, 1998; Mintzberg et al., 2003) but the sequence of activities when compared is similar. Mintzberg, in contrast to Andrews, introduces the idea that strategies can form in an organization without being consciously intended, that is without being formulated. In this context, there is a clear distinction between deliberate and emergent formulation. An individual's strategy depends on his or her assumptions and perspectives. Mintzberg et al. (2003) call it an emergent formulation. A realized strategy can emerge in response to a developing situation and not only by purposeful formulation, or systematic analysis. An implementation of emergent strategies involves the allocation of resources even though an organization has not explicitly chosen these strategies. Emergent or deliberate strategy implies that an organization is learning what works in practice. This is an important distinction because much of the literature treats strategic planning as a deliberate and explicit process and fails to acknowledge the notion that some strategies evolve through daily decision making (Earle, 2009). Bryson (2004) echoes this belief as he supports the use of strategic planning to help organizations develop and implement effective strategies but also encourages them to remain open to unexpected or unanticipated opportunities (Earle, 2009). Remaining open to uncertainties could even be considered as a useful adaptation strategy. This is akin to planning for the unknown.

In Figure 1 originally developed by Andrew in 1971, there are different links among formulation, corporate strategy and implementation forming a loop. Whereas formulation and implementation are uni-directionally linked to corporate strategy, formulation and implementation are linked by a bi-directional arrow. These suggest that after implementation, the results achieved inform reformulation to address any identified gaps between targets and outcomes. This indicates that the process is iterative. Again, under the formulation stages, steps 1 through 4 are iterative. The feedback between various steps is important as it indicates that the formulation stage is neither linear nor static but dynamic. The material resources of organizations change, as do personal values and the aspirations of management. Hence, corporate strategy eventually changes to reflect the dynamic relationship among interested parties. In this model, corporate strategy and its implementation influence the organizational structure and relationships, process and behaviour as well as top leadership. This suggests that these variables change in time in response to changes in corporate strategy. This model is very relevant as a framework to examine the UCC digital collection case study as it takes to account emergent strategies providing the necessary steps of activities that organizations may do in relation to work activities that are performed by the in the organizations as well as their effects and relationships.
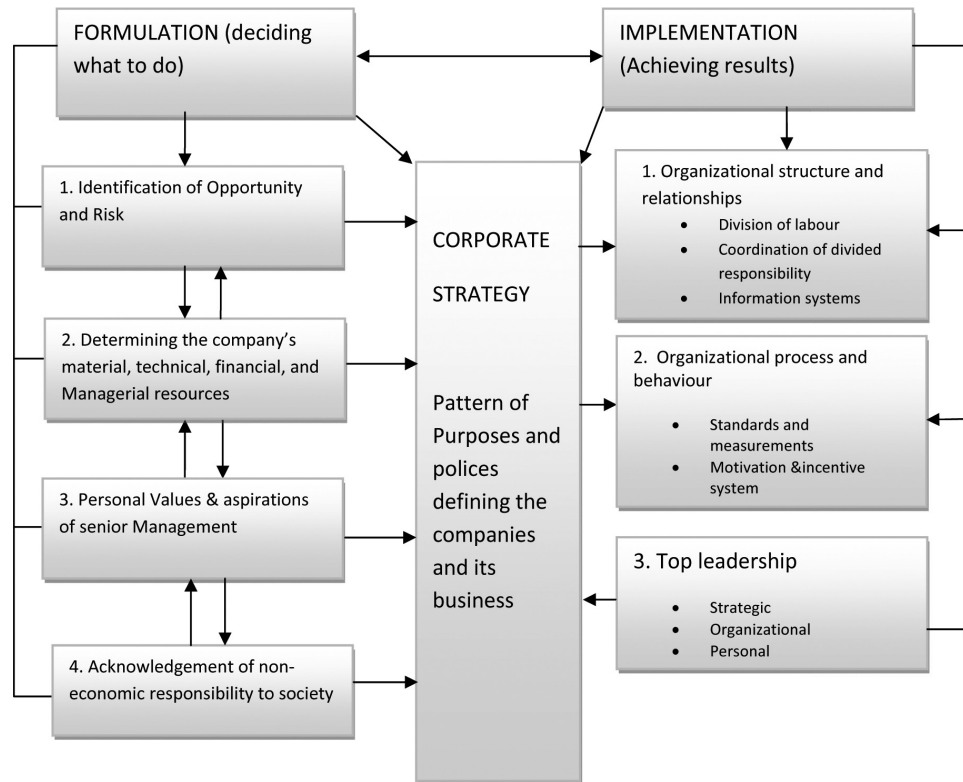
Fig. 1. Andrew's (1971) Model of strategy formulation and implementation

Although useful, Andrew's theoretical framework has been severally critiqued. Mintzberg et al. (2003) argue that the act of creating strategy is an extremely complex process demanding sophisticated cognitive and social skills that researchers have only begun to understand; strategy-making certainly cannot be formally programmed by organizational theorists. It has also been argued that the model is too rigid and impedes flexibility (McGee et al., 2005). If the future does not unfold as anticipated then it may invalidate the strategy taken. Also, there are some implementation decisions that do not fit the model. They include specific project implementations. In these cases implementation is exclusively tactical and often routinized. Strategic intent and dynamic interactions influence the decision only indirectly. Also, the framework does not explicitly address the 'why' and 'how' elements of strategy formulation. The framework appears to apply to large organisations and belong to developed western countries. Therefore, the usefulness of the model in understanding strategy formulation from the context of small organisations in the developing world is largely unexplored.

The University of Cape Coast Library (UCCL) is one of the largest academic libraries in Ghana. It has the capacity for holding 750,000 volumes excluding pamphlets and journals and has a seating capacity of 2,000 users at a time. It is the most frequently utilized resource in the university with approximately 5,000 visits per day. It is a hybrid library with approximately 227,414 hard copies

and a substantial number of e-books and databases that can be accessed via the internet (UCC Library, 2013). A miscellany of items has specifically been digitized by the University of Cape Coast Library. However, the digitized materials are not linked and can be broadly categorized into three groups, that is, cultural collections, teaching and learning resources and research collections.

The UCC was chosen for the reason that its digital collection building was one of the most advanced. Since a multitude of universities of all types (small, large, public, private) may be interested in digital collections in Ghana, it is impossible to study them broadly and in depth within the time and resource constraints of this study. Furthermore, there were few indications that the private universities had been particularly active on the issue of developing digital collections. They were not mentioned in earlier research articles on digital libraries, nor had they to my knowledge issued specific press releases on the topic (see Ydersbond, 2012). Since very little systematized information on my topic was available, interviewing university management and representatives of library staff became the main method of data collection.

3. Methodology

3.1. Case study

The specific type of case study method chosen here for investigating the research questions in this paper is theory-testing case study.

3.1.1. Interviews
Given the need for in-depth descriptive data for testing the Andrews theoretical framework, qualitative key informant interviews were conducted. A purposive sampling strategy (Miles & Huberman, 1994, p. 27) was used to identify key informants, selecting individuals most likely to generate productive and in-depth discussions related to the digital library project at the UCC. The interviews were semi-structured with open-ended questions, to allow respondents to answer in their own ways (Bryman, 2008). The selection criteria and recruitment strategy was developed in consultation with the University of Cape Coast Librarian, the Head of the Digital Library Project, and the UCC Library management team. The selection criteria used included identifying key informants who were deemed knowledgeable about the digital collection strategies and processes; involved in decision-making at the management level in the university and involved in the operation, and monitoring and evaluation of the digital library project

These criteria were used with the research question in mind. Research question is unique because it can only be answered by juxtaposing the responses of key informants on the DL strategic planning processes used at the UCC with the Andrews framework. The key informants included two library senior members, members of library management board, digital library senior member, staff of digital library project, an official from the office of the registrar, and members of various strategic planning committees that were thought to be influential in matters that affect the university library.

In order to assess the extent of collaboration among interested parties, frequency of feedback and meetings were determined. Interviews were scheduled for approximately one hour, and ranged in length from just less than an hour to two full hours. On average, interviews took 68 minutes to complete, with all interviews totaling approximately 38 hours of interview transcript. The interviews were carried out between 13th September, 2011 and 12th January, 2012. Key informants were provided with a copy of the interview guide in advance of the interview. Key informants were interviewed either in-person or via telephone by researcher.

A total of 25 respondents were identified for interview. Twenty-three (92%) planned interviews were completed as part of this work. Two key respondents (top-level university administrators) either declined to participate or did not respond to at least four requests to be interviewed. Among the 23 interviews conducted, three interviewees did not have sufficient background in the subject matter (since they were employed by the UCC only 2 months prior to the interview) to comment in-depth, and hence the interviews did not result in a rich enough data to warrant transcription. On several occasions, some of the 20 key informants chose to be interviewed with a supervisor or colleague for the purpose of providing a more fulsome interview, thus providing a total of 16 separate interviews including interviews with a senior official from the registrar's office, library senior member, digital library management member, digital library staff (7) and library committee members (6). Thus, coding and analyses were carried out on 16 interviews. All interviewees willingly participated but some preferred writing down their answers to being interviewed face-to-face.

All interviews were digitally recorded and transcribed verbatim; in addition, I made notes about my main impressions from the interviews the same day that they took place. Last, the interviewees were allowed to read through, check quotes and comment on the presentations of their respective views. One possible drawback with this approach is that respondents might withdraw quotes that they realized might put them in an undesirable light. On the other hand, this procedure increased validity, as misunderstandings and inaccuracies were cleared up (see Ydersbond, 2012). The inter-viewees were contacted in June, July and August 2011 with a formal research proposal per e-mail in English, in line with Goldstein's (2002) recommendations. If they did not answer, I also phoned them. At least one week in advance, I sent the respondents a list of key words or the interview questions to aid them in recollecting exactly what had happened, since the actual strategic planning processes had unfolded some two to three years earlier.

3.2. Coding and Analysis

NVIVO 8 (QSR International), a qualitative analysis software package, was used to code the data and assist with analysis. The interview transcripts were imported into NVivo 8 as separate sources and initially segmented based on the questions posed during the interview. 'Segmenting' is viewed as an analytic action that can be directly mapped onto certain portions of text, which allows the researchers to define "the boundaries of a narrative or segment" (MacQueen & Guest,

2008, p. 14). This process allowed all responses to be initially segmented according to their interview question, with responses corresponding to the specific areas of inquiry for this paper. Following the initial segmenting activities, I analysed each question posed in the interview (all responses provided by informants) for key themes pertaining to the interview question specifically (e.g., personal values and aspirations of senior management). The interview questions each related to the research questions (e.g., the priorities set by the university). Certain key transcripts and/or nodes were examined further for relevant themes, and the first set of categories for data reduction was identified. Finally, I separately reviewed the textual data within the coded themes, and emerging categories and confirming examples were selected using a consensus validation approach. The researcher examined rival and/or competing themes (Miles & Huberman, 1994, p. 269) as applicable, considering each in the context of the major themes that emerged from the data. Then, I identified illustrative quotations – as applicable – at this stage of analysis. Additional codes were generated as themes or ideas emerged within the collective responses of each item and by contrast across the interviewee categories (e.g., administrator/senior management, DL project leader).

3.3. Pattern Matching of Empirical Material to the Theoretical Framework

After transcribing the interview data and analysing using NVIVO 8, the empirical material was compared with the Andrews framework of strategy formulation and implementation. The congruence method used was in the identification of similarities between the strategic planning steps used by UCC in building digital collections and the components of the Andrews framework: *Identification of opportunity and risk, Determining the libraries material, technical, financial and managerial resource, Personal values and aspirations of senior management, Acknowledgement of non-economic responsibility to society, Organizational structures and relationships,* and *Organizational process and behaviour.*

4. Findings and Discussion

4.1. Comparing the empirical material to the Andrew theoretical framework

From Table 1, it can be seen from the empirical data that two aspects (resources and aspirations of senior management) of the formulation phase were emergent. In the implementation phase, five aspects (achieving results, processes and behaviour, standards, motivation, personal) were emergent. All other elements were planned in both the formulation and implementation phases.

Table 1 shows in detail the aspects of the Andrews framework that was either supported or unsupported by the empirical material. The entries in Table 1 are categorical (either yes or no). This means that the entries are mutually exclusive. However, this categorisation may be problematic. For instance, on the face of the interview data and cursory glance at official UCC documents, it appeared that the UCC had considered resource allocation in the DL strategic planning process. However, further critical scrutiny indicated otherwise. Resource allocation by the UCC to both the main library and

the digital library was inadequate for achieving their mandates. In another instance, senior management members indicated they were personally engaged in the DL but I could not find evidence to support their supposed involvement. Besides, the responses of the DL staff did not seem to corroborate the assertions of the senior managers. This ambivalence is difficult to enter into Table 1 since the entries are categorical.

Table 1. Summary of empirical material in relation to components of the Andrews theoretical framework

Phase	Purposes and Policies			
	Supported by the empirical data	Negated by the empirical data	Planned	Emergent
Formulation:				
What to do goals	Yes	-	Yes	No
Opportunities and risks	Yes	-	Yes	No
Resources	-	Yes	No	Yes
Aspirations of senior management	-	Yes	No	Yes
Non-economic responsibility	Yes	-	Yes	No
Implementation:				
Achieving results	-	Yes	No	Yes
Organizational structure	Yes	-	Yes	No
Division of labour	Yes	-	Yes	No
Coordination	Yes	-	Yes	No
Processes and behaviour	-	Yes	No	Yes
Standards	-	Yes	No	Yes
Motivation	-	Yes	No	Yes
Top leadership (strategic involvement)	Yes	-	Yes	No
Personal	-	Yes	No	Yes

4.1.1. Formulation Phase

The driving forces for the establishment of the DL were both internal and external. The processes were driven top-down from the university management through the librarian to the library staff. According to one project management member, in terms of specific top-down or external factor, the development of the DL became necessary when the Association of African Universities (AAU) asked its member institutions to compile databases of all their theses and abstracts of documents. This was to emulate the creation of institutional repositories and the move of most printing houses, publishers and authors from print format only to creating databases of their publications. These internal and external motivations precipitated the DL project. However, as noted by some interested parties, the digital library project was not entirely about opportunities. It also presents significant challenges and risks which must be addressed in order to ensure its success. Another issue identified by respondents as a risk is the fact that the DL project did not have any previous local examples to learn from. One way to reduce the risk associated with the implementation of the project is

to constantly monitor and evaluate the project and its staff and in order to ascertain the progress, achievements and pitfalls in the DL project. Generally, from the foregoing, it can be argued that opportunities and risks in the Andrews model are supported by the empirical material.

Financial resources, for example cost of training of staff or acquisition of requisite technology, can be limiting in the context of the UCC. This means that financial resources (cost implications of the decision to build the UCC digital library) affect all other resource sectors-technical, material, and human. In this regard, one university management member indicated that;

> *"··· But we realized that limited funding, inadequate and weak internet infrastructure and networks could derail the project. Without funding it won't be possible to develop the digital library collection as an institutional digital library though we know the collection is beneficial to the university community because it can get instant access to unlimited information services from across the world for the purpose of education. The sustainability of the project is, therefore, linked to the availability and constant allocation of funds to support it ···"*

This realization was not limited to only the university management. In fact, other interested parties, particularly the DL project staff also agreed with this assertion. The following comment by one of them typifies this realisation;

> *"··· given the limited financial and other technological resources available to us, we have cause to worry about its sustainability ··· especially when we have precedent on some projects on campus that have stalled or have been completely abandoned due to lack of funds ··· I only hope that the digital library project will not suffer the same fate ···"*

Initially, financial support for building the UCC digital library was granted by the World Bank through the Teaching, Learning and Innovation Fund (TALIF). This fund was medium term instrument of tertiary education policy meant to raise the quality of tertiary level teaching and learning. Currently, students support the digitization project and contribute to its sustainability by paying library development fees as part of tuition fees, and this is goes into an Internally Generated Fund (IGF). Apart from this, there are no external agencies or special university funds that support the DL project. Some organizations such as the National Information Technology Authority (NITA), National Communications Authority (NCA) and the Consortium of Academic and Research Libraries in Ghana (CARLIGH), which consists of 31 higher education institutions, have supported the project in various forms; the latter in the form of staff training through state Universities, the University of Ghana (UG) and the Kwame Nkrumah University of Science and Technology (KNUST) assist the project by providing IT services in the areas of equipment installation and testing. Communications with these collaborators take the form of face to face meetings, emails, workshops and seminars. Progress made as well as challenges faced by staff are periodical sent back as feedback to management. The existing basic resources for the DL project were rated by staff as inadequate; however, a DL project member rated them as "above average" some of the equipment such as book scanners, cameras and

software require upgrading.

The empirical material indicates that the UCC considered the allocation of resources to the DL library project. But this resource allocation is inadequate and indicative of poor planning. It is not enough that this aspect of the Andrews model was present or considered in the DL strategic planning process. It is important to critically examine the quality and quantity of resource allocation. On the basis of limited quality and quantity of resource allocation alluded to by the interviewees, the empirical material does not fully support this aspect of the Andrews framework. It is possible that some of the challenges hitherto encountered in the implementation phase of the UCC digital library emanates from this weak link of resource allocation.

On a personal note, the registrar considers the future of the digital library as bright because it increases the students' educational experiences as it makes available to them a wide array of sources of information for their academic work. In his own words management also

> *"Aspires that the DL project upon completion would meet the standards of other institutional digital libraries in the developed countries"*

These values are shared by other interested parties such as the digital library staff and library committee members. However, some of the DL staff were of the view that it takes more than these personal aspirations for the project to succeed. It is their assertion that university management has to go beyond these aspirations if the project is to succeed. For instance, one DL project staff remarked;

> *"··· the best way for management to demonstrate that they hold these aspirations is for management to adequately resource the digital library project, both financially and logistically and to personally engage in the process ···"*

It appears there are discrepancies in the responses of the senior management members and the digital library project staff regarding the values of the former. While senior managers argue that they have sought every occasion to prioritize the DL, the project team refer to the reality of harsh working conditions. Furthermore, the latter group indicated that it seems the senior managers consider the DL as business as usual and that perhaps, the DL is not really regarded as an essential part of the UCC and its Library. This paper did not find any evidence in the interviews to show that the senior management members in the UCC personally engaged and did something to ascertain their values. This element of the Andrews model was not present in the UCC strategy for the DL. Thus, the empirical material does not seem to support this element of the Andrews model.

As a corporate entity, UCC recognizes it has both economic and non-economic considerations that inform their institutional action. In terms of the latter, one top management member had this to say;

> *"··· UCC is located within a cluster of local communities, in which most individuals have low educational attainment. Most of these communities have high proportions of potential non-traditional students. By focusing on such students, we are, invariably, fulfilling our social and non-economic responsibility*

to society. Our non-economic motivation is, especially, true when viewed against the background that
we have reduced our fees so that this group of students can easily afford our fees …"

According to another top University management staff;

"… Regardless of whether one believes that UCC should adopt non-economic goals as well as
profit maximization as ultimate goals, or whether one believes that the profit motive is sufficient
to encourage UCC to act in socially responsible ways, there is still an important role for us to
play in these local communities, nonetheless, given that some of our traditional students even reside
in such communities …"

Acknowledgment of non-economic responsibility is the final element of the formulation phase of the Andrews model. Interview data showed that this element was a central theme and major consideration in the strategic planning process of the DL. Thus, the empirical material supports this element of the Andrews model. The formulation and implementation phases of the Andrews framework are linked by the corporate strategy (pattern of purposes and policies), which is the focus of the next subsection.

When asked about availability of guidelines in the digitization of the library collection, five out of six library committee members said the library was using specific guidelines: these are scanning methods, software to be used, formats for the resultant scanned documents etc. These specific guidelines are captured in the policy document submitted to the Academic Board. Since 2005, the UCC has sought to expand access to information through distance learning mode to students. This led to the development of the digital library and the institutional repository (IR) document. These steps underscore the importance of the library within the university's medium to long-term strategic goals.

The digital library project had a time line concerning its development and completion. According to the two library senior members, there are short to medium term plans of 1-2 and 3-5 years duration respectively for its development. However, the digital library project staff had no idea about this time line. In fact, all project staff interviewed did not know how long the project was expected to take from commencement to completion of the digitization. One of the staff said

"… we have no idea about the duration of the project all we do is work on the project". Another
member put it: "our superiors have not mentioned to us or told us how long this project is to run
or finish. I have no idea …"

4.1.2. Implementation Phase
Although there is a mechanism to monitor the achievements of the project through time, it is rather informal. In order to achieve results, a library senior member indicated that university monitors and evaluates the progress of the DL project through reports from; the librarian, library committee and visits by university management including the Vice Chancellor (VC), pro-Vice Chancellor, and the Registrar. However, this assertion was not fully corroborated by the digital library project

staff. One project staff member said that;

> "… although management and other senior level participators visit us often, their monitoring and evaluation is not formal, documented or institutionalized….Mostly, feedback given to us is via verbal rather than written communication …"

Obviously, this type of evaluation of the staff and the project is not sustainable. As it stands, it is difficult to track the sequence of evaluation and to correct previous mistakes from time to time. Thus, the empirical material does not support this aspect of the Andrews framework.

The results point to division of labour and coordination among relevant internal participants in the DL project. At UCC there is a library committee that has general oversight responsibility for the management of the library. It provides suggestion and direction on library policy, projects, introduction of new services and improvements on existing ones. This committee is made of representatives of: the library, faculties and departments, university administration and students. The committee meets quarterly. The librarian provides a progress and situation report on the DL and other activities and needs of the library. The committee makes inputs into reports pertaining to the library which have come before it, collates them and submits these to the academic board of the university; the library committee is a subcommittee of the Academic Board. Projects accepted by the Academic Board are budgeted for implementation by the university management. Thus a consensus building approach through the committee system enables coordination among all interested parties of the DL project. So far, no conflicts have emerged among interested parties. Thus, it can be argued that the empirical material supports this aspect of the Andrews model.

The work schedules of the DL staff interviewed include: maintaining accurate records of the collection; configuring the integrated library system; importing data from cataloguing department; training of staff; and data input and converting data into formats needed. Monitoring the progress of the project is important therefore library management holds meetings with the DL once a semester. Seven DL staff were interviewed concerning these meetings and two of them averred that

> "their contributions were not taken into consideration", while one asserted that his/her suggestions concerning the project at meetings are sometimes taken into consideration. The other four stated they "hardly made any suggestions at meetings".

Staff training is an important facet of the DL project. Majority of staff (5 out of 7) were of the view that training was done anytime the need arose: the rest (2) thought training were not frequent enough. Some of the staff were not satisfied with the progress and pace of the project because the project lacked "sufficient resources". Other reasons were that the documents available for retrospective cataloguing are many and therefore management should employ more hands, and encourage and motivate staff to increase the pace of work. In addition three other staff proposed the "purchase *of more scanners, computers and electronic books in their bid to make work faster and easier for us".*

At UCC, incentive measures, such as salaries, secondary benefits, and intangible rewards, recognition or sanctions may be used to motivate digital library staff to increase performance (Balassanian & Wignaraja, 2006). However, apart from regular salaries the digital library staff have not benefited from any other incentive. Although qualified personnel may be in place at the UCC digital library office, appropriate work environment and incentives need to be present. These include appropriate remuneration, the needed software and hardware that will enhance their output. One of the project staff said:

> *"··· we understand that our pay has to be negotiated by our leaders with government but our desire is once a while they should give us bonus packages in the form of money ···"*

Another staff said:

> *"··· verbal praise and occasional lunch provided for staff for work done is not always the best; we need variations ···"*

Evidence, from this study, points to a range of de-motivating factors besides pay levels and non-material incentives that can have a significant impact on staff motivation and organisational performance (Balassanian & Wignaraja, 2006). In the context of UCC, the digital library staff drew attention to two critical de-motivation factors: limited number of staff to digitize the huge amount of data, and limited equipment for achieving the purpose. Regarding the former, one member of staff said that;

> *"··· we work tirelessly for long hours in order to meet digitization targets. I was thinking that aside the annual benefits to all library staff, we (digital library staff in particular) will get additional benefits from management. Yet, this hasn't happened to date ···"*

Regarding the latter, a digital library staff remarked that;

> *"··· no matter our skill levels, if equipment are lacking there is no way we can meet the target set for us by management. In such a case, who is to blame for non-performance ···?"*

Staff retention is also a problem as staff leave for better job offers and new staff have to be recruited and trained; this increases the budget of the project and delays output. Two of the staff gave the same answer saying:

> *"··· hmmm it's complicated but lack of computers plus incentives for staff allowance is a factor of high staff turnover ···"*

Digital library development is costly but worthwhile; managers of the project need to find ways to expedite output and positive outcomes. Thus the project would be successful but the challenges

of staff recruitment and retention, adequate remuneration in relation to qualification levels and the provision of the appropriate should be overcome quickly. From the foregoing, it can be argued that empirical data does not support this element of the Andrews framework.

5. Conclusion

There has been little previous work on digital library collections in Ghana, and for that matter Africa, by means of theory-testing case studies. To my knowledge, no studies have enquired into the reasons for choice of planning strategies and the role of the DL interest groups (users and planners) in the formulation and implementation of these strategies. The design used here is a theory-testing, most-likely-case design. The congruence method/pattern matching was used to assess how the findings of this study fit with the Andrews theory expectations. The study found that UCC did not entirely follow the strategic planning process proposed by Andrews; however, some of the steps were adapted to meet the local needs of the UCC. This shows that strategy process is rather complex consisting of intended, deliberate, emergent, and realised strategies that occur in response to changing context-specific needs, dynamic internal and external environments. The study concludes that although the external environment influenced UCC's decision to deliver digital library services, it is clear that UCC did not follow any systematic structure in formulating (deciding what to do) and implementing the digital library project (achieving results).

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[Appendix 1] Interview Schedule for University Administrators

Time Started: _____   Time ended: _____

Background Information
1. What's your current position at UCC? How long have you been in this position? Can you give me a brief overview of what it is you do in your work?
2. What would you say most motivates you to do what you do? What are the goals you most want to accomplish in your work? That is the goals that are in your job description and the goals you hold personally?
3. Did you have any key mentors or people who deeply influenced who you are, what you believe in and what you're committed to in your work and life? Tell me about them.
4. Did you have any life-changing experiences that put you on the path that led you to be doing what you're doing today? Tell me about them.

[Next, I'd like to ask you some questions about the University's policy on developing digital collections.]
5. How did the need to develop digital collections at the University Library arise?
6. How do you see the digital library collections developing in the future?
7. What difficulties do you see that might affect the development of the digital collections?
8. In general, how do you see the development of the digital collections benefiting the University community?

[Now I have one or two questions about the resources available for the project.]
9. Does the government support this project in any way? How is the government supporting the project?
10. Are any other external agencies supporting the project? How are they supporting the project?
11. Are there special University funds allocated for the development of the digital library?

Prompt *- Is there anything else?" or Any other sources of finance?*

12. Can you tell me about the strategic planning processes in relation to the establishment of the digital library?
13. How did the development of the digital library affect the need for the technological infrastructure of the University?
14. Is the digital library development now part of the university's strategic plan?
15. Has the university given any guidelines on how it believes the digital library should be developed? How were these guidelines developed and for who?
16. Can I get a copy of these guidelines, please?
17. How do you receive feedback regarding the digital library development?
18. In your position as the academic registrar how do you see the future of the digital library collection?

[Appendix 2] Interview questions for Librarian and digital library project officer

Time Started: _____   Time ended: _____

[To begin with, I'd like to ask you some questions about how the development of digital collections started.]

1. What reasons make the development of the digital library necessary?
2. Who was involved in the decision to develop the digital library?
   (Getting the names and positions you may ask what was the role of each person and how (s)he affected the decision)
3. Has everyone agreed on the desirability of the project or was there some disagreement about it?
4. Has the library management considered the resources and capabilities of the library before the decision to build a digital library was made? Were they redistributed and used?
5. Do you develop plans of different duration for the library (longer-term and shorter-term)? What are the periods covered by these plans?
   (If there are several versions ask: What are their differences apart from the covered period?)
6. Does the digital library develop as planned? why it keeps (does not keep) to the plan?
7. What is your assessment of the resources available for the project?
8. How the development of the digital library affected the allocation of funds to the library and inside it?
9. What are the main financial sources for the development of the digital library?
   Prompt - *Is there any other non-financial support to the library? If yes, of what kind and by who or what organizations?*
   Do you have any fundraising activity for the digital library?
10. Who are your main collaborators in developing digital collections at the library?
11. What is the role of the collaborators in the project? How do you communicate with your collaborators?
12. How do you communicate with the project staff?
    Prompt: *What are the communication channels and media that you use for communication with people working with the digital collections? Here you can also ask the question about conflict resolution (if it is about internal conflicts). Now let us talk about the current state of the library*
13. What has been achieved so far in the digital library?
14. How did the development of the digital library affect the recruitment of specialists?
15. How did the development of the digital library affect the resources for training of librarians?
16. How did the development of the digital library affect the library access for distance learners?
17. How did the development of the digital library affect the subscription to online journals?
18. How did the development of the digital library affect the need for the technological infrastructure of the University?
19. What technological resources have the library for the development of the digital collection?
20. What are the greatest unsatisfied needs of the library in this respect (what technology is still lacking)?
21. How has the university policy on library development affected the digital library development?
22. How does the University monitor the progress of the digital library development?
23. Did the university issue any guidelines as to how the digital collection is to be built?