A CRITICAL GENRE ANALYSIS OF
THE USER REQUIREMENT SPECIFICATION REPORT IN
THE INFORMATION TECHNOLOGY INDUSTRY

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A CRITICAL GENRE ANALYSIS OF THE USER REQUIREMENT SPECIFICATION REPORT IN THE INFORMATION TECHNOLOGY INDUSTRY

ABSTRACT

While it has been established that discursive practices involving writing are highly situated and context-bound, few local studies have examined the processes involved in the construction of texts and the shaping of the intended text. Recent perspectives on writing as ways of working and acting, and texts as social action suggest that studying the processes behind the construction of a text could provide a clearer understanding of the discursive practices involved in the shaping of the text. This is seen as relevant to professional writing context in the present study as texts are often shaped to facilitate the social action of their users (Pare, 2015). Therefore, this study aims to investigate the processes involved in the construction of an information technology (IT) document called the User Requirement Specification (URS) report. This URS report is situated within the documentation practices of an IT development project involving the revamping of a client's portal website. Using Rhetorical Genre Studies (Miller, 1984; Artemeva, 2009) as the main theoretical framework, the study employed interviews, document analysis and field notes to investigate the discursive practices involved in the shaping of this URS report. Thus, the study involved looking at the processes of text construction as well as into the text as an attempt at explaining the rhetorical and linguistics aspects of text construction. Based on the discourse analysis of interview transcripts report documents and the final URS report, findings revealed that the processes involved in the URS construction were based on three main concerns: the client's needs and demands; the stipulated requirements and allowed format of the report (the template); and shared objectives of the project's outcome. However, the writer and contributors to the text were

able to exercise agency in recommending what could benefit the client and end-users of the portal in the long run. This is reflected in the discursive features of the final URS document. Examining the processes of the URS construction was useful to the study as it revealed the collective involvement of different teams and their communication that led to the production of URS report. It is hoped that the findings would be applicable in the context of technical report writing with helpful implications to professional context and the IT world.

Keywords: writing processes, technical report, user requirement(s) specification report, Rhetorical Genre Studies, discursive practices, texts as social action

ANALISA GENRE SECARA KRITIKAL TERHADAP SEBUAH LAPORAN SPESIFIKASI PENGGUNA DI DALAM INDUSTRI TEKNOLOGI MAKLUMAT

ABSTRAK

Walaupun kajian lepas telah menunjukkan bahawa amalan diskursif melibatkan penulisan adalah berkait rapat dengan konteks penulisan teks tersebut, hanya segelintir kajian tempatan yang mengkaji proses-proses yang terlibat dalam pembinaan teks dan pembentukan teks tersebut. Perspektif terkini yang memperlihatkan penulisan sebagai satu amalan atau fenomena sosial (*social action*) boleh memberi pemahaman yang jelas mengenai amalan diskursif yang terlibat dalam pembentukan teks. Hal ini dilihat sebagai sesuatu yang relevan dalam konteks penulisan untuk tujuan professional di mana teks sering dibentuk untuk mengorak dan memudahkan amalan sosial para pengguna (Pare, 2015). Oleh itu kajian ini bertujuan untuk mengkaji proses-proses yang terlibat dalam pembinaan sebuah dokumen yang bersifat informasi teknologi (IT) yang dinamakan sebagai laporan Spesifikasi Keperluan Pengguna (*URS*). Laporan ini adalah merupakan amalan pendokumentasian untuk projek pembangunan IT melibatkan penambahbaikan sebuah laman web portal pelanggan. Menggunakan *Rhetorical Genre Studies* (Miller, 1984; Artemeva, 2009) sebagai kerangka teoretik utama , kajian ini menggunakan metod wawancara, penganalisaan dokumen dan nota medan dalam mengkaji amalan diskursif dalam pembinaan dokumen *URS* tersebut. Oleh itu kajian melibatkan proses pembinaan teks beserta teks sebagai usaha untuk memberi penerangan berkenaan penggunaan aspek retorik dan linguistic dalam pembinaan teks. Berdasarkan analisa berbentuk wacana diskursif yang dijalankan ke atas transkrip wawancara, dokumen laporan dan dokumen *URS* yang akhir atau terkini, penemuan kajian menunjukkan bahawa proses yang terlibat dalam pembinaan URS adalah berdasarkan tiga teras utama iaitu: keperluan dan

permintaan klien; keperluan dan format yang ditetapkan dan dibenarkan (templat laporan); dan objektif bersama hasil projek. Walaupun begitu, penulis dan penyumbang kepada teks tersebut mampu menggunakan cara tersendiri dalam memberi cadangan yang dapat memanfatkan pengguna portal dalam jangka masa panjang. Ini dapat dilihat melalui ciri-ciri diskursif di dalam dokumen *URS* yang akhir tersebut. Mengkaji proses-proses yang terlibat dalam pembentukan teks *URS* adalah berguna untuk kajian ini kerana ia menunjukkan penglibatan secara kolektif ahli-ahli projek serta komunikasi di antara mereka ke arah penghasilan sebuah laporan *URS*. Adalah diharapkan bahawa penemuan kajian ini dapat diterapkan dalam konteks penulisan laporan teknikal dengan implikasi yang berguna kepada penulisan bahasa kedua.

Kata kunci: proses penulisan teks, laporan spesifikasi pengguna, "*Rhetorical Genre Studies*" (RGS), amalan diskursif, teks sebagai amalan sosial ("*social action*")

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LIST OF SYMBOLS AND ABBREVIATIONS

AS   Activity System

BC   Business Consulting

CAD   Chief Administrative Director

CARS   Create-a-Research Space

CEO   Chief Executive Officer

CER   Corporate Environmental Report

CMMI   Capability Maturity Model Integration

DC   Document Controller

EAP   English for Academic Purposes

EFL   English as a Foreign Language

ESL   English as a Second Language

ESP   English for Specific Purposes

FMC   Fund Manager Commentary

IA   Information Architecture

ICT   Information Communication Technology

IDC   Internet Data Centre

IEEE   Institute of Electrical and Electronics Engineers

IMRD   Introduction-Method-Results Discussion

IS   Information Systems

IT   Information Technology

KFU   Key Functional Units

LDA   Linguistics Discourse Analysis

MCP   My Current Portal

PD	Project Development
PLC	Project Lifecycle
PMP	Project Management Plan
RA	Research Articles
RGS	Rhetorical Genre Studies
RQ	Requirement Study
SDLC	Systems Development Lifecycle
SFL	Systemic Functional Linguistics
SRS	Systems Requirement Specification
TC	Technical Team
URS	User Requirement Specification

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CHAPTER 1: INTRODUCTION

1.1 Introduction

This chapter sets the scene for the study by firstly providing background information on the study placing it in context within the broader field of professional writing. The chapter will then establish the research concerns and later explains the significance of the present study. Further context of the problem will be given by looking at the development in professional writing at the workplace. This also includes a discussion on the realities behind the writing of business and technical documents in professional contexts, bringing into question the relationship writing has with the concept of genre. This provides scope with which to introduce the problem motivating the study and the chosen theoretical framework. Finally, the objectives of the study as well as the research questions to be addressed will be presented followed by the final section explaining how the thesis will be structured.

1.2 Background to the Study

This study is a case study looking at the processes involved in the construction of a text, namely the user requirements specification report (henceforth known as URS report). This is done by looking at the writing processes including the communicative exchanges involved in the text's construction. Research has established that writing is highly situated, and context bound thus shaping how documents are constructed in specific workplace sites for specific purposes (Pare, 2015; Bremner 2014; Gruber, 2013). What is also known is that discursive practices have also been found to be highly situated as they are dependent upon the specific organizational context and culture as well as the social relations among its participants (Bazerman, 2012; Bhatia, 2012; 2004; Searle, 2010), This means that discursive practices vary according to the local context in that the

practices and activities associated with the writing of the text, the language used, and the rhetorical text level conventions are shaped by the social and cultural contexts within which writers work. Writing these documents require knowledge and understanding of that context.

In addition, changing workplace contexts and practices will have an influence on the nature of the texts produced especially in the face of increasing "differentiation and specialization of professions" which requires professionals to constantly adapt to disciplinary communication, changing goals and communicative purposes (Conception Orna-Montesinos, 2012; Johns, 2011, p. 63; Roberts, 2010). For instance, while a business report is often written for practical reasons such as to solve a problem and suggest solutions, its writing can also be quite rhetorically complex due to industry-specific practices and regulations (Searle, 2010). In spite of these developments, few local studies have examined the processes involved in the text construction and the shaping of the intended text.

There are several bases for making the above argument. Firstly, recent perspectives on writing as ways of working and acting, and texts as social action suggest that studying the processes behind the construction of a text could provide a clearer understanding of the discursive practices in producing a text, and how that writing is used to accomplish certain goals or actions. Indeed, writing studies are now approached from more developmental and communicative perspectives, focusing on "actions of the writer", and most recently as "expressions of social purposes" (Hyland, 2010, p. 192). Hence, the goals of writing, the intended audience, and the relations between the writer(s) to the specified audience(s) are often considered. The general understanding is that writing does not exist in isolation but is situated within a particular practice and is therefore embedded in wider social

practices. This also suggests that meaning making is situated in concrete interactions. As language use is functional for meaning-making tasks, the overall structure of texts is determined by the functions it carries within specific communicative situations.

Secondly, studies on professional writing tend to give more emphasis to format and language features of the text over its production. However, professional writing is socially situated within a specific culture of its professional organization, therefore it has become necessary to investigate the written discourses and social processes characteristic of these settings. This is important in the understanding of how writing is engaged with the process of learning ways to communicate in organizational contexts for specific purposes (Newton and Kusmiercyzk, 2011). In the case of technical texts, for instance, writing is often carried out "to accommodate technology to the user" (Luzon, 2005, p. 287), indicating that the social needs of the writing situation are important aspects to consider. It is important to investigate not just the text, but the work or processes involved in its construction and examine how these processes helped in the shaping of the intended document (Rude, 2009; Pare, 2014; Bremner, 2014).

Third, most studies have somewhat kept the rhetorical aspects of the document production (such as in New Rhetoric study of genre/writing) and the linguistic aspects separate (such as ESP or EAP- based studies). However, only a few have given some insights to how the context helps in the shaping of the document. According to Aull (2015), there are areas where attention to both aspects and approaches should and can "co-exist." These include situations involving novice writers or writers writing professional documents in EFL and ESL contexts. These writers need to have a better understanding of the discursive practices in order to produce documents which attend to specific social and organizational needs.

In the case of the IT community, this kind of an investigation is useful as the production of documents often require adherence to specific conventions which have been established. However, studies have shown that the social process of any professional contexts plays an equally important role in the production of a document. This situation needs to be investigated further. As Hyland (2010, p. 194) argues, texts as social action requires "identifying the ways that texts actually work as communication." Similarly, Johns (2014) highlights the fact that writing activities and key players behind the production as well as use of the texts determine the organization of the texts and the linguistic choices made. In addition, writing is "about ways of working and acting" since texts are not "an ends but a process" (Prior, 2004; 2014). This shows that texts are produced for the purpose of accomplishing specific social ends or goals.

Although there have been a few studies of similar nature (Aull, 2015; Wang, 2007), the socio-rhetorical aspects of writing needs and situation in a professional context need to be explored and understood. This investigation is important as it would help make writing practices more visible to reveal, for instance, how "knowledge is constructed as well as reported as a final product" (McGrath, 2016, p. 26). Writers in professional context need to see the workings behind documents and understand how the writing of these documents is shaped by the discursive practices within their specific context, and how they may vary.

In order to address the above research gaps, the present study investigates the writing processes involved in the construction of a text within the context of information technology industry called a User Requirements Specification report (henceforth URS report). It pays attention to the social context (of writing) but without neglecting to explore the textual and language features of the text/document. The kind of an

investigation pursued in the present study requires a combination of approaches; not to be eclectic but to account for the particularities of the data that are specific to the chosen workplace setting. In the next sections which follow, details of the URS report, the full context of the study, including the choice of IT text and context will be presented.

1.3 Situating the Present Study

It has been mentioned in the last section that documents are known to vary according to the local context, audience and purpose. As such, recent studies on professional writing have illustrated various circumstances surrounding the writing of documents, the need to pay some attention to the rhetorical and social aspects of the writing context in producing workplace documents. In that sense, Miller (2004) argues that overemphasis on mechanistic form and style may preclude the potential of workplace texts to create more meaningful exchanges between writer and reader. It has also been argued that one writes, or engages in any communication, to participate in a community – to understand the "concepts, values, traditions and style" that allows one to identify with that community and become aware of what qualifies as success or failure of communication (Miller, 2004, p. 54). This argument is relevant to professional writing in the workplace in view of different circumstances or contingencies posed for workplace writers in the writing of specific document or text. This section presents a brief description of writing in the professional context with a focus on the local context.

1.3.1 Developments in Professional Writing at the Workplace

Research has suggested that writing performs very different functions in different contexts thus cannot be generalized across all contexts. So, while the generic structure of texts is important in terms of the structure it provides to the actions performed in workplaces (Searle, 2010), there are also varying agendas behind the routine nature of

writing at the workplace. Compliance with government, industry or corporate agendas and to maintain the social order of the workplace are some of these agendas. Studies have also shown that even within one organizational/professional setting, there are "intracompany variations in writing product and processes" according to the different "communities of practice" (Angouri & Harwood, 2008). In addition, writing in different fields such as writing technical texts required the professionals to engage in "complex web of profession related discourses". According to Bhatia (2004, p. 10), these "discursive realities" will add to the challenges faced by workplace writers, in particular those new to the profession.

Part of the problem could be due to differences across contexts in discursive sense. Study on business reports, for instance, has shown that contrary to expectations, the reports in the present business community varied in formats, types and characteristics (Yeung, 2006). It was reported that concerns for practical matters and practical solutions in business reports determined why some sections were different from conventional report sections. Dannels (2003) who conducted a study on design presentations in engineering concluded that contextual factors such as norms and expectations as well as the different practices, motives and roles had an influence on the resulting presentations.

In the legal domain, for instance, the need to address institutional factors appears to be primary. Studies have shown that competing activity systems between university and workplace contexts can result in the emergence of two somewhat distinct genres. Hafner (2013) pointed out that even though writers from Law schools and legal practice may belong to the same disciplinary culture, differences in the operating ideologies and underlying values will result in differences in the texts produced. These studies have shown that professional writing in professional settings does not merely involve textual

generalities and conventions but a consideration of the complex, disciplinary, professional and institutional contexts in which the text occurs. In some cases, this complexity can be seen in texts/genres that are considered "hybrid" showing "embedding and bending of genres, colonization of genres and disciplinary and institutional conflicts across generic boundaries" to represent different ideologies (Bowles, 2012 citing Bhatia, 2002, p. 43).

Expert writers have also been known to "exploit" genre conventions and use of the language to achieve "private intentions" (Bhatia, 2004; 2010). This usually occurs with corporate disclosures and annual reports, including other publicly available corporate documents. Bhatia therefore proposes a "multiperspective and multidimensional" framework (Bhatia, 2004, pp. 18) for the analysis of written discourse that takes into consideration the textual space, socio-cognitive space and social space to help explain the complexities of writing as it is realized within the professional and social contexts of the workplace. Each of these "spaces" calls for specific analytical procedures which can be used for investigating written text and its interaction with context of production. In recent expansion of his genre-based research of written discourse, Bhatia has proposed a more critical study of professional genres in order to account for the various "discursive realities" involving texts/genres within professional contexts. The concept of "critical genre analysis (CGA)" is central to Bhatia's approach to investigating written/professional discourse. It involves looking at pattern of interdiscursivity, that to "the multiple discourses, actions and voices" behind "the motives and intentions of disciplinary and professional practices" (Bhatia, 2004, p. 393).

The CGA approach advanced by Bhatia (2004, 2010) is useful as it is indeed the case that the organizational context creates "multiple rhetorical challenges" for workplace

writers. As the above studies have indicated, texts in the real world have been found to have multiple purposes that textual analysis alone cannot easily identify. Emerging genres could often be innovative ways of producing novel texts in response to changes in discursive practices within professional, disciplinary or organizational contexts. In the IT industry, for example, efficiency in relation to making information accessible to audiences is a key consideration. However, there is also standardized document based on industry standards to fulfil industry agendas for accountability and standardization (Searle, 2010), such as the case with project documentation. These dual, perhaps competing ends, need to be considered. In addition, there exists a great deal of intertextual dependence of text/genre that 'work together in assemblages' or in concert with one another (Spinuzzi, 2004, p. 1) In this case, the interactions of different but related texts form a part of the larger set within a specific professional practice that needs to be addressed in studying professional writing (Flowerdew & Wan, 2010).

Both writers of the documents and readers (stakeholders consisting of managers, coders, analysts, designers) are also often engaged in the social practices of the workplace (Searle, 2010). Hence, professional writing in business and industry are found to be collaborative in nature (Bremner, 2014; Cuppan and Bernhardt, 2012) where employees work together to plan, draft and revise a single document in order to produce a document that meets organizational goals, needs and values (Allen, Atkinson, & Morgan et.al., 2004). It can be seen that workplace texts are often read and acted upon by many individuals in the process before the final document is distributed.

While these practices challenged workplace writers in achieving text coherence, it did encourage the writers to participate in communication practices among knowledgeable peers whose work is guided by the same paradigms and the same codes of values and

assumptions. The writing process in this case was not only very much social in nature, but "acculturative" (Brufee, 1984 as cited in Thralls & Blyler, 2004) and normative as it reflected the shared values, cultures and practices of the discourse community. Theoretically, this exemplifies the situated nature of writing and is indicative of the different processes at play in the construction of written texts. This is an important point of consideration for the thesis.

To reflect the communicative needs of the members in specific settings, the working culture and expectations of the organization and shared rules of negotiations, language use must be aligned. Ain Nadzimah's (2008) study of language use within the Malaysian legal setting revealed the socio-cultural underpinnings of language use where language choice was influenced by the need to create positive intergroup relations. Thus "convergence" and "norm compliance" were the main parameters upon which language choice and strategy were made. It was thought that these "impersonal" aspects would increase the communicative efficiency of the interactions taking place in formal settings such as in the courts.

In professional settings such as banking, communicative efficiency is achieved through language, although in many cases, templates and software are created to help executive writers produce textually acceptable texts. However, these templates are often modified to adapt to the rhetorical need of the situation (such as when writing to appeal to customers) that is reportedly to have brought changes to the text. These changes are necessary in order to achieve the desired communicative effect on the reader, induce action and get the business done. Similarly, engineers have been found to emphasize correctness and simplicity in language use (Manvender & Sarimah, 2012). In the case of this study where language was used in a multilingual context, clarity and accuracy were

important to convey a message that could be understood to minimize the risk of work-related accidents.

Looking at the local context, there are developments in the Malaysian workplace written discourse which need to be investigated further with respect to the actual organizational or professional contexts in which the writing takes place. For instance, fields of business and technology have been seen to present rhetorical and communicative challenges involving language use. Increased automation in business processes and communication means greater efficiency and new opportunities, but it also means increased need to produce texts online, or initiate internet-based projects. This means that there will be the production of various documents/texts which communicate to those involved, the aims and nature of specific projects, or project tasks and the structure of work ahead. One such document is the user requirements specification often produced for software products and the like. Such information needs to be communicated through clearly and accurately to all the various stakeholders internal as well as external to the organization with different levels of technical understanding.

Given the above scenario, it has become important to investigate writing within the context of business and technology. Within the local context of Malaysia, to the best knowledge of the present researcher, very few writing studies in this field have been carried out. Most of the local studies have largely been assessments of needs with respect to the communication needs and skills required of the Malaysian workforce. The "discursive realities" as is described by Bhatia (2004) surrounding workplace writing as it may exist within local workplace context has been interpretive on the most part. The section that follows will briefly provide detail on user requirement specification report as it is relevant to the participating organization.

1.4   The User Requirement Specification Report

One of the critical activities and practices in IT development projects, including software engineering, is the creation of project documentation comprising written documents (normally reports) of varying nature dependent on the specific projects. These documents consist of both process documents, which describe the management and developmental side of the project, and product documents which describe the actual software product or IT services; both representing the work that needs to be done with respect to the software/system or website.

Although the project documentation is a tool for planning and decision making, it is also the communication medium between the development team and the client or end users. It is argued that project success depends on documentation that communicates the key concepts and requirements regarding the system in the clearest and most effective manner possible (Kipyegen & Korir, 2013 p. 223). As many companies continue to seek certification in a variety of world class standard programs, extensive documentation is often needed so is an important aspect of the company's business processes.

The user requirement(s) specification on its own is a planning and a reference document developed for software products (computer system, equipment, application and others) which specifies clearly what the system should be able to do (Ofni Systems, 2012 User Requirements Specification). Companies make use of the URS to describe the business needs of prospective users (client) and to list out the requirements for the particular system. The URS is an important document for IT projects. For both business owners and clients, specifying accurately what the particular application or computer system is about and what it should be able to do is crucial for the success for the development of the product. The URS is not a technical document per se but is a document

meant for readers with only a general knowledge of IT. It carries both technical and business functions in that both the technical and business aspects of requirements are presented. From a business standpoint, the URS should detail out what is required from a system that can deliver the business owner a business advantage.

The literature on requirements specification revealed that the URS is prevalent in the industry and in business, although the format and content may vary across types of project and business. For Company A, the URS is regarded as a report, rather than just a product specification, thus is interesting to study. Based on early feedback from the participants, it was revealed that although the document/text carries the function of a requirements specification, it was also designed to inform the clients of the project objectives and background, including the processes such as in obtaining the necessary details on the client's requirements for the particular IT product. In other words, the URS documents communicates both technical and business needs of the specific project that will be meaningful both to users and developments" (Papyrus, User Requirements Specification, 2008, p. 10).

The URS report forms a component of Company A's written documentation for IT projects, especially bigger projects which involve the development of software and portals. As normal practice, a template is used for writing the report which has been modified from the industry's template. The company's main aim in producing the report is to give the client and other project stakeholders a clear idea of the project in total in the standard manner and form set by the company (CEO & Head of Business, personal communication, 2012). The stakeholders vary depending on the project, but generally for a project involving a portal website, they include project managers, web designer(s), business analysts, systems analyst, information architects, financial officers,

programmers and many others. The URS is one of the main document deliverables which will be sent to the client for approval, without which the team would not be able to proceed to the next step in the project. As a reference document, the details within will be used by developers or coders to code the various functions and develop the system based on the requirements specified and described in the URS report. Testing and benchmarking are also based on the report.

For the purpose of the thesis, the URS report will be regarded as one form of professional writing as it helps project stakeholders get an understanding of the project and its requirements to make decisions or implement specific actions relating to the project. In the case of the study, URS report allows the next step of the project to proceed, including the production of other relevant reports such as the systems requirement specification (SRS) which is a more technical document. Therefore, the URS report both informs and invites actions.

1.5   Statement of the Problem

As the above discussions have illustrated, the writing of technical texts, the rhetorical and social contexts have a bearing on how technical reports are constructed (Spinuzzi, 2010; Mirel, 2004). Where advances in technology is concerned, writers of reports need to consider the impacts that these changes may have on reporting practices in the written form. Research findings suggest that investigating the writing of technical documents such as reports is necessary because of the structural and rhetorical complexity involved and their dependence on industry-specific practices and organizational cultures.

In the case of the IT community, the discursive practices involved will be useful to investigate in order to gain an insight to how the professional and social elements

underpin the construction of the URS report. It has been argued that these social conventions have an influence on the text as well as the process of producing the text. As the writing of the reports is shaped by discursive practices within a specific context, this study is interested in the URS report since changing technologies have made an impact on written communication, social relations and communicative practices. The URS therefore encompasses many of the elements discussed previously such as the need to write for multiple audiences, to be aware of organizational culture and social work order as well as changes in the social environment.

Studies on IT report is still lacking despite its prevalence in the local context. Available studies tend to focus on 'high-visibility' public documents such as corporate annual report, emails and company websites. What has been neglected is investigation on internal reports which are equally important and may also be dependent on their context of production and changing practices. The URS is one type of internal report that can reflect how the players, namely, professional writers from an IT company, communicate with their clients to produce the document.

While some studies found the influence of professional, disciplinary and institutional elements to be prominent in the writing of workplace documents, local studies have found that discursive practices were often in response to macro social changes external to the organization (Flowerdew & Wan, 2010; Sargunan, 2000). In some cases, the writing is made to fit more practical purposes such as in getting the language right to get the message across effectively among multilingual participants (Nur Ehsan & Saadiyah, 2011).

Also, as it appears that professional texts/genres in the workplace is localized, it becomes important to examine these texts/genres within their site-specific context to

capture what has been described as "distinctive needs of specific workplace which must be satisfied in the production of documents" (Davies & Birbili, 2000, p. 437). Therefore, this study is carried out to investigate the construction of a written technical report, namely, the user requirement specification report, within the context of a local IT organization. This is done by examining the writing processes involved in the construction of the report, including the communication taking place among players. As discursive practices vary according to the local context, writing workplace documents requires knowledge and understanding of the context. It is important to examine not just the text, but the work involved and the materials from which the text was produced (Pare, 2014).

It has been suggested that studying the writing processes as they take place within organizational processes and communication practices will be beneficial in examining the role of context in text production. For Bremner (2014, p. 260), looking at the process of text production enables one to explicate discipline and profession-specific ways of constructing knowledge and the participative nature of its construction to achieve their particular goals. Looking at writing as socially and culturally situated, other studies have also found that texts and writing practices are often strategically adapted or designed by individuals to produce the particular kind of knowledge required by specific community (Starke-Meyerring & Pare, 2011, p. 11). It would therefore be interesting and useful to investigate these discursive practices as they are realized within specific disciplinary, organizational or workplace settings.

The study sees the act of text construction as social actions (Bazerman, 2011) in response to organizational (disciplinary and professional) and social needs of the workplace. In this particular organization that has been identified for the present study,

the URS reports are produced based on a format predetermined by the company and the IT industry. However, variations or rather modifications do occur based on needs of the organization and the client. The analysis will be focused on how the report is constructed. It therefore makes it necessary to examine the URS report not solely as text but as part of a single discursive event taking place within project documentation. How are these communicated between the IT company and its client?

Despite existing templates, the final written report needs to be examined further. It is a product of the communicative exchange between the company and client. Are these changes reflected in the surface structure or language features? This investigation will take into account the discursive features in terms of both textual and language aspects of the constructed URS reports. This is important in order to link aspects of the discursive practices surrounding the processes of construction (context) and the text. Studies which examined processes of construction in the shaping of the intended text has been scarce. The present study is different in that respect. As workplaces are continually changing, the ideologies, value systems and cultures change to produce significant changes in language use, practices and to the texts/ genres in question, in terms of how they are constructed, interpreted and used (Bhatia, 2004). Research has also shown that some genres, including the report genre, have become quite complex in both content organization and forms, including language, as they reflect the nature of the changing workplace context, the rhetorical and social needs of existing situations, including the interests of multiple audiences with dissimilar needs. This can mostly be seen in the case of corporate social responsibility reports, and legal genres, but less so in technical reports, especially internal reports.

Relatively little is known about the type of technical texts such as the URS report, yet like other technical and professional writing, it is designed to accommodate users with varying needs and interests. As far as professional writing scholarship is concerned, according to Roberts (2010), changing nature of the work itself and new technologies had brought about changes in the "communicative environment" at work giving rise to "multimodality of everyday activities and thus new forms of the language". If that is the case, what textual aspects, including language, are considered in the rhetorical achievement of the whole URS report?

The URS report in the present study is approached from the perspective that it is part of a larger discursive event that is project documentation. In comparison with other studies which examined a single text within the context in which it occurred, the present study examined the construction of URS document as it is situated within a larger system of textual activity specific to project documentation within the context of the IT workplace. The present study is different in that respect.

Some questions worth asking, for example, include how does a document fit into the sequence of events in project documentation, and in turn the organization? What is the writer's role with respect to the document (Harrison, 2004)? Thus far, Bremner (2014) has been one of the few studies which have attempted to look at the process of text production. However, there is still much to be learned regarding the processes involved in the construction of workplace texts toward obtaining a clearer understanding of the social contexts of the workplace in the shaping of the intended document. The purposes of any text do not reside solely in its surface structure and linguistic features, but also by an awareness and knowledge of "organizational activities, motives and goals". Likewise, the style and structure of documents/genres may be conventionalized and possibly

"dictated" by rules in the organization or the genre in question, but how all this knowledge is instrumental in guiding its writing requires some consideration (Harrison, 2004, p. 263).

Looking at the processes involved in the construction of documents could shed light on this. In the present study these processes refer to the writing processes involved in the construction of the URS report. As workplace contexts are sites of changing practices especially in response to evolving technologies, this approach could also enable the researcher to explicate existing or new aspects of professional or institutional contexts that may have a bearing on the text to be produced and their resulting features. There is a need to understand writing in organizations better in ways of working that "align writers, readers, texts and contexts" (Prior, 2004, p. 167). Hence, it would be interesting to investigate how discursive practices of local organizations contribute towards the shaping of documents such as reports in the local context.

1.6   Objectives of the Study

The study investigates the processes involved in the construction of an IT report, namely the user requirement specification report (URS) as well as the communication that took place among the players in the shaping of the intended document. The study will address the following objectives:

1. To investigate the discursive practices in the construction of the URS report at an identified local organization

2. To study the discursive features of the URS report

1.7 Research Questions

The study hopes to address the following research questions:

1. What are the writing processes involved in the construction of the URS report at the local organization?
2. What forms of communicative exchange occurred among the players involved in the construction process?
3. What are the main discursive features of the URS report?

1.8 Rationale for the Study

The present study attempts to develop an understanding of writing in an integrative way. What is needed is more systematic understanding of how professional written texts/genres are constructed successfully. As text/genre is often found to be located in the "organizing action of their disciplines", in organizational processes and practices (Bazerman, 2011), there is a need to examine the processes of text construction as they are situated within larger systems of textual activity.

The present study hopes to contribute to existing knowledge regarding a text type along the following considerations: firstly, the study investigates the URS report as a text type within the field of IT. Therefore, the practices will be different, as well as the report genre focused on as unit of analysis. The URS report has not been studied a great deal from socio-cultural and socio-rhetorical perspectives. In addition, little behind-the-scenes processes impacted by technologies in terms of communication practices have been conducted. IT- centred texts such as the URS report examined in the study need to be explored in their context of production rather than IT-mediated texts such as emails and corporate websites to name a few.

It is understood that writing is highly situated and site-specific and draws meaning from the specific (socio) cultural context in which it takes place. As language is understood to be a meaning-making task, it thus 'serves' the needs of the writer to "make meaning", as it is fitting to the task at hand and the audience (Grabe & Kaplan, 1996, p.136). Texts that follow communicative patterns that both writer and reader can identify with will become "recognizable forms and mutually reinforcing" and thus become genres (Bazerman, 2004, p. 316). Due to this, the concept of *genre* has been utilized in this study. Research on writing as situated practice in the professional and workplace contexts has often involved work on genre, which is understood generally to be standardized, recognizable text professionals use to regulate their writing activities. Thus, texts that professionals deal with would belong to some form of a genre, which in the case of the present study is the report genre. It is important to note here however that this study uses the term genre loosely for the purpose of recognizing the URS report as text type of the report genre.

Miller's (1984) reworking of genres as forms of social action; that "functioned to organize the work of organizations" and coordinate actions points to the importance of viewing genres beyond the textual form to the ways, or processes, of meaning-making – of individuals undertaking activities and sharing meanings towards the accomplishment of certain tasks. Thus, central to the study is the Rhetorical Genre Studies (RGS) (Miller, 1984; Artemeva, 2009) perspective of genre at the workplace that it is "being shaped by the recurrent social context that arises in that workplace" (Bremner, 2012 p. 11). Therefore, both text and social context are considered to be "mutually constitutive". It has to be emphasized here that although the concept of genre is considered, the study looks at the construction of the URS as a particular text type of the report genre. Thus, it

investigates the writing processes and communicative exchanges among players. It is not the purpose of the study to carry out a full genre analysis study in its traditional sense.

Rhetorical Genre Studies (RGS) has been used as the main theoretical framework, based on the perspective of genre as social action (Miller, 1984). It is believed that RGS is most appropriate for the study as it sees texts as much more than structure, but as an interaction with a specific context to achieve a "social action" (Johns, 2013). Due to its focus on the interactions between texts and context, RGS links writing and genre in productive ways. Genre in this sense is approached from the perspective that it is situated and socially constructed. Thus, RGS allows the flexibility needed in the present investigation to investigate the processes involved in the construction of the URS text; that is the context of the text production and text.

1.9   Structure of the Thesis

The thesis will be structured as follows. Chapter 1 has set the scene of the study situating it within the context of professional writing scholarship. Chapter 2 will provide the relevant literature followed by Chapter 3 on the theoretical framework discussed at length. In Chapter 4 the research methodology will be explained. The Findings and Discussion will be organized into two parts as separate chapters 5 and 6. Chapter 5 will provide detailed discussion on the processes of the report construction, specifically the writing processes involved, along with the communication which took place in the report construction. Chapter 6 looks at the textual outcome derived from the process of construction with a focus on describing patterns in the structure of the URS report and language use. Lastly Chapter 7 concludes by summarizing the major findings and discussing the implications for writing and genre studies in a professional context.

1.10 Summary

This chapter has provided the background to the study situating it within current scholarship regarding writing and its social-situatedness. It has been seen that in workplace and professional contexts, writing text involves an interplay among a number of discursive practices already established within the specific organizational context and culture of the specific profession, including social relations among the participants. Therefore, texts or documents are shaped by the discursive practices of the specific context. However, they may also vary for many reasons. This chapter has provided several examples as support which point to the need to consider changing goals and practices of communities as well as social relations in relation to specific discursive practices in regard to the written text(s). The study is carried out to investigate the construction of an Information Technology (IT) report, namely, the user requirements specification report in a professional context, with the main aim of uncovering the discursive practices involved in its construction. Situated within a qualitative conceptual framework that sees texts as situated within organizational contexts and practices, and forms a part of a larger pattern of social action, the study seeks to provide an account of the processes involved in the construction of the report in the shaping of the intended document. This chapter ends by providing the rationale behind the study and research gaps.

CHAPTER TWO: LITERATURE REVIEW

2.0   Introduction

This study aims to investigate the processes involved in the construction of an IT report, namely the user requirement specification report. This chapter will cover topics on writing as social situated practice followed by a discussion on the complexity of workplace writing. The notion of Genre will be explored looking briefly at the development taking place within genre theory as insight to Rhetorical Genre Studies (RGS), the theoretical framework adopted in the study. This chapter will also cover Discourse and Discourse Analysis to highlight its various uses and its significance to the study. Examples of studies will be given. In addition, separate sections of studies on genre and workplace writing will also be provided.

2.1   Writing as Social Situated Practice

Writing practices are situated as it takes place within specific domain (disciplinary, workplace or professional) at specific moments and address specific needs of the context where it occurs (Chala & Chapeton, 2012). Ivanic (2004 p. 225) describes writing as a "purpose-driven communication" that takes place in a social context. According to Ivanic, this social practice view on writing is significantly different from the skills view and genre view of writing in that whilst both the latter perspectives are predominantly product-based and governed by rules, linguistic patterns and characteristic text types, the social practice view sees text and its processes of production as tied to the "whole complex of social intervention which makes up the communicative event in which they are situated" (Ivanic, 2004, p. 234).

Lillis (2008; 2001) described writing as a practice which links language use with individuals who are socially situated in specific situations and culture. In other words, writing does not exist in isolation but are context-bound and situated within people's practices in their social world. This claim is important as it illustrates the connection between the writers and their social and cultural contexts. Lillis supported her argument with an example of a study from professional writing in relation to the issue of style among second language scholars writing an English text for publication. Making use of "text histories" containing reviewers' comments as insights, it was found that the texts initially showed problems in stylistic features.

However, the analysis done on the text(s) alone could not reveal much about what was acceptable stylistically in the Anglophone publishing context. Upon closer investigation of the comments to establish a connection between the text and the context, it was revealed that the underlying problem was not so much on the text, as illustrated in the following excerpt. This comment was in relation to a specific writer's use of long sentences:

> …the problem" was "not so much with the text but what the text indexes- a particular tradition of scholarly writing, referred to as pretentious-and how she or he orients to that form- negatively. The reviewer indicates that her or his response is not an individualized response but located in terms of differing geo-cultural (rhetorical) traditions. (Lillis, 2008, p. 380)

It was concluded that there was indeed an interrelationship between the text and context whereby specific ideologies and rhetorical traditions determined how the texts were read and received. Not only that, contextualized details drawn from the study

demonstrates the politics of academic text production and to a certain degree of power relationships, which would not have been unraveled if the study had not gone beyond the perspective of the text as linguistic expression.

Where meaning-making is concerned, writing practices draw meaning from the specific context where it occurs thus can only be understood within that context (Swales, 1990). The situated nature of writing may present a challenge to new hirers in a workplace context because of the criticality that is attached to the context of the workplace. Over the last ten years, the socially situated nature of writing can be seen to have influenced writing research in particular in terms of focus. What can be said is that the focus has been less on the text but more on exploring context and social practices (Bhatia, 2012; Hafner, 2010; Bhatia, 2010; Flowerdew & Wan, 2010, Hyland, 2008; Beaufort, 2008; Cheng & Mok, 2008; Brady, 2007; Wegner, 2004; Berkenkotter, 2001). In doing so, writing studies have begun to uncover the complex and multifaceted nature of professional writing at the workplace, which will be discussed in the following sections.

2.2   Complexity of Workplace Writing

This section takes as its starting point the viewpoint expressed by Bazerman & Prior (2004, p. 2) in that understanding writing involves exploration of the "practices people engage in to produce texts" including how "writing practices gain their meanings and functions as dynamic elements of specific cultural setting". While this view allows for greater space for researchers to extend the study of writing beyond textual and linguistic descriptions, it also adds to the complexity in investigating writing.

In professional written discourse, the organizational practices and culture of the corporation often play important roles in the ways texts and genres are often constructed in specific workplace sites including the nature of the genre produced (Roberts, 2010; Flowerdew & Wan, 2010; Johns, 2011, p. 63; Russell, 2009; Roberts & Sarangi, 1999; Candlin, 2002; Nickerson, 2002). As Candlin & Hyland (1999 pp. 2-3) argued, writing is not "simply words on a page or screen" but a "set of communicative purposes which occur in a context of social, interpersonal and occupational practices" . It is thus essential to consider the "situatedness of texts and of the processes which contribute to their creation and interpretation" . Candlin and Hyland had set the research scene very early on for researchers. What can also be said in relation to these two views is the importance of investigating writing not only as product but as process, and the need for methodological orientations that can best account for all the constructs involved in writing, in particular those relevant to professional writing within a workplace context.

What has been uncovered about professional writing thus far is that it is a "complex, dynamic and multifunctional activity" if compared with writing which takes place in an academic setting. Professional writing has been described as having multiple purposes and multiple readerships. In addition, although there exists generic integrity within any professional genre (as recognized by its communicative purposes, form and function), there are often variations not only in terms of how genres overlap to form "colonies of genre" but how they can be "exploited" by expert members of the discourse community to serve private intentions (Bhatia, 2004 p. 57; 2008; 2010). Other studies have also revealed the "intertextual" and "interdiscursive"' relationship genres have with other forms of discourse (Bhatia, 2004, 2014; Searle, 2010, Hafner, 2010).

In terms of processes involved in the writing of texts, studies have shown that the construction of professional texts is a result of the interplay among a number of discursive practices that have already been established according to the disciplinary culture of specific profession or organization (Hafner, 2010; Flowerdew & Wan, 2010; Bremner, 2006, 2014). Most importantly recent studies are also increasingly placing an emphasis on the situated nature of discursive practices such as through studies that analyse professional writing alongside professional practices (Bhatia, 2008). This interest has come about due to an increasingly specialized society, thus an increasing differentiation and specialization of professions. Such a situation requires professionals to constantly adapt to disciplinary communication, its goals and communicative purposes (Gunnarsson, 2009; Conception Orna-Montesinos, 2012).

For example, in Gunnarsson's (200, p. 153) study on the organization of writing at work, the organizational structures were seen to have influenced the writing activity at work. Coming from a sociolinguistic perspective, sociolinguistic parameters such as "centrality, hierarchical asymmetry and clusters" were applied to the analysis of the writing activity, including who took up the responsibility of writing which specific documents and how central the documents were to each employee. Those who were in higher positions only dealt with documents that went to external authorities and the boards ('high centrality') while those in lower or middle positions took up "low centrality" documents that involved contacts with private individuals.

This finding is in contrary to findings obtained by Bhatia (2012) on the writing of CSR reports and company disclosures where documents which go out externally to the public were regarded as important and taken up by senior managers and corporate writers. It is clear in this case that the writing is embedded within the internal structure and network

of writing activities of the office, and hence the politics, even for a simple matter such as the types of documents to be written.

Gunnarsson (2009, p.161) also discovered the interplay of spoken and written discourses in individual writing activities – evidence of a "communicative chain in which spoken and written activities interact". This suggests "interdiscursivity" in the writing process. In addition, findings also show evidence of collaborative writing among the relevant officers, although its nature was determined by the internal structure and politics within the office. For instance, those in middle and low-level positions reported greater need to collaborate toward producing the required documents than high ranking officers.

Driskill (2004, p. 64) stated that corporate culture is also a powerful determinant of communication processes including writing. It determines the rituals and procedures for problem solving and writing such as "who speaks to whom?", "who listens to whom, when and why?" as well as how the writing is produced. The corporate culture could also contribute to the interpretive standards affecting writers' choice of content, persuasive approach and word choice. As an example, Driskill (2004) cited a situation where an employee was told to delete the word 'hope' from a draft. The response the employee obtained regarding the company's norms and culture for doing things was quite clear-cut - the company did not "hope for anything" but "decide what they want and then make it happen". Further to this, the values, norms, and beliefs that guide action have been seen to vary across organizations. Those without strong cultures might have different communication processes or other external sources such as professional standards for accountants, engineers, and others to account for (Driskill, 2004).

2.3   Intertextual and Interdiscursive Nature of Writing

In section 2.2, the notions of intertextuality and interdiscursivity were raised as potential issues to do with writing at the workplace. Intertextuality demonstrates how "texts rely on other texts" or the relation between texts with the texts surrounding it (Bazerman, 2004, p.84). These two notions of writing are increasingly being demonstrated in more recent studies on writing and genres in the terms used to refer to collections of genres such as genre set (Devitt, 1991), genre system (Bazerman, 2004), and genre repertoires and ecology (Spinuzzi, 2004). These terms describe how texts rely on other surrounding texts and discourses. They are not just merely categories but instances of text which are socially situated. Searle (2010) argues that when workers engage with written texts, they are also engaging with a range of other literacy practices. For example, service officers in the hospitality industry made use of language, both interpersonal and textual (related texts and genres) in the communicative process with customers in order to resolve a problem. According to Searle in her study of the service officer, for "any text, utterance or action to be interpreted meaningfully, it must be read against the background of other texts and operations" within the specific interaction (Searle, 2010, p. 40).

Intertextuality has been found to be prevalent in specific practices as well, such as email writing. Warren (2013) in his study of emails found that intertextuality was prevalent across all emails, and that 'its frequency of use and directionality depends on profession-specific communicative contexts and goals'. However, as this study was predominantly textual in nature not much is known as to why intertextual elements of the written emails were important in accomplishing discourse. Ho (2011) provided a more complete picture of intertextuality in terms of the functions it served in request email discourse. Based on the findings, it was argued that the use of intertextual (as well as

interdiscursive) elements in strategic ways in email requests could produce a higher chance of request compliance. In this case texts (email texts) are described as being 'part of the wider ongoing system of intertextually related practice grounded in professional context'.

On a similar note, intertextuality is also evident in workplace documents such as reports where it has been found that in the writing of the audit reports, for example, other related genres are sought to facilitate the writing of the reports among second language writers. In this case, the interactions of the different but related genres form a part of the larger genre system or set within the specific organization in question (Flowerdew & Wan, 2010).

As a summary, sections 2.2 and 2.3 have looked at the socially situated nature of writing and in relation to that has brought into discussion important characteristics of workplace writing, including intertextuality and interdiscursivity in written discourses. What can be observed at this point is that research on writing as situated practice has involved work on genre and genre-based approaches for addressing issues in professional and workplace communication where the role of context is primary. This means the notion of situated practice has several implications for genre. Recurrent text types or genres are central to many workplace practices. Schryer (2011, p. 44) states that as 'symbolic structures or sets of improvisational resources' are invoked in order to address recognizable issues or problems, 'genres should be at the centre of written or oral communication research'. The next section discusses what genre is and developments that have taken place in genre theory. This will be useful in illuminating the theoretical framework to be adopted in the thesis.

2.3   Genre

Genre theory has gone through major developments over the last 20 years and have been variously defined.   Traditional theories of genre were based primarily on textual forms in terms of the linguistic and rhetorical analysis of academic and professional genres (Bhatia, 2012, Wegner 2004). However, language use is also recognized as being functional in that it carries with it a meaning-making task. For instance, an analysis of the register of texts provides an understanding of the overall structure of the texts and how the overall structure is determined by the functions the texts carry within specific social situation. Here is a brief background and overview of the development of genre theories.

The first perspective of genre theory discussed in this chapter is Systemic Functional Linguistics (SFL). Based on the theoretical work of Michael Halliday in 1994, SFL sees genre as socially driven purposes and the schematic structures reflective of these purposes. It views genre as a way of getting things done, or of accomplishing something using language. Taking as its central focus the relationship between language and its functions in social settings (Hyon, 1996, p. 696), genre is closely related to what Eggins (1994) termed as "recognizable social activity types" prevalent in specific cultures including the use of language to achieve the particular social outcome. In other words, genre is a "staged, goal-oriented social process" thus emphasizes patterned and sequential use of language that is systematically linked to context. There is therefore a focus on the text to identify distinctive stages of moves alongside the lexical, grammatical and cohesive devices that can assist understanding of the function and construction of the genres. SFL has been useful pedagogically in terms of making visible the structure of key genres identifiable to actual community or disciplinary settings. This provides learners with an understanding of the ways of communicating within that specific communities.

In terms of theoretical perspective, SFL focuses on 'context of culture', therefore it has been argued that SFL 'defines context at a fairly macro level' (Bawarshi, pp.44).

However, genres are in fact also found to be dynamic and heterogeneous and are very much contextualized and locally constructed. ESP's approach to genre is similar in many respects to SFL in relation to the connection between language and social function but unlike SFL, ESP locates genre in more defined contexts such as discourse communities, hence the focus on communicative or rhetorical purposes. The ESP approach was pioneered by Swales (1990) and advanced by Bhatia (1993; 2004). Genre is seen as a class of communicative events based on shared communicative purposes among members of specific discourse communities (Swales, 1990; Hyland 2002; Bhatia, 1993). The communicative purpose in relation to the goals of the discourse community provides the rationale for genre and shapes the genre. A genre therefore has an accepted schematic structure, similar communication patterns, style, content and intended audience. This pattern of organization is analyzed in terms of rhetorical Move structure and linguistic features thus provide a method by which texts of specific genres can be identified and produced within specific fields or professions. Because of the highly structured and conventionalized element of genre (Bhatia, 2004), participants within the discourse community are "influenced and constrained in their choice of content and style". This is perhaps one defining aspect of the ESP genre theory which sets it apart from SFL and later more contemporary genre studies. Genre in this way is seen as a "relatively stable class of linguistic and rhetorical events", thus is useful in disciplinary settings.

The New Rhetoric group (Miller, 1984; Freedman and Medway, 1994) adopted a more sociological orientation to genre. Rather than emphasizing forms and generic structures, genre is seen as socially constructed therefore are closely tied to the rhetorical context.

Genres are regarded as more than formal category, but typified rhetorical actions based on recurrent situations. Research adopting the New Rhetoric perspective on genre are less interested in analysing text elements per se, but more so in terms of the rhetorical contexts; both in regard to the communities in which the texts are produced and their "diachronic evolution" to reflect changing needs and requirements of different readers (Hyland, 2003; Bowles, 2012 p. 47). One can see that despite somewhat different perspectives which the three main schools of genre theory hold, Hyland (2002, p. 115). argues that there can be seen to be a unifying element in that all three seek to describe and explain regularities of purpose, form, and situated social action. These three main genre perspectives or approaches have also been expanded or extended to serve different purposes.

For example, although ESP genre analysis has pedagogical benefits, and remains useful in that regard, Bhatia (2008, p. 162) has made an attempt to extend the analysis of genre to studying genres in professional, organizational and institutional settings, thus taking into account the social, socio-cognitive and cultural considerations of genre and written discourse. In contrast to early conceptualizations of genre where the text is central, this newer version of genre analysis assigns a more important role to context, that is "text external factors" that "contribute to the construction, interpretation and exploitation of genres" (Ibid, p. 171). In that regard, the ESP's approach to genre has similarities to New Rhetoric which shall be discussed later. With an expansive view of genre to cover context, Bhatia (2004, p. 18) proposed a "multidimensional and multi-perspective model for analysing written discourse" realized in terms of three concepts of space: textual space, socio-cognitive and social space in the analysis of written discourse. The model addresses the prominent role of context where professional, institutional and social cultures play equally important roles in genre construction. As mentioned in Chapter 1, specific

analytical procedures can be utilized in the analysis of written text and its interaction with context of production.

Later works on genres reveal a more complex picture of genre. According to Bhatia, in the real world of written discourse, writers are "operating within and across generic boundaries creating new forms of genre to serve private intentions within socially acceptable communicative practices and norms" (Bhatia, 2012, p. 24). As an extension of genre theory, he has proposed **a** more critical study of professional genres, hence the concept of "critical genre analysis (CGA)", towards analysing professional genres in relation to professional practices and culture. Central to CGA is the concept of "interdiscursivity" described as "a function of appropriation of generic resources across three kinds contextual and text-external resources" in the production of texts or genres. Bhatia (2010, p. 33) on discussing the notion of interdiscursivity has further proposed a broader 'three space model' framework which includes 'textual, sociopragmatic (genre-based discursive and professional practices), and social space'.

Thus, analysis of professional texts can be analysed at the levels of 'text, as representation of genre, as realization of professional practice and as expectation of professional culture'. Using this framework to study the production of corporate annual reports, Bhatia (2010) found that four different discourses were at play in the construction of the reports: reporting a positive image of the company amidst challenging economic environment, projecting future performance, yet abiding by the legal requirements associated with corporate disclosures, and 'exploiting' generic conventions and practices through strategic uses of the language.

2.3.1 The New Rhetoric Studies

Swales' original concepts of communicative purpose and discourse community, despite being influential, have been challenged by newer perspectives that see genre as variable and multi-layered (Askehave & Swales, 2001). Miller (1984) argued for a 'far more productive view of genres' by reconceptualizing 'textual genre as forms of social action'. Later studies also show that discourse community is seldom homogenous but comprise different members with varying perspectives and interpretations of the genres in question. Using the notion of communicative purposes, some scholars working in this tradition have applied the notion of genre to organizational communication and refined the original concept of genre as a 'template for action' enacted within a community to accomplish "socially recognized purposes" (Yates & Orlikowski, 2002, p. 3). Here a genre is seen as an "institutionalized template" created and drawn on by discourse community for structure in interactions or communicative actions "habitually", but also "strategically" to accomplish specific purposes. In simpler terms, genres can be changed as they are employed by individuals engaged in specific communicative or social activity. One can maintain genre rules or adapting them in response to changes in recurrent situations. These recent developments in the way genre is understood or newly conceived have given rise to another school of thought namely the New Rhetoric Studies.

The New Rhetoric defines genre as "typified rhetorical actions based on recurring situations" where language use and forms are developed "out of rhetorical aims and contexts shared by" members of particular group or culture. (Devitt, 2009 p. 342; Miller, 1994). The focus here is less on forms (textual and linguistic aspects of genres) but more on social actions and purposes within the situational contexts in which the genres occur. These sociocultural aspects of genre when applied to writing that writing is an activity that cannot be separated from the context in which it takes place. Hyland (2008, p. 543)

adds further to this definition by stating that genre represents "how writers typically use language to respond to recurring situations", thus is a "socially situated attempt to communicate with readers". In that respect, there is a reciprocal and dynamic relationship between the genres and the social contexts in which the genres take place, therefore genres are dynamic and in "constant state of flux", and most of all situated in specific context and time (Bowles, 2012 p. 47).

In addition, as a particular genre is a response to different context, audience and time, participants utilize different strategies at any one time in order to accomplish a particular purpose for a particular situation in time. Genre and genre-based writing is regarded as social action in that there are generalities and the conventions with which participants identify but there is also allowance for change and negotiation (Hyland, 2004). The fact that genre was found to be socially situated and vary according to the social context made them "fluid and dynamic, multilayered and complex" (Perry, 2009 p. 258; Bhatia, 2004) shaped by the different and changing purposes and social activities of specific social groups or discourse community. In this sense, Miller (1994) saw genres as a "cultural artefact" meaning as a "product that has particular functions, that fits into a system of functions and other artefact".

According to Bazerman, 'genres are forms of life, ways of being. They are frames for social action…genres shape the thoughts we form and the communication by which we interact'. In agreement to the understanding of genres as social process, Prior (2009, p. 17) states that "genres are not solely textual phenomena, or as templates but as always partly prefabricated, partly improvised or repurposed". Central to these perspectives on genre is understanding of contexts within which the genre is used.

2.3.2 Rhetorical Genre Studies

The New Rhetoric approaches to research paved the way for the development of Rhetorical Genre Studies (henceforth known as RGS). RGS in its original conception draws from the approach to genre theory that sees genres as typified social action based on recurrent situations, meaning that genres mediate situated practices and thus function to "coordinate the work of organizations" and to achieve a particular goal or task (Miller, 1984; Bawarshi, 2011 p. 32). Within different settings, people learn to recognize specific situations, typify the situations and develop communicative resources to respond in ways that could help them achieve specific goals. These resources, ways of acting and believing etc are translated into recognizable text types or speech events with their specific structures, content and style to "facilitate practice in these settings" (Schryer, 2011, p. 32).The view of genre as typified social action differs from the traditional view of genres as "stable text types characterized by their textual regularities". Genres are seen as "dynamic rhetorical forms that develop from responses to recurrent situations and serve to stabilize experience and give it coherence and meaning" (Bawarshi, 2010, p. 79). However, due to its dynamism, genres change along with changes in rhetorical situations, and social relations, disciplinary purpose and values – specific exigencies that requires investigating the particular social and cultural contexts within which the genre is enacted and used.

This concept of genre allows researchers to go beyond textual features to explore the social contexts of writing referred to by current RGS scholars as the "recurrent, social contexts that give rise to and shape genres, and at the same time, are shaped by genres" (Artemeva, 2009, p. 159). There is therefore a need to link the text and context of production closer in more principled ways. In that sense, although approaches such as SFL pays attention to social function, and thus context to explain regularities in form and

structure, it has been argued that SFL "discusses genres in terms of broad associations between language and context but tend to underemphasize the specific social actions that text accomplish" (Collin, 2012, p. 77). This point is significant to the present study.

Miller (1984) later developed the New Rhetoric Studies further into Rhetorical Genre Studies (RGS) framework but the original conception of genre as typified social action remains the same. Miller's argument has been summarized by Schryer (2011) given below:

> Genre is composed of a constellation of recognizable forms driven by an internal dynamic.... language events emerge as fusions of substantive and stylistic features in response to specific situations. Over time, people recognize the need to respond to specific situations, typify those situations and develop communicative resources to respond effectively.
>
> (Miller, 1984, as cited by Schryer, 2011 p.32)

Over the last twenty years or more, the concept of RGS has been reconceptualised and refined in many ways, often in accordance to specific disciplinary contexts. For example, Schryer (2011 p. 34) defines genre as "stabilized-for-now or stabilised enough sites of social and ideological actions" which later was defined further as a "constellation of regulated improvisational strategies triggered by the interaction between individual socialization….and an organization". Studies applying the RGS framework have also been known to integrate RGS with other theories in order to increase its explanatory potential. Whichever ways genres are reconceptualised within the RGS framework, the essence of RGS remain similar: texts are significant only in specific social contexts.

Methodologically, this means that there is a need to look beyond the text and the writer to the situations in which the text functions and the work it performs (Pare, 2014 p. 84). For the purpose of this study, RGS has been selected as theoretical and conceptual

framework as it allows flexibility to approach the URS report as situated and social in nature while at the same time examining it in terms of content and form. Miller (1984 in Paretti, 2008 p. 493) stated that the form in which workplace genres take does not result from "idealized set of rules or templates" but from "the social situations to which they respond". One case in point is research that involved historical investigations of genres in professional contexts where genres such as the research articles, in terms of form, have been found to evolve in relation to changes in social contexts and ideology. This suggests that, texts are therefore produced with an aim in mind; their structures determined by the specific institutional context and goals of the participants because of the need to facilitate work. Seen in this light, texts are therefore dynamic and open to changes in response to changes within specific institutional contexts, or more specifically the sociohistorical and sociocultural contexts.

Likewise, Swales (1990) argued that language (and literacy) are social practices dependent on their contexts of use. Language in this sense carries a functional purpose and is used for purposes of meaning making. In a similar fashion, Searle (2010) sees language use as dependent on different variables within a specific social situation, thus there is the possibility for the structure of the text (genre) to vary in response to the external context and social practices. Rhetorical Genre Studies, like other approaches to genre, such as the ESP approach, acknowledges this dynamic relationship between text and contexts as well as the rhetorical and situated nature of genres and texts. However, RGS views genre not just as situated within contexts but are 'constitutive of contexts' where they represent 'textual and social ways of knowing, being and interacting in particular contexts. In the present study, some of the tenets regarding RGS guiding its investigation can be described as follows:

- Rhetorical Genre Studies (RGS) sees text/genre as much more than structure (Johns, 2013). Textual elements are viewed as purposeful, interacting with context to achieve a "social action".

- When dealing with standardized texts, RGS sees them as forming "one element in larger patterns of social action". Thus, the study would need to look beyond the URS text and the writer to the situations in which the text functions and the work it performs (Pare, 2014 p. 84).

- As RGS focuses on the interactions between texts and their contexts, it links writing and genre in productive ways –texts are not an ends but a process that show what individuals are doing and how texts assist them toward accomplishing specific social ends or goals.

One can extrapolate from these views and say that a key element of RGS is the interactions among the texts, their social contexts of use and the individuals within larger patterns of social action (Pare, 2014). Studying the processes involved in the construction of the URS text carried out in the study fits appropriately within that framework. It incorporates new conceptualization of genre and newer approaches to writing which place emphasis not only on structures and language forms (in the linguistic sense) including other resources, but on the dialogic interaction between writer and readers; mediated by the texts or genres in question within socially-situated practices. The result of that interaction should provide an understanding of the patterns in the production, distribution and interpretation of the text, hence its discursive practices. Freedman and Artemeva (2008; 2009) have put forth the following argument:

At the very basic level, the RGS framework takes into consideration not just the 'regularities of texts', but the 'rhetoric and situations' in which the

texts/genres are situated and circumstances in which genres can sometimes be modified. Genres are studied not by examining their textual features but by analyzing the 'social contexts that give rise to and shape genres'

(Artemeva & Freedman, 2008 p. viii; Artemeva, 2008 p. 9).

Given that professional writing varies in function according to specific professional context, RGS seems appropriate to the present study. Starke-Meyerring & Pare (2011, p. 15) citing Schyrer (2011) further argues in support of RGS as an approach to studying writing theoretically and methodologically in the following ways:

1) RGS "positions itself between texts and the world they construct"

2) It works at "the border of writing studies and the fields whose writing" (and knowledge-making practices) "it seeks to understand", which in the case of the thesis is the writing of technical report/genre within the field of information system.

Often in RGS, there is greater use of ethnography and or ethnographic methods in analyzing texts compared to the micro analytic linguistic methods favored by the SFL tradition. The idea is to obtain a thick description of the academic or professional contexts in which the genres occur to obtain insights into the changing needs of the community and the changing forms of the text and genres as a response to these needs. RGS sees the study of genre as more than the exploration of its textual features but an analysis of 'recurrent social contexts that give rise to and shape genres, and at the same time are shaped by genres'.

2.3.3 The RGS Concept of an Activity System

Central to the RGS framework is the understanding of genre within its "context" of production, interactions or use. Tracing or tracking the processes of text construction in this study requires looking into the various practices and processes surrounding the text/document including the interactions among the participants. Rude (2009) argued that "because texts/genre are often used within an activity system and related communication practices, an examination of the practices surrounding text construction" is required, especially in cases where the texts are made to accommodate users with different needs and interests, such as the case with the URS report. Bawarshi (2010 p. 95) defined an activity system as an "ongoing, dynamic accomplishment of people acting together with shared tools, in particular writing". Genre or text is understood to mediate these practices toward achieving a defined goal of the members of the workplace community. Based on and adapted from Engestrom's expanded version of Vygotsky's activity theory, an activity system consists of several elements, namely the "subjects", "mediational means,", and "objects/motives which interact to produce certain outcomes.

To look at the construction of the URS report as it is situated within an activity system (the context) would mean conceptualizing the construction of the URS report as a collective endeavor of the participants directed towards a similar goal and mediated by material and genre tools or resources that are called into play in its production. The view of context as an activity system proposed by Engestrom and Cole and further refined by Russell (as cited by Bawarshi, 2011 p. 88) is:

> defined by and emerging from mediated, interactive, multiply shared,
> often competing, and motivated activities. Within an activity system, the
> subjects or agents, the objectives, and the mediational means function

inseparably from one another. As such, context becomes "an ongoing, dynamic accomplishment of people acting together with shared tools, including- most powerfully – writing".

The concept of Activity System (AS) in this study has been widely used by leading scholars in the field (see Pare, 2014; Johns, 2013; Schryer, 2012; Bremner, 2014; 2006; Bazerman, 2004). Many concepts have been used to complement and explain the RGS framework, one of which is AS. It needs to be mentioned here that AS in this study is used as a lens or orienting device (Virtaluoto, 2015), rather than the main framework. Another noteworthy point is that AS "cannot be observed directly: they can only be identified through their manifestations in, for example, the discourse of practitioners"; which in the case of the present study is through the interactions among participants obtained from interviews with participants and observation of the writing processes.

2.3.4 Reports as Genre and Report Writing Research

The thesis sets out to examine the construction of a written technical report, namely the user requirement specification report, at a private organization. Over the years, many studies have been influenced by Miller's (1984, p.155) reconceptualization of genre as being "open" and "organized around situated actions", and subsequent growth of New Rhetoric's perspective of genre as social action. Thus, many of the studies ground genre in "situated rhetorical action rather than in form and content" (Rude, 2004, p.72). On this basis, genre, including writing, is now viewed as more than regularized, standard textual forms but as 'doing something' (Bazerman. 2004). These developments are significant for studying reports due to their very nature. Various report genres guide different types of inquiry thus vary in their structures (Rude, 2004).

For instance, feasibility report, recommendation reports, problem-solving, proposal and others vary because they do different things and address different aims yet have not been consistently defined and distinguished from one another. Different reports such as the report for decision making and the proposal as well as experimental report may share common ground but "they begin with different types of problems, whose solutions require different types of inquiry and reasoning" (Rude, 2004 p.72). In that sense, reconceptualizing report as genre mentioned above would perhaps provide a productive way of exploring and investigating the nature of reports in terms of how and why they are written and used at the workplace, the kinds of situations they respond to and the values they represent. Looking at the situation from purely formalist term would be helpful in guiding the structure and production of reports but does little in providing knowledge about the rhetorical situation that gives rise to specific report.

This attention to the rhetorical situation can be a critical thing as far as organizations and businesses are concerned because it shapes the quality of decision that managers will make in many different contexts. The report (whichever is applicable to existing situation) carries and integrates all information gathered to help managers establish a basis for making decisions. Likewise, reports, such as business reports, as well as proposals develop from practical needs or problems not from theoretical or empirical ones (Rude, 2004; Yeung, 2007). As practical problems are often situated in time and place, they vary among organizations depending on their specific issues and the actions required.

The present study recognizes the view of Miller's (1984) "genres as situated rhetorical actions" and Lemke (1999 as cited in Morton, 2009, p. 219) on what the notion of *genre* can accomplish for the study. Using the notion of genres to study events is not primarily for classification purposes or for the identification of "a set of rules that are transferable

across situation". It is to investigate discrete events as they are "constituted by" the local, professional and disciplinary contexts where they occur. Therefore, the report genre and the documentation practices surrounding it is seen as a rhetorical phenomenon.

For Harran (2006, p. 110), reports as genres "embodies and reflects ideology as it reflects the ideas, interests, and values" of the participants in their quest towards achieving particular aims and purposes (be it on a personal, professional or institutional level). The writing of reports requires "content and meaning determining categories" as demonstrated by standard headings and other conventionalized features expected of a report. It is a "socially organized means of documentation that are acceptable or significant within specific generic expectations" with potential for modifications and innovation depending on the situations (Harran, 2006, p. 111).

The user requirements specification report (URS) looked at in the study is both a technical and business document since it is delivered to both technical and non-technical stakeholders and clients. It is also known to vary in format and features depending on the client and the nature of the project. In its process of construction, input from the technical and business teams is necessary implying that the different communities (business and technical) have roles to play in advancing their own knowledge and expertise, perhaps "values and beliefs" in the writing of the report (Harran, 2006, p. 111). It would be interesting to see how collective effort such as this impact upon the writing of the report or features of the report.

Writing as an area of research has begun to take central stage in Malaysia. However, research on writing remains rather scarce, especially writing of reports despite their prevalence in the local Malaysian workplaces. This seems to be true in other Asian

contexts as well (Yeung, 2007). For example, Ong T.L., Leong, C.K. & Paramjeet Singh (2011) in their study found that even in areas such as law and the humanities, writing reports made up 80% of employees' time in terms of percentage of frequency. It was also reported by both employers and the alumni respondents in the study that employees had the most difficulty writing reports, in addition to interpreting and translating documents, the writing of letters, memos, emails, contracts and documents (Isarji, Ainol Madziah, & Afiza, 2009). Despite this situation involving the writing of reports, to the best knowledge of the present researcher, studies on reports have been lacking. What are available seem to be snippets on the subject at surface level or report writing discussed as a skill. These writers however attested to the importance of updated needs analysis if language educators were to (re) examine the language and communication skills required by employers in order to stay current and prepared.

Yeung's (2007) study is notable in a sense that it illustrated how the writing of reports can differ across domains and contexts as well as needs. Her study of business reports was based on the premise that the sociocultural knowledge and practice of the business community might be sufficiently different, thus requires an investigation. The corpus of business reports in the study was examined for regularities in structure, rhetorical moves, and lexico-grammatical choices, in relation to the participants' sociocultural knowledge of the social contexts within which the reports functioned. Her investigation revealed that business reports develop from practical needs or problems not from theoretical or empirical ones (Rude, 2004; Yeung, 2007), thus revealing an overall funnel-shaped framework of business reports. The framework exemplified the rhetorical structure of business report where it often begins with a particular problem and ending "with particular solutions" that are of "practical value of application" (Yeung, 2007, p.164).

Indeed, employees writing technical documents at the workplace, such as reports and proposals, have reported different understanding of how to go about producing documents at their specific workplaces (Brady, 2007). For instance, it was found that technical communicators who were "mediating between the worlds of technology and end users" contextualized previous knowledge and facts to adapt to the writing situation at hand that involved complex negotiations between designers, developers, writers and users (Brady, 2007, p.40). A professional writer producing a set of documents for instructional purposes, such as a manual, finds that producing those documents involve considerations of how to make them usable and practical for end users (see also work procedures in Manvender & Sarimah, 2012 discussed previously). In this case the document produced would be a composite of all the different needs of the different stakeholders and audiences.

What is particularly interesting with Brady's findings is the social and situated nature of writing technical documents. One participant stated that her work with software engineers and industry customers necessitated an understanding of the goals of each party and how to shape her writing to negotiate and address their specific needs and interests. The nature of the scientific and technical fields also adds to the characteristics of technical documents. Most given tasks are problem-based so because these problems are often socially situated, a great deal of communication and negotiation between different stakeholders will be involved. In the case of the IT industry, the solutions to problems will often involve communication between the writer and the user. Here the complexity lies in the matrix of different ideologies and organizational culture and practices.

Research such as the one conducted by Brady shows that writing is a complex process which is influenced by the social context in which it occurs (Brady, 2007). Rude (2009)

states that the term context suggests that text do not exist independently of its "origins and impacts", therefore is produced out of the need to address a particular situation or problem. Similar in kind to the situation involving the writing of an instructional document mentioned previously, in the technical industry this need might be to help users use complex software or for managers to make a decision involving policy changes and many other needs important to the operational wellbeing of organizations.

Bhatia (2008, 2010, 2012) in discussing genre analysis as it was applied to the writing of company disclosure reports speaks of the "appropriation of genres" by corporate player; that is the "bending' of generic norms and conventions" for communicating and achieving specific organizational or business objectives existing within specific business context and practices, hence evidence of widespread interdiscursivity. His framework of applied genre analysis and later critical genre analysis of written discourse were developed to integrate important aspects of genre theory that account for the text, institutional and community goals, communicative purposes and discursive and social practices. Flowerdew & Wan (2010) conducted a study on company audit reports, not only to describe reports in linguistic terms but also to investigate aspects of context of the genre's production. Their study was multi-perspective involving textual and contextual perspectives in order to investigate the work that goes into the production of the report, and how other genres were involved including the use of templates. Given the multi-perspectival nature of the study, different methods of data collection were utilized namely observations of the auditing process, interviews and examination of texts (reports).

Going back to the discussion about the bank executives in the study conducted by Nur Ehsan and Saadiyah (2011), findings of Flowerdew and Wan's show that templates too were used for writing the audit report but when 'complex audit situations' cropped up,

original writing was required in order to convey the bad news to the clients. The ability to explain and communicate bad news to the clients seemed to be primary. It was concluded from the study that the writing of an audit report is shown to be relatively context-bound given particular circumstances. This study and others which focused on writing activity and context of writing have significance to the thesis in terms of research focus and rationale for looking at context of writing.

2.4   Workplace Writing Research in Malaysia

This section discusses writing research specific to the Malaysian workplace in order to address possible research gaps that need to be addressed within the Malaysian professional and workplace contexts. Much of the research relating to writing and communication skills in Malaysia tends to focus on identifying the skills and competencies, including communication skills required by employers. The research questions of such a study normally seek answers regarding the importance of English at the workplace, the types of tasks that new entrants and workplace employees have to perform, and the types of skills required to perform those tasks. Oftentimes, these questions seek to address the issues regarding graduate employability or factors behind graduates' rising unemployment rate. These studies have produced important findings and have been instrumental in pushing language educators to take a more concerted effort to prepare graduates for the workplace. (Fairuzza, Mohamad Nazuir, & Wahid, 2011; Kassim & Ali, 2010; Koo, Pang & Mansur, 2008).

Despite the critical need to examine the above issues, many of the studies were revisiting the subject of employability and unemployment over again and uncovering similar findings with respect to the lack of communication skills among new entrants making up the Malaysian workforce. With respect to the IT field, studies addressing

writing and communication seem to be limited and the few which were conducted have also been limited to the latter interest – that of revisiting the employability and unemployment issues. These are useful topics to investigate but there is a need to reexamine writing within the frame of the different exigencies and rhetorical situations confronting workplace writers, as discussed in Chapter 1. Latisha & Surina (2010) hinted at these possible research directions saying that identifying skills and competencies might not suffice in preparing the Malaysian workforce for writing at the workplace. According to Searle (2010):

> workplaces are sites of changing practices, (as such) employees need an understanding of the institutional order, that is the social organization of work and the discourses that support it. It has been argued therefore that to focus on skills and observable competencies loses sight of the complexity and highly contextualized nature of work.
>
> (Searle, 2010, p. 55)

To bring the notion of socially situated practices into the picture, the perspective on skills and competencies can be supported by an approach that considers the overall 'environment' in which the communicative acts occur. Thus far to the best knowledge of the present researcher, very few studies have investigated the social context of writing in the Malaysian workplaces except studies by Annie Attan (1998; 2009) and Ain Nadzimah (2008). The first study by Annie Atan revolved around the discourse of multi-ethnic, multi- cultural communities of one manufacturing company. Language use in that context was aligned to reflect the communicative needs of their members in specific settings, the working culture and expectations of the organization and shared rules of negotiations. As the company subscribed to specific target goals such as 'quality' and 'efficiency' for their products and processes in tandem with the Japanese work culture, texts took on specific

code and genre, such as a 'code-mix of native English discourse' to convey various concerns in the most efficient and accurate manner. In the writing of the Job Instruction, for example, language was shaped to match the specific job demands and situations.

The second study by Ain Nadzimah (2008) illustrates the socio-cultural underpinnings of language use within the Malaysian legal setting in relation to the use of Bahasa and English. Language choice was influenced by the need to create positive intergroup relations, thus 'convergence' and 'norm compliance' were the main parameters upon which language choice and strategy were made. It was thought that these 'impersonal' aspects would increase the communicative efficiency of the interactions taking place in formal settings such as in court. What can be deduced from these studies is that where language use ids concerned, the widespread use of English and the prevalence of writing in almost all business and industry due to globalization and technological revolution have brought on an almost urgent need to not only use the correct language (as in correct grammatical and sentence structures) in conventionalized ways appropriate to the genre/texts in question, but also to use the right kind of language. Other studies that were beginning to consider the social context of writing/texts include Chitravelu (1999), Sargunan, (2000) and Noorizah (2008). Similarly, these studies recognized the relationship that exists between text and social process, language and discourse as they occur within the specific contexts of the workplace. As such, discursive practices were often in response to macro social changes or situational and communicative needs, culture and expectations of the organisations.

Although these studies are relevant, they are largely product-oriented, and few investigated the processes involved in the text construction thus gave limited information on the different considerations that shaped the written document especially from the

views of workplace employees producing written texts. The proposed study intends to fill this gap.

Newer studies done abroad are increasingly focusing more on processes of writing, are more theoretically motivated and are multidisciplinary in nature to capture important elements of context (Hafner, 2010; Bhatia, 2010; Flowerdew & Wan 2010; Russell, 2009). On that note, two studies within the local context need to be discussed in some detail because of their approach in the investigation of writing and the study outcomes, and thus is significant to the thesis. On a large part these two studies were still retaining the original aim of analyzing needs of specific industry (Manvender & Sarimah, 2012) and looking at the use of the English language in written documents (Nur Ehsan & Saadiyah, 2011). However, they went further into areas that showed what professionals had to do in real work situations. This is perhaps a move in the right direction as written discourse, especially in relation to professional discourse should be examined at critical moments of interaction using methodologies that are more sensitive to capture the subtleties of workplace discourses.

To illustrate, the study by Manvender & Sarimah (2012) looked at written professional discourse in the petroleum industry using interviews, observations and macro level textual analysis of work procedures as data collection methods. The findings obtained gave useful information on the language skills needed to write workplace documents but went further to uncover the nature of the workplace discourse and practices of the petroleum industry. What this do was provided information to give better understanding of the nature of written communication in engineering. For example, engineers in the petroleum industry had to be competent in writing in English to prepare written documents ranging from emails and memos to work procedure, reports, instructions and manuals. The concern was

not on using good English for the sake of good English but for clarity and accuracy of information to reduce risk of accidents and injury. The textual examination of the work procedure documents clearly shows the use of direct and simple sentences and words.

The findings of the study could be seen as an instance of "institutional social order" (Searle, 2010) determining language use in written documents. Language use in technical documents such as the work procedures examined in the above study was not just to retain its technicality for its own sake but was bound by the companies' communication systems that require direct and clear flow of communication among employees for the crucial reason mentioned above.

Nur Ehsan & Saadiyah (2011) investigated workplace writing activity as it unfolded within the context of three Malaysian banking institutions. Findings show that to "do business" and display good language use, the use of templates and writing software became necessary. Despite the available templates and software, there can be variations in the way the writing was carried out. These variations were derived from individual efforts of the executives who found the need to be "different" depending on particular circumstances. For instance, when writing to social superiors or responding to complaints there was the need to practice a bit of diplomacy to appeal to the customers. When writing proposals where there was no use of a template, the writing had to be clear and precise enough so business deals could be secured.

With the banks investigated in the study, those who were more proficient in the language and with experience writing proposals, such as the senior managers, undertook the responsibility for preparing and writing the necessary documents – not only because

they had developed a better grasp of the language but because they had the knowledge and understanding of the context in which the proposal was being written.

2.5   Professional Discourse and Workplace Writing Research

Writing in workplace and professional contexts have undergone major changes as a result of changes in the business environment, economic changes and technological advances to name a few. The social environment within the workplace is also changing to keep up with the pace thus have made an impact on the nature of written communication at the workplace and professional context. This is reflected in the changing nature of studies on writing over the last twenty years. Bhatia (2004) gave a detailed look at the history and development of written discourse which he categorized into three phases – the first phase being a textualization of lexico-grammar, the second phase involving organization of discourse, and the third phase involving contextualization of discourse.

In business communication, for example, what used to be the study of language use in isolated written texts (textualization of lexico-grammar) has moved into the direction of studying language within contextualized communicative genres, with an emphasis on the organizational and/or cultural factors that contribute to the realization of the individual text under investigation (contextualization of discourse). In addition, where the initial focus was to look at language skills and observable competencies alone, newer studies are looking at language strategies or tactical choices associated with effective communication in business. A cursory glance at older studies and newer studies can provide researchers with insights into the changing focus of most research including writing research. These will be discussed below.

There has been an increase in studies that looked at the production of professional texts in terms of the practices and activities surrounding the text production. For example, in the area of professional written communication, Shahizan (2000) in her investigation of the acceptability of student- produced report among business professionals showed that other factors besides language and the linguistic aspects of the students' writing determine the professionals' assessment of the reports. Their job functions, position as managers and their writing practices specific to their own departments play a big part in the whole assessment process. The study implies that there is a high degree of specificity about written text and the manner in which the writing should be approached according to individual managers. Later, Zuocheng (2013) conducted a study of similar nature but on a more extensive level. It was found that even though the professionals reacted positively to the students' writing, there was diversity in the professionals' reception of the Business English students' writing depending on the specific business sectors the professionals came from.

The element of specificity in the workplace context is important consideration in writing studies. This is true given the highly situated nature of written text where the "role relationships, tasks and industry-specific practices and concerns" are primary (Zuocheng, 2013 p. 153). However, while these studies discovered how writing might be contingent upon specific contextual elements, they did not specify how and in what way. For example, if there was diversity in the reception of students' writing, how did this diversity arise? Likewise, if the position of managers played a big part in the assessment process, what was the nature of the assessment?

McCarthy, Grabill & Hart-Davidson (2011) looked at how the introduction of a "content management system" affected writing practices in a selected organization. The

study was a qualitative study of organizational writing practices using genres as the unit of analysis. The study found that contextual elements like organizational values, expectations and practices had an impact on how the new system was received and used. It was concluded that the social structure of the workplace was a significant factor in the writers' choice of writing tools. Graham & Whelan (2008) studied the practices of a professional web designer in the designs of an e-card and a website to investigate how new media intersected with genre theories in the design of greeting cards. The study found that the web design process was based on pragmatic reasons to do with budget and the client's timeline. However, the design process was also closely related to the cultural and contextual aspects of American social culture and corporate culture.

Flowerdew and Wan (2010) conducted a study of audit reports in which a combination of linguistic analysis and ethnographic perspective were used. It was found that in cases where the managers found difficulties explaining complex audit situations, a template was used but with some original writing. To do so the managers did not only need good English language skills and knowledge of the discipline but also the ability to read into the social situations for deciding what kind of writing would be appropriate using the template. It was concluded that the audit reports examined in their study were constructed according to the disciplinary culture of specific profession. Hafner (2010) too found that the context of specific discipline played a role in document production where the writing of a barrister's opinion was contingent upon the needs of the solicitor's first- hand knowledge of the client's case as well as the needs of the lay client. It was also found that the process of genre construction involves a multitude of perspectives in view of the variety of participants, texts and discourses involved.

The results of studies such as the above reflect the nature of professional writing in terms of its social situatedness. Angouri & Harwood (2008) sought to explore this social and situated nature of writing by examining both the written products and processes of three branches of the same multinational company. The goals of the study were to see if intra-company variation existed among the three when writing the same genres of written documents, and whether the variation presented a challenge for writers and instructors of writing courses. Findings show that there were variations in the written products and the ways they were written as the employees saw appropriate according to the local context, audience and purpose. In addition, a great deal of collaboration was involved and diverse ways of approaching the writing of the documents.

Other studies on written text and writing looked at the social and ideological nature of writing. Berkenkotter's (2001) work on rhetorical recontextualization in psychotherapy paperwork involving the writing of the DSM-IV, an influential text in Psychiatry, reveals that genres are socially situated (Beaufort, 2008) and "instantiate social and institutional relations" (Berkenkotter, 2001 p. 330). What the study showed is that as a reference text, the DSM-IV including other surrounding texts made up a genre system that tie health professionals from the different domains together based on a common understanding. Thus, it carried the function of stabilizing practices, and of ensuring standardization and consistency with respect to the diagnoses of condition and treatments prescribed across the various professional domains. However, mental health practitioners had different kinds of training and background that gave them different orientations in patient diagnoses and therapy. There is in this case a conflict between keeping the integrity of the profession and offering different perspectives and interpretations of each case.

The above case is similar to other studies on Business and in particular technical communication, where members of the professional community write several different texts belonging to many different genres requiring them to conform to the expected structure, yet inventive enough to adapt to the rhetorical exigencies of the particular situation. For instance, the writing of specific genre such as the CSR report (Bhatia, 2012; Cuppan, 2012) posed multiple challenges for workplace writers. The conflict between structures on one hand and inventiveness and innovation on the other is even more prominent in technical communication where high technology organizations place greater emphasis on stability and standardization. Is there space for innovation, and if there is what organizing principles shape the text construction? From another standpoint, high-tech organizations that produce rapidly changing technologies are also known to embrace dynamic cultures of change and innovation (Leonardi & Jackson, 2009).

Although the studies discussed have been able to shed light on the influence of the writing context on the discursive practices surrounding the writing of professional texts, perhaps with the exception of Graham and Whelan's (2008) and Flowerdew and Wan (2010), very few seems to document the processes leading to the production of the actual text (Bremner, 2014). Studies which have investigated the processes leading to the actual text have been able to establish a link between the context of the text production and text in clearer ways. Swarts (2016 p. 385) found that composing practices using mobile devices allowed the participants to capture, store and connect pieces of information that supported networking of professional and domestic activity. One of the significant features of mobile composing which supported this networking is "aligning", afforded by the act of writing/composing, which linked the "actors" together in complex interactions of texts and pieces of information (p. 404). The interesting findings of this study is in the "coordinative value" of texts in that the composing practices were distributed over various

participants and "coordinated through various documents" or texts from different sources, spaces and time resulting in an accessible text in terms of content. The investigations carried out by Flowerdew and Wan (2010) and Bremner (2014) on the processes of writing documents in professional contexts show that the construction of professional texts is a result of a variety of discursive practices specific to the disciplinary culture of specific profession. Like the study done by Swarts, their studies were also useful in explicating the social underpinnings of document creation.

Gunnarsson (2009) who investigated the legislative writing process found that the legal writing process could be categorized into two phases, namely 'construction of a text and editing'. According to Gunnarrsson, the construction of text phase involved the "mental generation of ideas making up the content of the text and formulation of those ideas into words". On the other hand, editing involved "putting the written notes into a text form" (p. 39). However, as the process of writing law was a "collective" process and required considerations (or 'explorations', as Gunnarsson defined it) of the "immediate and future implications of the stipulated law", it was found that the text was constantly adapted to the legal working group and the public which resulted in "a very abstract and implicit text" (p. 137). Bremner (2005; 2015) too found similar, dynamic and collaborative processes in the production of press releases in his study; although he had categorized the writing process into three 'cycles of activity' namely "brainstorming, the writing of the press release and media-pitching" (p. 259). It was also found that in these different activities different genres played important roles leading towards the press release text. More studies of this nature, that is looking at processes, are needed in order to make the writing and the behind the scenes processes visible.

2.6   Discourse Analysis and Analyzing Discourse for Language Features

Discourse Analysis (DA) in general term studies language in use (Gee, 2011). It is the study of the way language is organized in texts in relation to its social contexts, thus DA examines language use beyond sentence level. The focus is on language as social actions linked to social relations and practices, rather than just structures. There are many approaches to DA and varying perspectives depending on specific theoretical/philosophical premises regarding the role of language. Studies can take various forms such as by examining paragraph structure, or patterns of organization of a whole text or "broader social context" of language use (Paltridge & Wang, 2010, p. 257). The list of approaches to DA seems to also have changed slightly and have expanded to include Systemic Functional Linguistics and Multimodal Analysis, to name a few. Speech Act theory, Conversational Analysis and Genre Analysis as well as Critical Discourse Analysis remain grouped under DA, although Genre Analysis seems to have been discussed on its own given its various developments. This list is illustrative rather than exhaustive given here to show the different approaches available. Despite the difference in orientation, these approaches share broadly similar aims that is to understand how language use reflects the world and social relations.

The above view is significant to the study of writing and written texts. Recent scholarship on writing as socially situated suggests that one need to focus on 'persons working with social and cultural resources on specific tasks within specific activities with clearly defined goals' (Kamberelis & de la Luna, 2004, p. 240). In simpler terms, texts are produced by drawing on specific genre conventions, but the ideas come from other texts or other resources that are meaningful within that specific cultural or social contexts. The method (s) of DA allows one to understand texts and writing practices as dynamic elements in specific cultural setting that gain meanings within that specific setting

(Bazerman & Prior, 2004, p. 2). The relevance to the present study is the understanding that DA could offer as to why texts may vary despite having similar generic structures.

As a qualitative method of analysis, on the most part, DA often involves data collection methods such as document analysis, interviews and observations, to name a few. In the case of this study, document analysis and interviews formed the main data collection methods. Semi-structured interviews are commonly used, but there are other forms of interview depending on the nature of the study. In this study, semi-structured interviews were utilized, as well as "stimulated elicitation interview" (Prior, 2004; Swarts, 2016) and "discourse-based interviews" (Ivanic & Weldon, 1999 p. 176; Prior, 2004, p. 188; Lillis, 2008; Rieff & Bawarshi, 2011). These two forms of interviews are often used in writing research especially in tracing the process of writing and how texts evolve, especially when drafts of texts are used as reference throughout. In the present study, these interviews were used to elicit feedback from participants about the texts they were producing/produced, the processes they went through and various affordances or constraints that were "salient" to them within the context of writing (Kamberelis & de la Luna, 2004, p. 249).

The present study set out to investigate the processes involved in the construction of the URS report in the shaping of the intended document. While the RGS framework by large places greater emphasis on analysing context (generally defined) in relation to texts; viewing the (written) discourse broadly as encompassing the texts and the "situations in which they arise" (Pare, 2015), it does not afford much space for the analytical aspect of studying the construction of texts. The focus of RGS is more rhetorical, looking at the discourse of writing practices, rather than analytical in regard to the textual features of the text. In order to look into the URS text and examine its features, a discourse analytical

approach needed to be incorporated. The main concern in discussing DA in this chapter is to highlight its usefulness in tackling texts in professional contexts. It offers "ways of tracing processes and of exploring variations or the textures of discourse that exist within a specific piece of writing".

Due to the complexity regarding the nature of writing across different workplace and professional domains, many scholars have long acknowledged the need to further explore texts as they are situated in specific local contexts and examine the processes by which they are constructed and interpreted (Candlin & Hyland, 1999; Lillis, 2008; Angouri & Harwood, 2008; Bhatia, 2012; Zuocheng, 2013, Bremner, 2014). Central to this research concern is the current importance of looking at discursive practices as a way to situate genres and texts within its disciplinary or professional contexts and to explore the context which operates around the activity of writing texts (Rude, 2009; Searle, 2010, Bhatia, 2008, 2012). The term "Discursive practices" have been variously defined, but the study takes the definition provided by Kamberelis & de la Luna (2004, p. 252), which states that discursive practices is "specific patterns of producing, distributing, and consuming knowledges and artifacts within specific fields of action". The study's investigation of the processes of construction also involved looking at the discursive practices.

Another reason for incorporating a DA framework into the study was to describe non-conventional text types such as the URS report. The study drew on Kwan (2017), Yeung (2007) and Samraj (2016) overall framework of macro- structures of texts to study the URS in depth. Yeung's study relates most to report, in particular how it is differentiated from the scientific report in terms of overall purpose. Thus, her study acknowledged the possibility for variations in "meaning-determining categories" along which reports often go by. The present study sees the URS report, as it is produced and used at the selected

company, as being generically similar to reports but is probably distinct given that it is both a specification and a report. Thus, it provides technical as well as business details, which needs to be further studied. This 'distinctiveness' as well as 'overlap' need to be understood within the context of text production (Bhatia, 2004 p. 81). This is perhaps an appropriate approach to take as it is in tandem with the overall perspective of the study which sees the URS report as a form of 'social action' (Miller, 1984; Pare, 2015). This also suggests that established methods such as the moves structure analysis or the IMRD structure analysis (Swales, 1990; Bhatia, 2004) although is highly useful, may not often be totally applicable in situations where the texts are overlapping across different disciplines, or where the nature of the text or sample size does not permit the kinds of analyses such as moves analysis.

Swales (2016 p. 33) in writing about analyzing cultural artefacts such as artworks stated that 'structural arrangements of context and image' is inherent in these genres, resulting in the production of 'fluid' texts that 'resist the traditional move structure' analysis common in the humanities. Swales argue that experts "convey their expertise by adapting the contents through use of text and images" suggesting that the genre could be understood by drawing upon the discourse of production (Swales, 2016 p. 33).

As the URS and the fields of business and Information Systems (IS) seem related, the study draws on previous studies on business, IT and (IS) fields as points of reference for understanding how structural and language features of reports and "non-conventional" texts in "non-conventional domains" have been described in the literature. These studies include Yeung's (2007 p. 160) study on business reports analyzed according to "regularities in structure, rhetorical moves, and lexico-grammatical choices" or "macro structures"; Samraj's (2016) analysis of the overall structure of manuscript reviews

looking for "discourse strategies" and "key functional units" in the texts; and Nathan's (2013) analysis of business case reports, although his were analyzed according to moves.

Within an academic context, Miller and Pessoa (2016 p. 46) analyzed case analysis writing using "categorical content analysis" and "function categories" to establish the relation between the roles played in case writing assignment and functions. Particularly interesting is Kwan's (2017) analysis of the 'macro structures' of research articles in IS with particularly revealing results in regard the numerous intra disciplinary macrostructure configurations found in the articles within this field.

In that regard, Samraj's (2016) study on manuscript reviews is useful as it focused on an occluded genre with some regularities defined across studies of similar nature, but "distinctive enough to warrant eclectic, perhaps context-sensitive methods of analyses". In her study, Samraj based her analysis of the reviews on notions of discourse strategies and key functional units such as Justification, Recommendation and Evaluation (henceforth known as KFU) instead of moves. According to Samraj, these were more "general of their functions" and would account for the "fluid" nature of the rhetorical moves found in sections of the manuscript reviews (Samraj, 2016, p. 80). Applying this method to the present study, the perspective of discourse structure along with the accompanying KFU allowed the URS report to be described in an organized way by considering the discourse surrounding the text.

Kwan (2017 p. 18) described the macrostructure of research articles (RA) in computer designs using similar discourse analytical approach as Samraj above. For example, Kwan identified different methods of inquiry in different disciplines as rationale for examining the macrostructure of the RAs to highlight the diversity that can be found in the structures

of occluded texts such as RA in Computer Design and Information Systems. Kwan (2017 p. 18) found that the middle sections of the RAs as corresponding to the activities of seeking "knowledge bases" aimed at identifying relevant methods that can be used to design various solutions, "artefacts" or "outcomes" which can be presented in different ways including various 'constructs' of the requirements, prototype of the solution and others.

DA has often been used in studies investigating language features. Studies using DA, while adopting different approaches, have been able to describe use of language as they reflect the wider social context. A study done by Mason & Mason (2012) on corporate environmental report found that linguistic features used in the report correlated with processes according to type of environmental sector laid out in the different sub moves of the report. The study which examined the rhetorical and discursive devices that corporate environmental reports used to communicate a green ideology to audience members (see below for further details), found that language was used to shape opinions about corporate environmental sustainability (Mason & Mason, 2012 p. 484).

The above study saw texts/genre as "socially situated attempts to communicate with the readers" (Hyland, 2008: 543), thus can be examined within the confines of the context in which the genre is produced. In this case, even though the main interest was textual, recognition was given to the contextual aspects surrounding the written CER thus the use of transitivity analysis as a tool. Findings show that the rhetoric of environmental consciousness was the main organizing principle behind the discursive choices found in the reports. The peoples' beliefs that the environment needed to be protected reflected their social and culturally held values. The writing of the CER was constructed in a manner that aligned with these values, or "follows the cognitive basis of ideological

formation" (p. 500) - that is audience members' beliefs and perceptions about the society and the environment.

Linguistically, the use of "actional verb" such as "reduce', 'limit', 'minimize', 'preserve', 'partner', 'committed" and others further the macro level analysis to illustrate how language use in this type of genre was appropriated to tie the company's ideology with its actions (Mason & Mason, 2012, p. 494). These words signal "material processes" or processes in which the actor does something therefore their use in the report (reportedly made up 72% of the processes in the corpus) reflected the company's commitments to the environmental preservation through their efforts and actions. This study is a good example of more contemporary analysis of a genre. It also gave good insights into how ideologies can shape practices, which in turn shape the rhetorical devices used in CERs. It goes without saying that societal changes and evolving ideologies would have the potential to change the rhetoric surrounding environmental sustainability, and subsequently changing the genre in question.

McNair & Paretti (2010 p. 325) argued that effective communication involving use of technology requires practices for using language and technology in effective ways to build "relational space". In networked collaboration examined in their study, for instance, language use in business and technical environments involves "clear transmission of complex information" as well as "social and affective language practices that build relationships, foster engagement and trust" (p. 325). To what extent this is applicable to the URS report in terms of language features remain to be seen.

2.7   Genre Research in Workplace and Professional contexts

This section will cover several studies on genre, in particular reporting genre. Most of the genre research reviewed will be from business communication but as will be seen

later on, technical communication is also very relevant to the discussion. A few of these genre studies have been discussed in the previous section, in particular on the genre of corporate disclosure involving the annual reports (Bhatia, 2012; 2010). According to Mason & Mason (2012), companies use reporting genres to stress organizational values, such as their commitment to investors, clients and the community at large. Their study on corporate disclosure genre, in particular corporate environmental reports (henceforth known as CER) was based on the perspective that the structure of the reports had a role in expressing the company's ideology and the language used was capable of shaping audience members' opinions about corporate environmental sustainability.

The CERs were much like other types of report, such as mission statements and annual reports in that they are one of the means by which to remain competitive and significant in terms of building a strong corporate image. They were regarded as a 'hybrid or mixed genre using generic values of reporting genres (narrations and arguments) and promotional genres (descriptions and evaluations)' (p. 486) to achieve the stated aims. A combination of these two discursive choices enabled the reports to carry out two main functions of informing audience of the efforts the company was taking to protect the environment and promoting an image of "good environmental stewardship".

The study further examined the rhetorical and discursive devices that corporate environmental reports used to communicate a green ideology to audience members, analyzing the data at both macro levels (structural analysis involving discourse structure and moves analysis) and micro levels ("transitivity analysis" of the linguistic components of report corpus). In this case the study was a study of genre analysis study in its original form complemented with SFL transitivity analyses of the linguistic features in order to apply semantic-based approaches to the analysis. This was done to provide "insight" (to

use the actual term by the researchers) on how language was used to shape opinions about corporate environmental sustainability (Mason & Mason, 2012 p. 484). It did not attempt to relate to the process by which the CER texts were produced.

Findings show that the rhetoric of environmental consciousness was the main organizing principle behind the discursive choices found in the reports. The peoples' beliefs that the environment needed to be protected reflected their social and culturally held values. The writing of the CER was constructed in a manner that aligned with these values, or 'follows the cognitive basis of ideological formation" (Ibid p. 500) - that is audience members' beliefs and perceptions about the society and the environment. The language used was also seen to reflect the company's ideology with its actions (Mason & Mason, 2012, p. 494). As detailed above, these words signal "material processes" or processes in which the actor does something therefore their use in the report (reportedly made up 72% of the processes in the corpus) reflected the company's commitments to the environmental preservation through their efforts and actions.

Bruce (2014) examined the genre of the Fund Manager Commentary (henceforthe known as FMC), a relatively new genre that is positioned within the corporate disclosure report. According to the writer, the principle genre of corporate disclosure was the annual report with its different mandatory sections. It has already been established from previous research that the corporate annual report has experienced significant changes in its functions in order to promote a good image of the company in question. Bruce observed that given this shared objective, there had been a rise in other voluntary disclosure documents, such as press releases, newspaper articles and others that carry the usual informational function regarding company's practices but which also carry promotional function to 'address the social and environmental impacts of their activities' to investors,

shareholders and the entire public (p. 317). This had a lot to do with existing climate of uncertainty in the business world that there was the need to convey "transparency" and "openness" as part of credibility-boosting strategies of companies.

This development had also led to an increasing use of electronic media to post reports on company websites as a move to reach out to a bigger audience including the public. What is significant in this case is the potential for some of the existing corporate disclosures to vary in the form and presentation and for new electronic genres to emerge. The Fund manager commentary was one such genre. The study was interested in investigating conventionalized features of the report and how critical thinking was expressed in the evaluative judgments of fund managers. Given these dual objectives, the study adopted a holistic use of a genre-based approach to examine in a holistic way the textual and discursive elements.

On a slightly different note, Nathan (2010) saw appropriation of linguistic features and moves; as was reported in Bhatia's (2008; 2010), Mason's (2012) and Bruce's (2014) studies, as strategies not for influencing purposes but more to attend to changing needs and advances in the specific field or specialism in question. His genre-based study on pedagogical case reports found that the reports as a genre had similar linguistic characteristics but there were also variations in linguistic features, moves and lexis as they were used at the disciplinary and sub-disciplinary levels. As such, distinct genres existed for case reports in marketing, project management, marketing management and management accounting.

Variable uses of optional rhetorical moves were seen be a reflection of "key concepts, conceptual approaches and cognitive orientation between the specialisms". These aspects

of the specialist reports had a lot to do with the reports being 'situated within the academic business field', representing different dynamic and changing specialist areas. Each of this specialist area is a "distinct communities of research" with its own communication practices. Although Nathan's study was academic-based and focused on analysis moves, it does provide some interesting observations in regard to writing in its professional sense as it relates to the different specialisms.

In the Malaysian context, Hajibah Osman (2008; 2005) carried out an investigation of the genre of corporate advertising specifically the rebranding of academic institutions in Malaysia. The unit of analysis focused on was university brochures examined textually and linguistically for strategies writers of these brochures used to rebrand the university. The study made use of sociolinguistic theory as lens from which to examine the research data. The theory sees writing as embedded within organizational and corporate culture, which in the case of the study was the corporate culture practiced by the universities. The standpoint is that the construction of university brochures was influenced by different factors, one of which was the concept of 'promotional culture'.

In conclusion, the studies on genre discussed in this section have provided good insights on the nature of workplace and professional writing. However, there has been the tendency to base the analysis of written texts/genres on what Angouri & Harwood (2008) called 'high visibility documents' such as corporate annual reports, corporate disclosures, company websites with wide public access, and press releases which by nature are largely promotional (Angouri & Harwood, 2008 p. 39). The present study investigates internal written reports which are of 'low visibility' but equally important for company operations in achieving an organization's business objectives, especially within the context of an IT workplace and profession. In addition, there is also greater focus given to reports in the

engineering, science and business than those in technology and IT. In other words, 'low visibility' reports, in particular those in IT are illustrative of 'occluded' texts important in work processes and practices.

These reports often supplement other documents sent to external reader thus are also dependent on the situation of their production (Hovde, 2003; Cheung, 2002). Are they open to variations and changes similar in nature to other more publicly prominent documents? If writing of these internally based report is shaped by discursive practices within specific context, how might this shape the intended report? The thesis attempts to investigate this further. It would be helpful to know if new sets of textual patterns were produced due to varying discursive practices. Most studies examined the context of production but not in the shaping of the intended text. The thesis will address this first research gap.

Secondly, studies tend to be text-focused and product-oriented. As a result, elements of contexts remain largely interpretive. Bruce (2014, p. 328) argued that examination into the 'discoursal context' is necessary by looking at the communicative practices and perspectives of individual writers as well as insightful interpretations of the readers' reception of the documents (Bruce, 2014). A case in point is the writers (fund managers) in his study who drew upon specialist terminologies of the professional investment field for writing their texts despite the initial aim at writing for a wider, non-specialist investor community. It was concluded that the highly technical nature of the FMC "highly embedded in the language of the professional fund manager community". Perspective of individual fund managers could provide better understanding of their strategic uses of the language including use of the conventionalized generic resources.

Indeed, the studies reviewed thus far have revealed the primary influence of work processes and practices in the construction of the different texts/genres in question. The research outcomes of most of the studies indicated that there was constant interaction between organizational processes and practices with the writing process in the production of workplace documents. The rhetorical choices, aside from those that were based on the writer, reader and subject, are in turn influenced by these practices. Many of the genre-based studies have been largely focused on mainly the text. What is needed but still lacking is firstly 1) an examination of the site-specific discursive practices behind text construction and second 2) an examination of the text (s) as it functions as part of a larger discursive event within the context of specific workplace. More recent studies such as those done by Nathan (2010) and Yeung (2007) and to some extent Bruce (2014) are moving into that direction, but studies of this kind are still lacking, especially local ones. The thesis attempts to address this second research gap.

Recent studies have now attempted to bring the text and its discursive practices closer or as Kress (2011, p. 239) argued "to bring together to mutual advantage". To the best knowledge of the present researcher, these kinds of studies remain quite scarce. These kinds of studies have importance in today's changing specializations and disciplines, but for which existing methodologies are inadequate to provide or explained (Kress, 2011). These changes have resulted in texts that are not conventional ones (such as the research articles) but are nonetheless important for everyday functioning or corporations and or disciplines. The discursive practices around the production of the texts are also known to differ according to different disciplinary modes of inquiry (Kwan, 2017), often giving rise to the shape and form of the text which can only be explained through investigating both the practices/social contexts of writing and text.

Aull's (2015) study on first year writing was one of the few studies which have used RGS in combination with other approaches in order to combine the text and context of production together. Her argument relates to the different foci of EAP genre studies, which is linguistic, as opposed to RGS, which is contextually grounded. Taking that to the context of first-year writing (FYW), Aull saw these different approaches as "gaps in FYW". Aull's main interest was to find out why there were linguistic differences in first-year writing among first-year writers, which cannot be explained from only one of the above approaches. Thus, her study examined FYW using a combination of RGS and EAP traditions. The FYW was analyzed in relation to essay prompts on the basis that discourse features such as textual patterns and use of evidence are in response to these prompts and thus shaped students' writing. It was found that the first-year writing samples showed variable uses of language in accordance to the essay prompt, but, mostly personal evidence markers, suggesting that the students tend to use personal experience rather than research or views when making arguments (Ibid p. 31). Aull concluded that giving attention to linguistic analysis within RGS provided clearer explanations for the kinds of language used by students as they made sense of the writing prompts. In sum, Aull's study is one of the very few studies which attempted to the link text and context, though it remained largely text based. Nonetheless the approach used in the study supports the present study in relation to the need to augment the study of writing using RGS with some form of linguistic analysis. In the case of the present study, this applies to investigating the URS text in relation to its processes of construction.

2.8 Situating the User Requirement Specifications Report

Recent findings on written genres in the professional and workplace contexts especially within a technological environment revealed the need to examine technical genres not as linguistic artefact alone but contextualized and situated within a larger

process of textual activity such as project documentation (Rude, 2009). The study examined the URS report as it was situated within the context of project documentation for IT development project. The URS report therefore can be said to function both as a product, a formal document delivered to the client and distributed internally. It is seen as an artifact used to communicate 'information about the software system to which it belongs and instill knowledge of the system' (Kipyegen & Korir, 2013, p. 223; 225). The section which follow provides details on the URS with a view to understanding its overall structure.

As previously mentioned, the URS document is specialized for documenting IT project development or systems/software development. From what has been claimed by one informant, the structure of the URS overall is conventional and standardized based on a pre-designed template customized from the industry's standard URS format. In 2009, the company received CMMI certification, thus all documents were also CMMI approved, including the standard company URS. The URS is regarded as a necessary document for any project, especially bigger projects which involve the development of software and portals. KAS, the Head of Business reiterated that the URS report is not meant to be a technical document because for any projects carried out by Company A, the stakeholders comprise technical as well management personnel, including designers. It was stated that the URS should be accessible to the non-technical readers.

A customized template for the URS report is used for writing the URS report. It can be said that it has become an important tool with which to construct the report. An extract from the template is given here to provide an idea of the overall format of the URS report. Following Converse (2012), Table 2.1 lists the required sections of the industry's URS to provide an overview of what headings and subheadings were involved, thus presenting

an overall idea of the contents. The key purpose here is not to understand each section or the specific technical elements in depth but to get an overall idea of the structure and framework on which writing is based. A more detailed analysis of the overall organization of the URS texts for the MCP project in terms of discourse strategies and functional units will be given later (Samraj, 2016; Barton 2002). Table 2.1 shows section headings for the URS before customization:

Table 2.1: Section Headings for the URS Before Customization

1. Introduction
    1.1 Purpose of document
    1.2 Scope of document
    1.3 Definitions & abbreviations
    1.4 References
    1.5 Overview of Document

2. General Description
    2.1 Product perspective
    2.2 General capabilities
    2.3 General constraints
    2.4 User characteristics
    2.5 Operational environment
    2.6 Assumptions and dependencies

3. Specific Requirements
    3.1 Capability requirements
    3.2 Constraints requirements
    3.3 Documentation requirements

Looking at the template in general, the overall organization of the text is atypical of the conventional business report genre; as identified in business reference books or learned in business class. There seems to be no identifiable pattern to compare the URS to the business report, or the research report for that matter. However, looking at the headings, the focus appears to be on two distinct parts: firstly, which describes the purpose of the URS document in terms of what it does (in the Introduction), and secondly, which

provides details of the product in question according to general and specific requirements (within sections 2 and 3).

Further examination of the inside pages of the template shows that there are descriptions or explanations of each section as to the content that should be included and how it should be presented. To illustrate this point further, excerpts from the URS text taken from the different sub-sections under Introduction, General Description (2.1 and 2.2 and 2.5) and under Specific Requirements (3.1) have been given below:

Excerpt 1.1   The purpose of this document is to collect, analyze and define high-level needs and features of the (system name). It focuses on the capabilities needed by the stakeholders….and why these needs exist.

Excerpt 2.1   This subsection should place the product in perspective to other related products and the user environment. If the product is a component of a larger system identify the relevant interfaces between systems…via a block diagram.

Excerpt 2.2   Summarize the major benefits and features the product will provide. For example, a URS document for a customer support system may address problem documentation, routing and status reporting…

Excerpt 2.5   Describe what external systems do and their interfaces with the product

Excerpt 3.1   Summarize the major benefits and features the product will provide. For example, a URS document for a customer support system may address problem documentation routing and status reporting …. organize the functions so the list is understandable to anyone reading the document for the first time. A simple table listing the key benefits and features might suffice.

(User requirement Specification Template, before customization, v. 1.0, 2012)

As the URS text is specialized for documenting information systems (IS) or software development tasks, one could probably speculate that the reason behind the

difference in structure (or lack of an identifiable structure, perhaps) is due to differences in disciplinary domains. Taking the case of the research articles (RA) in information systems, for example, a study by Kwan (2017 p. 15) has found that the macro-structure configurations of the RA are often "shaped by the modes of inquiry and knowledge-producing practices in specific disciplinary domains." According to the writer, this has led to a "development of discipline-specific models" that are "different from the single models such as the widely known IMRD model or structure". There is significance of these findings to the present study in that the nature of the IT or IS discipline might contribute to epistemological or socio-rhetorical differences between disciplines. In turn, the structural patterns of texts, style and content, even audiences would have to be studied within these contexts of text production.

Although the RA is not an equivalent genre to the URS, the IS domain is. It is safe to say then that it is not uncommon for technically-oriented genres, in particular occluded ones like the URS, to be structured in varied ways, much like the "varied ways" RAs in IS or Computer Science are "sectioned" and "are named" (ibid. p. 15). This justifies to an extent the need to investigate genres such as the URS, not because it is different but because it is a prevalent genre in professional fields like IT. The fact that variations in structure/models have been found in a "broad range of disciplines" (Kwan, 2017 p. 15) makes investigations of texts such as the URS worthwhile.

As can be seen from the excerpts, the industry template shows simplicity in the level of detail required, except perhaps in places where technicalities of the systems are required (understandably the required 'interfaces between systems' and operational environment amongst a few others). The customized template created by Company A on the other hand seems slightly more detailed than the industry's template in terms of format

and content. Table 2.2 shows the headings and sub-headings to be found in the customized template; henceforth referred to as the company template:

Table 2.2: Section Headings of Template (After Customization)

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1. Introduction
    1.1 Purpose of document
    1.2 Scope of document
    1.3 Glossary & abbreviations
    1.4 References
    1.5 Overview of the project

2. General Descriptions
    2.1 General Description
    2.2 Product perspective
    2.3 General capabilities
    2.4 General constraints
    2.5 User characteristics
    2.6 Operational environment
    2.7 Assumptions and dependencies

3. Specific Requirements
    3.1 Capability requirements
    3.2 Constraints requirements
    3.3 Main requirements
    3.4 General requirements
    3.5 User interface requirements
    3.6 Documentation requirements
    3.7 Implementation requirements

4. Appendices

There are evidently additional sections in the customized template with respect to the Introduction and Specific Requirements sections. Interestingly, other project URS written after 2009 (post-CMMI certification), such as the one for the MCP, showed newly- added sections on client background and requirement methodology that is absent in the company's original template. In fact, the Introduction section provided details on both the document purpose and project purpose, extending it further to include brief details on the issue behind the need for the new system/portal. Sections 2 and 3 remained to provide details of the various specifications of the required system within the scope of the client's

needs. Nonetheless, additional sections called User interface requirements and General requirements had been included. The question is why have there been further adjustments to the company template?

A reasonable explanation would be to take the context of the company into the picture and what the participants understood about the URS report. Feedback from the project team members indicates that the URS was regarded as a report in its own right, and labelled as a "report" as it describes what the system does/what the clients want the system to do; meaning the requirement specifications per se in its true sense of the word. However, the URS report was also regarded as a business document thus the need to incorporate the business aspects of the project and business processes. This information could be found in the project objectives, and additional sections on client background and requirement methodology (personal communication, 2012). The URS as it is produced and used in the company, can be rightly called a report on that basis.

The original industry template did not include these new sections possibly because as mentioned by the CEO, it is 'generic' to software engineering. In the case of the MCP project, the writer and the team decided to go further to include details on the project background, the client's mission and vision as well as project benefits because the additional information would be "more valuable to the project" (personal communication, Nov 25, 2015). Perhaps he meant this as giving an overall, complete picture of the project even if some of the information is seldom required by the client. As stated by KAS, the MCP project team leader and writer of the URS:

> For example, in a proper URS document, we will have the introduction, the overview of the project, what is the scope and then how we do the requirement

study - the method of it. From there, there's another section where we describe the specific requirement.

<div style="text-align: right">(KAS, personal communication, Nov 25, 2015)</div>

As previously discussed in Chapter 1, IT projects often involve various stakeholders comprising both technical and non-technical users, thus effective dissemination of key information is crucial. It is reported that documentation that can be regarded as successful is one that "makes information easily accessible, provides a limited number of user entry points, helps users learn quickly and simplifies the product" (Kipyegen & Korrir, 2013 p. 223).

The available literature on the subject of requirement specification/ requirement determination and the user requirement specification suggests that the URS is not a technical document per se but is a document that is comprehensible by readers with only a general knowledge of IT. It is understood from initial feedback from participants that for any IT projects carried out at Company A, the stakeholders comprise technical as well as management personnel, including designers with varying interests, both business and technological interests. In such a situation, it requires a document which is non-technical and accessible to multiple stakeholders of different background.

2.9   Conclusion

This section has reviewed the literature around writing and genre for the purpose of tracing the theoretical developments in the field and framework that has been by other scholars to study writing. The main outcome of the literature review illustrates how writers are connected with his or her social and cultural contexts, thus professional writing needs to be investigated as it is situated within specific social practice. The focus of studies has been less on the text but more on exploring context and social practices. With

respect to the Malaysian context, workplace writing studies have been few, but these were limited to issues of employability and skills. Recent studies which did acknowledge the role of specific workplace play in written communication were largely text oriented. Studies that were done elsewhere had begun to investigate the processes involved in producing workplace documents, but much remains to be understood. In terms of research on reports, writing technical documents such as reports is a contested area as different understanding exists in producing these documents. This is due to differing needs and advances within specific workplaces, but recent perspectives show that texts are 'socially-situated attempts to communicate with the readers '(Hyland, 2008). These findings suggest that ideologies can shape practices, which in turn shape the rhetorical devices used in texts (Bruce, 2014). To explain the context of writing, studies have followed a framework which produces both textual and contextual outcomes, which is significant to the present study in terms of research direction. The review of literature in this chapter shows that writing is a process and is an on-going activity. Focus on the text alone distances us from the writer and the larger culture and context of writing. As discursive practices are highly contextualized, it is important to examine and understand the procedures and processes involved in producing workplace documents. The main gap has been to link these processes of construction to the text in more productive ways. The URS report has not been investigated in terms of the discursive practices involved in its construction, yet it is a prevalent text in the IT field, produced for very important reasons. The fact that it is regarded by the participating organization as a report rather than just a specification; and also that there is variation across URS reports within the organization itself attests to the need for the kind of an investigation that would provide an understanding of the context around the writing of the report.

CHAPTER 3: THEORETICAL FRAMEWORK

3.0   Introduction

The present study has adopted a qualitative approach in examining the construction of a written technical report, specifically the user requirements specification report (URS), as it is realized within the context of a local organization. This chapter will present the theoretical framework adopted for the study starting from explanation of the qualitative research approach chosen and the rationale.

3.1   Research Context

A recent study by the World Bank indicated that the Information and Communications Technology (ICT) sector is rapidly growing with an annual market of US$800 billion globally, hence, there is pressing need for countries around the world to invest in developing skills that can promote technology progress and productivity growth (Cisco Networking Academy, 2013). In Malaysia, The MSC Malaysia flagship has been the country's national ICT agenda launched in 1994 as initiatives to complement global IT development. The seven flagship areas include sectors such as finance, logistics, transportation, energy, technology, manufacturing and healthcare. To encourage high standard of services and capabilities, out of 2600 MSC-status companies, 60 are from world class organizations. There has also been a rise in local companies awarded the Capability Maturity Model (CMM) certificates level 2 for reaching the standard set forth by the industry (Abdul Rahman, Yusri, Mohd Adam, Husnayati, 2010). These developments have increased the need for IT workforce that are capable of supporting the ICT industry.

The influence of IT is widespread covering the industry, as discussed above, businesses and the public. For one, the information revolution is quickly changing much of the way companies do business. Increasingly more and more companies are doing business over the web as a way to establish their presence online. It is through the use of ICT that information regarding their businesses can be widely disseminated in ways that give companies greater function and significance in terms of their capacity to reach out to and connect with the population in "productive and meaningful ways" (Geisler, Bazerman, Doheny-Farina et.al., 2001). For one corporate communication has been reformulated because of the technological change, as companies engage in internal and external communication with different constituencies such as media, investors, clients and partners, employee, government, the community and so forth using not only printed materials but also information posted on company websites and blogs. The communication process is now highly interactive as users directly and indirectly use these strategic communication opportunities to communicate with corporations through these new digital media channels (Argenti, 2006).

These new communication channels are also changing and expanding companies' work processes. As companies establish themselves online, there is a need for the use of web applications to create websites, portals or systems which are interactive, user-friendly and efficient in terms of speed and ease of communication and exchange of information with customers. Many enterprises are also increasingly transacting business on the Web so new business models are being developed to address current 'E-business' needs. In view of this, hundreds of applications and shared services need to be developed to conduct e-business such as online forms, shopping baskets, job applications, banking, bill payment, auctions etc. It is reported that organizations are spending more time creating and designing web content and documenting internet-based projects and

practices in order to maximize the business potentials that the new technologies are bringing. This increased automation in business processes and communication means greater efficiency and new opportunities, but it also means the capacity to initiate internet-based projects, and produce texts which communicate to those involved about the project tasks ahead, and the structure of work to be followed. This information needs to be communicated through clearly and accurately to all the various stakeholders internal as well as external to the organization with different levels of technical understanding. The participating organization in this study is situated against this backdrop of IT developments.

3.2   The Interpretive Research Approach

As mentioned, the study examines the construction of a written technical report, specifically the URS report, as it is realized within the context of a local organization. It is based on current arguments regarding the highly situated nature of writing, genre and language use where meaning is dependent upon the specific organizational context and culture as well as the social relations among its participants (Searle, 2010). Thus, an interpretive qualitative approach is suitable as it focuses on the construction of meaning within a particular social setting, as they are derived from the points of views and interpretations of the "actors". It adopts an "emic, holistic and semiotic" approach to researching a particular phenomenon, a case or setting (Davis, 1995 p. 434; Schryer, 2011).

The study sought to investigate the processes involved in the construction of an IT report in the shaping of the intended document. The situated nature of written genre and language use calls for a research framework akin to the interpretive approach that considers the particularities of the local situations including all the existing structures,

content, style and organization of the genre in question. In other words, writing and genres need to be studied in relation to their context of use. As context here was the central concern, the present study would need to describe the local situation, specifically the discursive practices involved in the writing of the report, including the actions and points of views of the key players as these were embedded within the social and cultural context of the organization.

An interpretive approach provides the philosophical perspectives that can inform the theoretical/conceptual framework, research design and methods adopted in the study towards obtaining the holistic understanding of the process of constructing the report in the shaping of the IT report in question. As the processes of construction is situated within a specific professional context, a framework that situates writing and genre as it is situated within organizational writing practices and activity need to be considered. Not only that, as the study looks at the writing of the report in question and writing itself is understood to be reflective of its "social uses" (Hyland, 2010 p. 194), the framework selected also needs to be able to capture the socio-historical/sociocultural aspects surrounding writing and genre.

The difficulty in conceptualizing a study such as the above, as far as theoretical construct is concerned, is the dilemma over selecting a theory which grounds itself in language and text structure or one which pays attention to particularities of context such as one derived from social theories of context (Johns, 2002). At this point it would be appropriate to bring to the fore the concept of "genre" as it relates to language and text structure, particularly to text types that could be found in professional writing contexts (see Literature review for details). Much of this difficulty relating to an appropriate theory selection, as mentioned above, perhaps stems from the perspectives of genre and

how it has been applied across various camps. The continuing tension has been between describing genre as stable text types and thus a focus on its textual and formal properties, as opposed to genre as recurring social actions and thus focusing on its sociocultural and sociorhetorical elements (Schryer, 2011; Artemeva, 2009; Samuels, 2014 p. 6).

The latter characterization is based on newer conceptualization of genre advanced in particular by Carolyn Miller (1984), which sees genre as "typified social action" rather than "conventional formulas" (Artemeva & Freadman, 2008). This conceptualization can be said to be the most compatible with current developments in writing studies in relation to the interrelationship of social context and texts where it is argued that text features "evolve in relation to their social functions within organizations" thus giving rise to the development of a social rhetorical view of writing (Beaufort, 2008 p. 227).

Given the above development in how writing is currently understood, with respect to genre and language use, Rhetorical Genre Studies (RGS) was selected as the main theoretical framework in this study because of the link that it provides between genre and writing given their similar philosophic foundation. In addition, RGS provides a framework for understanding texts within their social, cultural, historical and professional settings, thus would be appropriate to address the concerns surrounding writing and language. In this study, the RGS framework was used to explore the data on processes of URS construction. As the study investigated these processes in the shaping of the intended URS document, the RGS framework was complemented by a discourse analytical approach to provide the textual and linguistic dimension of the text construction.

On a practical level, the selection of a viable theoretical framework in the thesis was also guided in large part by current practices of the organization with respect to written

documents, including reports. These practices can be said to be socially situated requiring an approach that locates the analysis of texts and the accompanying activities in writing them in the context where communicative purposes and social action play significant roles in accomplishing specific organizational and disciplinary goals. Based on information gathered while gaining access to the organization, the current practices in the organization and some of the implications they had on the study can be summarized as below:

1. The technical report genres in the chosen organization did not function in isolation but were linked with one another and appeared to "coordinate the social actions within and between systems of activity" (Devitt, 2004; Bazerman, 2004). This dynamic interaction among genres/texts requires a framework which encompasses the larger discursive event, namely project documentation, within which the specific report was being written.

2. Organizational practices, including discursive practices and activities relating to project documentation in the chosen organization adhered rather closely to the wider disciplinary practices and industry-specific requirements of information systems and software engineering. Therefore, it seemed necessary to locate the study within the context of software engineering and procedure for production and documentation of texts. The implication to this is that while there is the choice of conducting the study purely along the method of conventional genre analysis, there is the reality of workplace practices that reflect current workplace changes and developments in the field which needed to be considered.

3. The technical report in the information systems field, in particular those that document systems or user requirements are often made to varying audiences including not only the immediate clients who make decisions as to whether to accept the proposed requirements/solutions, but members of different units within the organization acting on the texts for different purposes. Winsor (1999) found that the technical reports effect action of others towards a socially recognized goal. There are also potential end users with multiple needs and interests to consider and account for in the written reports.

The RGS framework is relevant to the study in the following ways. First, a report-writing event is described as a "socially organized means of documentation to produce an account" taken up by readers in an organized way. As discussed in Chapter 2, within the report, "meaning-determining categories" through the use of standard headings provide readers with certain expectations of what actions are acceptable or significant, and these generic expectations provide readers with an idea of existing patterns that are to be maintained. However, it is believed that there is space for modification. Thus, the professional report writing activity is embedded within the institutional and disciplinary culture in which it functions, and thus needs to be examined within that context or culture.

Secondly, RGS contributes significantly to writing research as it can be applied across various disciplines. In addition, genres and language events are derived from a blend of "substantive and stylistic features" in responding to specific situations (Schryer, 2008 p. 32). RGS can be seen to be a workable framework in the context of the thesis because it also recognizes texts/genres as ways to achieve social ends; much like the case of manuals, to cite as an example, as being intimately linked to the action it is meant to accomplish.

This study looked at the URS report produced by a team of IT professionals (business analysts/information architects etc.) as part of IT development project documentation practices. The report communicates to potential readers the systems in plan, thus is set to achieve social ends in the sense that it communicates the key concepts and requirements of the software system in an accessible way to project stakeholders. It is expected that the construction of the URS report would have to consider various interests and needs of the user, including other relevant considerations. The theoretical framework adopted in the study is also based on several other factors that emerged from previous studies in relation to professional writing within a technological environment, which will be discussed in the next section.

3.4 Relevance to the Professional Context

Technical communication, as it is relevant to IT, requires not only a consideration of recent changes in technology and how it affects writing but also an investigation of how these changes are influencing or organizing the work processes organizations. The theoretical framework adopted would need to go beyond the analysis of individual genres to include the larger networks of writing activities that helped the organization realize its specific project objectives. Examining the processes of text construction, thus, would be a good way of unpacking these network of writing activities as they respond to changing needs and/or specific exigencies, as is suggested in the argument above. The main thrust to the study of this kind would be to see what processes of text construction are involved, what activities, texts or genres contributed to the overall process, and how these helped in the shaping of the required document or text. The RGS framework seems an appropriate lens with which to analyze the processes of the URS text construction. The study's theoretical framework is also guided (or rather determined) by documentation practices and activity in the chosen organizations. The preliminary phase of the study

prompted the following considerations that led to the adoption of RGS as the main theoretical framework:

- The practice of doing user requirements in IT requires a theory which seeks out the social context. This is so because user requirements are often user-centred, thus address varying audiences with multiple needs and interests.

- The written URS report showed distinctively different sections, which served different purposes for different key players in the project. These "sociorhetorical" elements need to be considered.

- The URS report is part of project documentation practices and is reported to be intertextually linked with other reports to regulate the action of project team members towards project goals. Thus, there is the need to look at a larger activity system (Spinuzzi, 2004, Bawarshi, 2002; Rude, 2009).

This study can be said to parallel a study on genre processes conducted by Bremner (2014), except that the present study paid equal attention to the discursive practices as well as linguistic resources in the shaping of the report document in question. In other words, attention was also given to the text. To provide the study with the necessary framework for looking at the text in terms of structure and language, Discourse Analysis was utilized. It is hoped that this level of analysis in combination with RGS would enable the researcher to capture both the rhetorical and linguistic aspects of genre construction (Flowerdew & Wan, 2011). Although some scholars have questioned the utility and difficulties involved in tying the texts and processes together, the thesis has conceived this to be necessary if an understanding were to be reached on how writing activities and practices interact with texts to produce an outcome that could be used to further actions.

3.5 Operationalizing the RGS Framework

This study used the term "context" in various instances. Although generally the term refers to the social context of the workplace, this can be a somewhat loose reference point. For the purpose of this study, "context" is used to refer to an activity system that involves practices that workplace members participate to produce a main outcome, which in the case of this study was the activity system of IT development project documentation. Table 3 lists the various elements constituting an activity system:

Table 3.1: Elements of an Activity System

Element of Activity System	General description
Subjects	"Individuals, working individually carrying out an activity" (the URS writer and team members working on the project and the construction of the URS report)
Mediational means	"Material and semiotic "tools in use" used by subjects to carry out their work" (language; various texts or genre in genre sets/system of project documents).
Object/motives	"Outcome to be accomplished such as the object of study" (clearly written URS report which conformed to established format for URS reports)
Rules/norms and conventions	"Explicit and implicit regulations, norms and conventions that constrain actions and interactions within the activity system" (organizational culture, industry requirements for 'typifying and standardizing of documents' (Schryer, 2011 p.11))
Community	"Multiple individuals and or sub-groups who share the same general object"
Division of labour	"Division of tasks between members of the community with implications for power or status" (who writes what and when and who has the authority to modify and invent genres to produce "baseline document")

An important point to note about the concept of activity system is that it is not the core component/ theoretical framework of the present study but is incorporated for the purpose of defining the context within which the URS report was constructed. Activity system (henceforth known as AS) is a useful concept in RGS (among others) which enabled the study to position and conceptualize "context" so that analysis and discussions would be more structured and manageable, rather than reliant on an elusive definition or reference

of "context". Although limiting because of the boundary it tends to create around any unit of analysis, AS does "operationalize" context on theoretical grounds.

3.6   Summary

This chapter has provided the theoretical underpinnings of the study and situates it within a qualitative interpretive research paradigm. This provides an overarching research framework and informs the methodology to be adopted. The study as mentioned is a qualitative case study involving an investigation of the processes involved in the construction of an IT report, namely the user requirement specification report within the context of a local technology organization. It is based on current scholarship regarding the context-specific and situated nature of writing where meaning is dependent upon the specific organizational context and culture as well as the social relations among its participants.

CHAPTER 4: RESEARCH METHODOLOGY

4.0   Introduction

This chapter provides details of the methodology used in this study. It will firstly discuss the qualitative research approach followed by the study design. Details on case study will be discussed including rationale and the selection of the case in this study. This will be followed by details of the research settings, ethical considerations and data collections methods. Data analysis will then be described at length. This chapter will end with information on the pilot studies.

4.1   Qualitative Research Approach

The study specifically investigated the processes involved in the construction of the URS report, as it was realized within an IT project documentation practices. The aim was to investigate the discursive practices in the shaping of the intended document to arrive at a full and rich understanding of the context. As with other qualitative study of similar nature, doing so requires an examination of the specific institutional context, its members (social groups) and their practices. In other words, the present study involved gathering data that were derived from natural setting, and from the perspectives of the participants who knew what was important and salient around particular social phenomena, which in the case of the study was the construction of a report.

In line with the above qualitative inquiry, studying the construction of a written document, such as the report, required studying the social practices surrounding the process of constructing the report. The study is positioned within an interpretive research paradigm which rests on the assumption that reality is socially constructed through language and shared meanings and therefore arrives at an understanding of phenomenon

not by testing hypotheses or predefined variables but through the meanings that people assign to the phenomenon. Qualitative study in the interpretive tradition thus is interested in the 'lived experience' of the participants and in interpreting these experiences rather than making 'generalizable assertions' (Riehl, 2001 p. 116). This provides an overarching research framework for the present study and informs the study design, as will be detailed in the section that follows.

4.2   The Design of the Study

Gibson and Brown (2009 p. 49) stated that research design can usefully be conceived as a strategy that seeks to find relationship between data to research topics. Designing research involves developing a strategy for research that include specifying research topics and questions, choosing research sites and participants and deciding criteria for selection, and thinking through the methods of data collection and how they are going to be employed. Given the considerations regarding qualitative research and the specific research paradigm followed in the study, the case study was thought to be a suitable approach to obtain the necessary data needed to answer the research questions. Willis (2007) argues that the case study is often used by interpretive researchers therefore can be said to be reflective of the research paradigm adopted in the present study.

4.2.1 The Case Study Approach

As a general definition, case study is a detailed study or an examination of a specific event, organization or school system (Wiersma & Jurs, 2009). Yin (2009: 18) describes a case study as an "empirical enquiry that investigates a phenomenon in depth and within its real-life context; when the boundaries between phenomenon and context are not clearly evident and when multiple sources of evidence are used". The case study is recognized as the preferred strategy to serve research questions of "how and why" and is

"strong in reality" allowing researchers to identify with the issues and concerns raised by participants. It allows researchers to study an aspect of a problem in depth as well as the interactive processes at work within a specific situation within a limited time scale. In the case of the study, the case study approach would provide the researcher with "full and rich understanding" of the organizational context under study (White, Drew & Hay, 2009, p. 19). This view parallels that of Stake (2005) who argued that a driving question that should accompany any case study is 'what can be learned from the single case'. In this regard he believed that the design of the study should optimize understanding of the case, thus the need for a "thick description", as advanced by Geertz (1973 in Stake, 2005 p. 242).

4.2.2 Criteria for Selection of Case

In the study, the organization (the case) was selected for "intrinsic" and "instrumental" reasons (Stake, 2005 p. 237). First, the organization as object of study is itself a 'specific bounded system', which is a main criterion for the selection of a case. Second, the case study was intrinsic in basis because the chosen organization (the case) is of particular interest to the study in regard the position it had occupied in the IT and Information Systems (IS) field in terms of the kinds of projects undertaken towards making a name for itself in the local Malaysian and international IT contexts. Information gathered from a preliminary meeting with the gatekeepers a few months before the actual study began shows that the company's practices and activity were supportive of the country's overall objective for technology growth and the creation of a knowledge society. The creation of 'technopreneurship' currently in demand in the country was championed by the organization.

Third the company acknowledged the language, writing and skills issues the newer Malaysian workforce was facing and was committed to helping them achieve an acceptable standard in the English language. This is evident from the support it gave to new employees/graduates through specific program that was handled specifically by one of the subsidiary companies specialized in training graduates further in the IT field, including writing project documentation. This factor is important for two reasons. One is that both researcher and the 'case' in question shared relevance regarding language use and writing. Another is that the company could offer the study 'something' to pursue and investigate further, namely the report.

Third, the selection of the case was also based on instrumental reason because it had potential for providing insight into the research issue advanced in the present study. According to Stake (2005), a case study can be described as instrumental because it facilitates the understanding of the issue. He states:

> The case…plays a supportive role. The case is often looked at in depth, its context scrutinized, its ordinary activities detailed, but because this helps us pursue the external interest. The choice of case is made because it is expected to advance our understanding of that other interest. (Stake, 2005 p. 237)

Stake also states that there is no distinct line between intrinsic case study and instrumental. A combined purpose is possible in particular when several, and often changing, interests need to be pursued, as is often the case with normal research and everyday circumstances (Stake, 2005). The next section will give further details on the research setting.

4.3   The Research Setting

The chosen organization selected for the study is a parent company to a group of companies. The Group specializes in E-business and has been in the business for about fifteen years. As an E-business specialist, the Group's core business includes implementing and managing integral e-business infrastructure, solutions and services (Group Company Profile). Their services have included Internet Data Centre operations (IDC), web applications and e-business consultancy. The nature of the Group's business seems suited to the current technologically motivated business environment. With the increase in the number of businesses doing business over the web due to its potential benefits in bringing about greater 'visibility' for company, there is a simultaneous need for web applications and other related technologies to create company websites and portal to assist in the way companies do business nowadays and reach out to the wider population. The need to have interactive and user-friendly websites as well as efficient in terms of the ease and speed of the communication and exchange of information with customers is almost a requirement. All the above needs require advanced technologies; the least being fast internet connectivity along with effective systems and operation. The Group capitalizes on these business needs in an integrated way by developing and designing e-business infrastructures, providing IT solutions and services, including consultancy according to the specific needs of business organizations and marketplace.

As businesses are looking toward establishing their presence online, they need E-business specialists to provide them with the needed solutions to maximize on their business potentials. According to the Group's company profile, the solutions the company had provided to address e-business needs of organizations over the years included creating interactive websites for state and government websites and other big corporations. For instance, the Group had accomplished tasks such as restoring internal

corporate intranet for other organizations towards enhancing staff interactivity, improving upon systems and operations to increase the ease by which information is disseminated to the public, securing Dedicated Hosting of their own websites, and securing a platform upon which educational and interactive activities can be pursued with various community groups.

The Group also successfully created a repository of information along with online system which catered to payment needs, enquiries and complaints for the public. There had also been the need among businesses to enhance customers' online user experience through the setting up of a one-stop portal catering for specific needs of their own clients and agents among many others. It is reportedly the first of nine companies awarded MSC status with proven track record that spanned over 9 years (detail true at the time of the study).

4.3.1 The Research Site and Rationale for Selection

The subsidiary company selected for the study specializes in e-business solutions. In this study, the company will be referred to as Company A. Up until the time of the study, the company had served more than fifty corporate and government-linked agencies. It claimed to adopt international processes thus is CMMI Level 3 compliant and operates based on international best practices and standard for web assessment and design. The company's core competency to date has included online related services such as web assessment, software development, content bureau and product and web application development. All this is carried out through the design, development and maintenance of web-based applications including turnkey related projects that have helped other organizations improve their businesses and achieve their goals.

The company's mission and vision are to "transform the vision and strategies of partners, customers and communities into business results" (Group company profile). This social need can be seen to be illustrated in the company's and the Group's philosophy of creating products and services of value to clients (the actual philosophy cannot be disclosed entirely verbatim for confidentiality reasons). Guided by these mission and philosophy, Company A in its practices strives to work together alongside their partners and customers/clients to create what they call a 'mutually enriching business ecosystem'. There is therefore the practical need of providing IT solutions to the clients necessary to add value to their businesses and at the same time build partnership and solid relationships with the clients and other communities, which is an interesting and important point to note at this juncture.

The company addresses clients' business challenges and needs by providing the necessary solutions and services that can meet their business goals. In the world of increased globalization and advanced technology the client's business challenges vary, but as far as online needs are concerned, these have included the need to showcase online presence, information and services, the need to increase the ease of information that is being disseminated to the public, the need to revamp existing corporate intranet towards increasing staff productivity and developing a knowledge-sharing community and the need to maintain or establish consistent communication and branding, among others (Company Profile document). In attending to the immediate needs of the clients, the company studies these challenges and addresses the client's specific requirements through offering various solutions that can help meet the client's business goals. In order to do this, it is necessary to understand the client's objective as target audience, but at the same time understand and address community's needs (end user's needs). The business context within which the company operates appears to be complex involving negotiation

of needs of different stakeholders amidst staying accountable to industry standards. This scenario needs to be studied in greater detail. Company A's offer of an interesting (maybe rich) context for studying its practices, including discursive practices provided the study with one rationale for site selection, and thus the case to be studied.

The second rationale for the selection of Company A was made because of its involvement in turnkey related projects, thus is seen as having a closer connection and communication with the clients. As the study sees writing and language use as influenced by the professional and social contexts, this aspect of the organization's business would allow an exploration of the discursive practices that were employed in dealing with clients. The third selection criteria had to do with the nature and range of writing and written documents produced in the company required to document project processes and milestones. Feedback obtained earlier in the study revealed that Company A was the only company out of the other subsidiary companies which produced report as project documentation requirement, therefore would be the most suitable for the study.

4.4   Ethical Consideration

4.4.1 Gaining Access to the Organization

Before the study could begin, steps were taken to gain access to the company and research participants. In any fieldwork successful access to the organisations, and subsequently the participation of potential informants within them has been described as a 'prerequisite' for carrying out the research thus is crucial to ensure credibility of the findings (Shenton & Hayter, 2004 p. 224). As it was not totally feasible to conduct a pilot study involving an outside organization, gaining access was not a straightforward process, but rather three-fold comprising three stages. These were firstly, access to the company to assess the feasibility of the study and to make preparation for gaining access to the

organization (the Group); secondly, access to the focal company, which is Company A. Access in this case refers to access to research site and participants and access to documents and company material. Thirdly, it was gaining access to the research participants. The focal organization in the present study was a group of companies comprising a parent company and five subsidiary companies.

The first stage took place about 7-8 months before access to Company A was initiated. It involved an informal meeting/chat and unstructured interviews with the Human Resource Manager, Chief Executive Officer and an executive to obtain a familiarity and general understanding of the Group's business undertakings and its current structure as well as details on writing activities. This stage of the study was important to help establish common ground as far as research interests were concerned. Any competing interests were noted so that these could be addressed later. Several secondary sources were also sought to get further details on the organization given by the Chief Administrative Director (CAD) upon request. This preliminary contact was intended to refine and focus the primary research questions, and to that effect, this was achieved. It also enabled the researcher to obtain details on the writing practices and the documents written.

The kind of study intended required the researcher to establish common ground and relevance right from the very beginning, and to understand the broader perspectives of the main key person(s) in regard to the research topic. Access therefore had to be obtained at the highest executive level, meaning the CEO of the Group of companies as the organizational gatekeeper who have control over access to resources, both documents and people (Campbell, Gray, Meletis et.al., 2006). However, it would not be appropriate to contact the CEO directly.

It was convenient at the time that prior contact had been previously established with the Chief Administrative Director (CAD) of the organization following a study carried out with her sometime in 2000. Although the CAD held a different position then, and the nature of the study, the informants, company structure and administration were quite different, this "opportunist approach" (Symon & Cassell, 2012) was sufficient to get the study going in terms of getting hold of a contact person and exploring research potential.

4.4.1.1 Establishing Common Ground & Research Relevance

Although the CAD was a convenient start for gaining initial access, careful planning was also required on the part of the researcher. Firstly, at this early stage, gaining familiarity with the existing company, its current structure and business ventures was helpful and necessary because it helped develop an understanding of the organization, particularly the kinds of writing done. It also provided the researcher with a good lead from which to initiate a discussion with the CAD and later with the other gatekeepers. Several secondary sources were sought to get details on the organization such as websites, newspaper articles and company prospectus and a few publicly available documents given by the CAD upon request.

Secondly, there is the question of the suitability of the proposed research itself. It was more or less clear that the research was to study writing in organizational setting, but how feasible was it to do so at the company? A discussion was held between the CAD and researcher; once face to face but the rest mostly via emails to arrive at an initial understanding of the following matters:

- the nature of the proposed study and its requirements
- the feasibility of data collection method to be employed
- the expected duration of the study

- the documents required (and those that could be accessed), among other relevant methodological-related matters.

At this stage the research design that was earlier developed as part of the study proposal was a useful reference point for the researcher. What is important at this point is establishing a common ground with the CAD – to clearly explain the purpose of the study and establish relevance. This involved the following key issues pertaining to the company and the researcher:

- the company's aims with respect to written documentation
- Their commitment to the training of graduates in skills not only with software but also use of the English language in communication
- General thinking around IT and what users look for in terms of their information needs
- How writing can help achieve organizational or institutional goals.

At this stage, the researcher's attempt was at establishing credibility as well as positioning herself as a researcher with some shared objective(s). This was a useful step in the process of gaining access as it gave the researcher grounds upon which to bring the study up to a higher level of administration.

4.4.1.2   Gaining Trust

The second stage of access involved the CAD approaching the CEO of the Group of Companies to obtain verbal agreement for the project. A description of the proposed study, timeline and relevant information, including a letter of authorization from Faculty of Languages and Linguistics, University Malaya were provided. It was also at that point that the subject of confidentiality and disclosure were raised by the CAD. The CAD was

mostly concerned about disclosure of documents due to confidentiality given the fact that the study was going to use company documents as data. Although nothing formal was discussed or negotiated, it was necessary to talk about what the researcher's plans were for anonymising the data, ethical consent and observing confidentiality.

Informal consent was given by the CEO of the Group, which allowed the researcher to proceed with gaining access to the focal subsidiary (Company A). A briefing of the study was given including the nature of the proposed study, data collection method, expected duration of the study, the documents required and other relevant matters. Company procedures, ethical guidelines and informed consent were also discussed. At this point, no documents were released as full access to the company had not yet been granted. Information on the documents written at the company was gathered from the interview feedback. Although the study had not formally begun, the CEO voluntarily provided a general briefing on the company, project cycle and the relevant project documents. It soon became apparent that the study could be wide in scope thus needed to be refined in terms of focus and the research procedures. The decision at that time was to focus on practices; which confirmed earlier plans to study the discursive practices surrounding project documentation, and subsequently the writing of the report in question. It was quite clear at this point the 'emergent' nature of a qualitative enquiry.

Access to the company was obtained in July 2011 and work got underway for initial visits. However, before a visit was granted and therefore physical access to the research site, the researcher was made to sign a Disclosure Agreement. Once that was done, full access was granted, a visit scheduled, and access card given. The researcher observed all rules and regulation strictly to gain trust and establish credibility critical as an 'outsider'

to the site. It must be said that the researcher's previous engagement with the company, helped her gain the required access.

4.4.2   Gaining Access to Participants

Access to the participants was more complex and multi-tiered. The CEO of the participating subsidiary (Company A) was the first point of contact. Once identified, an email was sent out to the relevant individuals seeking cooperation in the study. The researcher felt that it was best to observe the company structure and strategize to gain access to the team members, especially the writers. It was not until three to four weeks after the initial contact that the study could fully begin. Gaining access to the participants can be said to be an on-going process. Getting the participants was made mostly based on accessibility, but resembling purposive sampling for some order of structure:

> Many qualitative researchers employ…purposive, and not random sampling methods. They seek out groups, settings, and individuals where…the processes being studied are most likely to occur.
>   (Denzin & Lincoln as cited in Silverman, 2005 p. 104)

In order to do the above, all heads/unit managers were approached through informal meetings, sitting-in at meetings and emailing to get to know the people and asking them to identify the right team members to approach. A kind of a table of matrix (Silverman, 2005) was created for this purpose as exemplified in Table 4.1. It has to be said that access to the participant was an on-going process. As the study dealt with writing, the task of seeking the writer(s) of the report had to be done in line with the developing project. Development of the portal project required the input and collaboration of different individuals with different job scope and responsibilities. As members of the PD team, they were different sub-teams contributing towards the developing report document,

therefore it became important for the researcher to obtain access to their participation in an organized manner as is illustrated in Table 4.1. Once voluntary participation was obtained, each participant was requested to sign an Informed Consent (see Appendix A).

Doing the Informed Consent was on-going as and when the participation of the respective team members/key players were sought and obtained. The subject of informed consent was brought up at the acquaintance stage and explained so that the players understood what was involved. It was stressed that participation was strictly voluntary. Each person was given a copy of the consent form and given time to read and sign. No interview was carried out until after the informed consent was obtained.

Table 4.1: Matrix of Participation

Position	Type of information required	Role in the project	Scheduled meeting	Plan of Action
Managers/Heads				
CEO Head of Business	Company structure Who's who in the organization Project overview Project overview Roles and position Writing tasks	CEO – monitoring, seeing client etc. Business Analyst/Project leader	Done Tuesday	Will email Project Director
Project team members				
Business Analyst Information Architect Systems Analyst Project Managers	Start Phase 1 and 2 Written discourse and practices Functions of report etc.	Project leader/reviewer		

4.5 Research Design

The flow of the research design has been provided in Figure 4.1

RESEARCH DESIGN

DATA COLLECTION	DATA ANALYSIS
PHASE 1 Identify and select organization Settle ethical matters	**PHASE 1** Preliminary arrangements Access & Informed consent
Stage 1 **Interview Set A** • Semi-structured interview with heads of unit, senior & junior executives • Purpose: to obtain details on discursive practices and writing context • Corporate documents /artefacts • Purpose: to obtain background details on history, corporate objectives etc.	Stage 1 **Written discourse & practices** • Document review: Organizational structure & aims • Transcribe, code and analyze interview transcripts qualitatively using Atlas.ti software
Stage 2 **Company URS Reports** •Collection of past and present URS reports •Interview with 2 specialist informants Purpose: to obtain an overview and understanding of the reports	Stage 2 **Company URS Reports** • Macro-level analysis of collection of URS reports • Macrostructure of reports • Document Analysis of linguistic features
PHASE 2 Stage 1 **Current Project URS Report** • Collect drafts of URS report of current project (MyCurrent Portal project (MCP)) **Interview Set B** • stimulated elicitation & discourse-based interviews with key players: writers contributors to the report **Meeting notes and discussion** • Purpose: to obtain accounts of processes of URS construction	**PHASE 2** Stage 1 • Micro level analysis of drafts of reports • Contextualized understanding of the construction of report • transcribe and categorize responses • Analyze texts vis-à-vis interviews for rhetorical significance of changes • Track changes made to report • Field notes of meetings & discussions
Stage 2 Final report & Participant Verification • Collect final report • Conduct participant verification	**Stage 2** Analysis of final report, following Phase 1; Stage 2

Figure 4.1: Research Design

4.6   Methodology

4.6.1 Data Collection

Data collection was guided by the need to obtain an understanding of the company in question and its discursive practices with respect to the writing of the URS report within the scope of project documentation. Data was also collected to get at the informants' perspectives and experience with producing the report. According to Stake (2005) methods in case studies should be interpretive to allow for the 'production of meaning' and an understanding of what is important about the case within its own world. However, from the experience of the researcher, getting at this understanding can be challenging especially when one conducts the study in the workplace where there are limits to what can be accessed, observed and disclosed.

It needs to be mentioned here that as at the stage of the study, the portal project in question had already started past the proposal stage and was being handed over to the project development team (PD team), input on the processes of construction and all the relevant documents were obtained mostly form the Business Consulting Unit (see Chapter 5, section 5.1.2 for further details). This unit consisted of the PD team members holding the positions of Business analysts, Systems Analysts, website designers, Information Architects, and content experts. The Project Director and Project Managers were also involved but only to monitor the project and the document deliverables. There was also a Document Controller (DC) who was the key person authorized to keep, maintain and release all past and present documents written at Company A.

Following the request of the CEO, all matters regarding the PhD project was to be referred to the Project Director and Managers as well as KAS, project leader. However, after further discussions, the Project Director appointed KAS, within his capacity as head

of the Business Consulting unit and team lead, as the main contact person to assist in the study. Thus, much of the input on the processes of the URS construction was obtained from KAS to comply with the above request and directive.

In this chapter, the terms "contextual data" and "textual data" will be used to refer to data on processes and data on texts respectively. Both 'process' data and textual data were needed to address the research questions posed in the study. As such, the study was carried out in stages as follows:

1. Main data collection: Phase 1 (Data on text Stages 1 and 2)
2. Main data collection: Phase 2 (Data on processes Stages 1 and 2)

The main aim of data collection in the study was to collect text data obtained from the written documents as well contextual data in relation to the writing processes involved in the construction of the URS report, including the communication taking place among the key players (Davis, 1995 p. 444). The main methods of data collection were as follows:

4.6.1.1 Semi-structured Interviews

The main data collection method utilized in the study was semi-structured interviews. Two main interviews were carried out, which are Interview Set A and Interview Set B (see Appendix B and Appendix C). The first set of interview A was to collect information on the company profile, the staff/team members, the writing processes and key players, the functions of the report as well as writing concerns, language use and others from the point of view of the participants. The second set of interview Set B was "stimulated elicitation interview" (Prior, 2004) and "discourse-based interviews" (Ivanic & Weldon, 1999 p. 176; Prior, 2004 p. 188; Lillis, 2008; Reiff & Bawarshi, 2011). In the study, the

stimulated elicitation interview was carried out to obtain details on the processes of URS construction, thus were guided by the following categories of questions:

- The process of construction at the initiation stage
- The process of construction at the development stage
- The process of construction at final stage

All the interviews lasted around 40 minutes to an hour or more, conducted on site, recorded upon permission and transcribed. Nonetheless, many instances the interviews were extended past the hour or had to be newly scheduled. As the interviews were semi-structured, the questions were pre-determined and largely open-ended. Therefore, there was room for the participants to speak at length about a subject or to shift topics. The researcher allowed the conversation to develop taking care to fit the pre-defined questions into the unfolding conversation (Gibson & Brown, 2009). In other cases, the conversation uncovered points of interest relevant to the study which led to more specific questions that were explored in another session. The researcher listed these questions as 'ad-hoc', meaning that they were not part of the key questions formed earlier. In most cases these extended conversations provided the study with information that was both useful and illuminating. The interviews were conducted in the following ways:

Phase 1; Stage 1 of the study utilized Interview Set A. This interview was carried out with top administrative officers, including heads of the different units at Company A, and later with senior and junior officers working on the project documentation. A set of standard key questions were asked; however, a few specific questions were asked to probe answers from specific individuals as the interviews unfolded.

Phase 2; Stage 1 of the study utilized the stimulated elicitation interview and discourse-based interviews conducted with the main writer KAS and ANNE. These

interviews were conducted simultaneously with the document/drafts of the reports. With the discourse-based interview, as the study dealt with authentic official report documents that were confidential it was not considered appropriate to simply make modifications, as is often practiced in conducting this kind of interviews. As alternative, revised drafts of the URS report were presented and compared to seek feedback on why certain changes/revisions were made. This helped to retain the authenticity of the texts and the naturalistic flavor of the study. The discourse-based interviews were used hand in hand with stimulated elicitation interview discussed above.

The focus of data collection at this stage was on obtaining the contextual details surrounding the URS report production, with specific focus on the current MCP project. This stage of data collection involved tracking the processes of construction of the URS for the MCP project in order to address RQ 1 and RQ 2:

RQ1: What are the writing processes involved in the construction of the URS report at the identified local organization?

RQ2: What forms of communicative exchange occurred between the key players involved in the construction process?

Stimulated elicitation interview/discourse-based interviews (Interview Set B) were carried out to obtain narrative accounts of processes of construction in the shaping of the report document. Drafts of the URS reports of the current MCP project were analyzed in tandem with an interest in the changes made to the drafts. This enabled the researcher to obtain details on the writing processes of the URS construction as well as forms of communicative exchange (RQ2).

Phase 2; Stage 2 involved the collection of final report of the MCP project and participant verification. Participant verification was done twice throughout the study with NAZ and KAS.

4.6.1.2 Documents and Texts

Another method of data collection was using company documents/artefacts categorized into three sets. The first set of documents were collected to obtain background information on the organization's history and goals, its mission statements, corporate aims and objectives, the structure and workings of the organization, and relevant disciplinary practices, especially in relation to the writing of reports, communication and English language use. These documentary sources were documents that comprised corporate profile, company mission statements, organizational structure and other documents illustrating the company's past and present undertakings. Some of these documents were closed access but were available upon request and thus could be disclosed.

The other set of documents was regular documents typical of project documents but closed access. These were drafts and final copies of URS reports, proposals, tender and award documents, project management plan, URS workshop handouts, design concepts and many others. These documents had to be treated confidentially. The study referred to the documents as 'process documents' used to track the processes of construction. The reports selected were those written from 2009 onwards. This is the period after the company received CMMI level 3 and therefore considered as being standardized and in compliance with industry's requirements, procedures and guidelines. They were also selected based on what the respondents were prepared to give, as well as availability.

Selection and collection of the report documents were carried out early in the study guided by the research focus and questions. It was felt that doing so would help the company make early plans for accessing the documents from their archives, or personal files depending on where they were kept. In total, six (6) final URS reports were analyzed. These comprised five (5) past URS reports of past projects and one (1) final URS report of the current MCP project. In addition, six (6) drafts of the MCP project were also examined to track the changes.

Phase 1; Stage 1 of the study utilized the corporate documents to provide background information on the company profile, reports and the others mentioned above. Phase 1; Stage 2 of the study utilized the project documents to obtain an understanding of the URS report. This was done through an analysis of final reports of five (5) past projects and one final report of the MCP project. The analysis of past URS reports was carried out to initiate the researcher into the analysis of the main project report and to obtain an overview of the overall structure and language used. The data obtained from the past reports could be regarded as "secondary" and was used to supplement data from the main project URS (Gibson & Brown, 2009 p. 67). Overall, Phase 1; Stage 1 of data collection was used to address RQ 3:

RQ3: What are the main discursive features of the URS report?

The methods of data collection utilized during Stage 2 were document analysis and semi-structured interviews, as are described below:

1. Final URS report of six major projects conducted from 2009 onwards were collected to examine the format and language features. The selection criteria were dependent on the number of projects the company conducted, and for which the URS was a required document and project deliverable. These were

projects and reports undertaken from 2009 onwards after the company achieved CMMI certification on the reason that the. As this phase of the study was focused on getting a general idea of the report genre, it was decided that a collection of six reports including the present report, would be sufficient for an exploratory investigation of structure and language use (Bhatia, 2004 p. 165). These reports will be called reports A, B, C onwards for past projects and MCP report for the current project (which stands for 'Mycurrent Portal report) respectively.

2. Semi-structured interviews with two specialist informants (Head of Business Consulting unit and Technical unit) to confirm the analysis of the chosen reports and obtain general insights on the context surrounding the writing of the reports. These informants were chosen because they were subject-matter experts and were team lead for the current project. There were also reviewers of the reports, while one of them was the main writer.

4.6.1.3 Field notes of discussions and meetings

In order to obtain an emic or insider understanding of the writing practices and the communicative exchanges, a few discussions and meetings were attended with permission. However, no permission was given to audiotape the meetings thus field notes were taken. These field notes were also written to make up for missed meetings based on feedback interviews from the team members who were present at the meetings. The 'observation' made at the   meetings was unstructured and were aimed at gathering interesting aspects of the study to fulfill the following purposes:

- To gather aspects which were interesting to the study and explore further with the participants

- To compare data as it unfolded

- To reflect upon what was observed and relating it to the research question

4.7   Data Analysis

4.7.1 Interview Data

The data was analyzed at both the descriptive level and interpretive level. The interview data was subjected to two coding phases. The first phase involved the coding and thematic analysis of Interview Set A, while the second phase involved Interview Set B. The first set of interview A was transcribed verbatim and read through to obtain an overall understanding of the respondents' feedback. This was followed by the creation of 'analytic notes' for each interview transcript (Gibson & Brown, 2009 p. 95) so that early comparison between interviews could be carried out (see Appendix D). This analysis was an analysis at a descriptive level but important for doing data coding and reduction later for purposes of identifying patterns and salient theme across all the responses (Silverman, 2005). The analytic notes also served practical purposes in that the researcher could adapt, change and modify interview questions as the study progressed.

The coding and thematic analysis of Interview Set A was carried out to contextualize the study in terms of prominent elements of the social context within which the URS report for the MCP project was constructed. Before coding could be carried out, a broad framework of data analysis was created in order to develop conceptual categories for the purpose of organizing and overall management of the data coding and classifying tasks (Samuels, 2014 p.68). Two aspects guided the analysis based on the research questions posed in the study: 1) aspects of discursive practices and 2) Processes and procedure for writing (Bhatia, 2004). Specific and more detailed coding categories were also identified based on previous findings on writing practices of professionals (Wegner, 2004; Graham & Whalen, 2008; McCarthy, Grabill, Hart-Davidson et.al, 2011; Walton, 2013). Some of the codes applied include 'values', 'expectations', 'practices', audience demands', and 'organizational culture'. The coding categories were also identified inductively from first

reading of the data, as they emerged from the data. For instance, the codes 'added value', solution', 'best practices', 'industry needs', and 'business needs' were derived from the current interview data. Below were some of the coding categories:

Aspects of discursive practices surrounding the URS reports:

- mode of communication used to write the reports

- the participants of the construction process

- the communicative needs of the reports addressed in terms of:

  - Organizational practices
  - Organizational culture
  - Culture of writing
  - Language requirements of the report
  - Content requirements of the report

Aspects of the processes and procedures for writing the URS for the MCP project:

  - Generic expectations and requirements
  - Client demands
  - Values, expectations and requirements
  - Technological needs
  - Best practices
  - Industry needs
  - Business needs

Once initial categories were determined, the transcripts of interviews were read a second time to identify other emerging codes, and later re-read to identify and code segments. Qualitative data coding software Atlas.ti was used for this purpose. Cross-checking of categories was carried out to map code to content (the responses) to ensure consistency and convenience when interpretation was needed. New categories were added as necessary (inductive coding) and all coding categories refined.

These codes were later grouped into 'Family' codes' for easy identification, followed by thematic analysis to identify recurrent themes and pattern. A coding framework was

devised for this purpose. The same coding strategies were applied to the second coding phase involving Interview Set B ("stimulated elicitation interview" and discourse-based interview), but with the additional aim of identifying patterns in relation to the processes of the URS construction (initiation and development stages). Discourse-based interview is a method of interviewing to discuss a particular piece of writing to get writers to provide knowledge of and motivations for the texts (ibid p. 189). This is a method useful for discussing about a particular piece of writing such as the formats of the report, the communicative purpose of the report, their roles in relation to the project documentation, use of language and general impressions of the particular text, as the respondents saw relevant to the situation at hand rather than mainly a recollection of what was written. This usually involves some modification to the text and requires the writer to consider the changes and whether s/he would accept. In the present study some modification to the procedure for conducting the discourse-based interview was initiated as the study dealt with authentic text that could not be modified. Parts of the report in discussion were highlighted as 'stimulus' for the respondents to look through and reflect (Prior, 2004, p. 189), guided by relevant questions to inquire, probe or invite further feedback that could clarify the texts.

Interview Set B involved the following coding strategies:

- Applying new codes derived inductively from the data which included tasks and practices, URS activity and flow, audience needs, persons involved, mediational means, communicative needs of the report such as content requirement, language requirement and systems requirement.

- Determining categories relating to elements of activity systems such as mediational means, norms, subjects involved etc.

Comparison across datasets were carried out between Interview Set B (discourse-based interview data) and Interview Set A for triangulation purposes. The diagram below illustrates data analysis for sets of interview data.

Coding Framework Interview Sets A and B
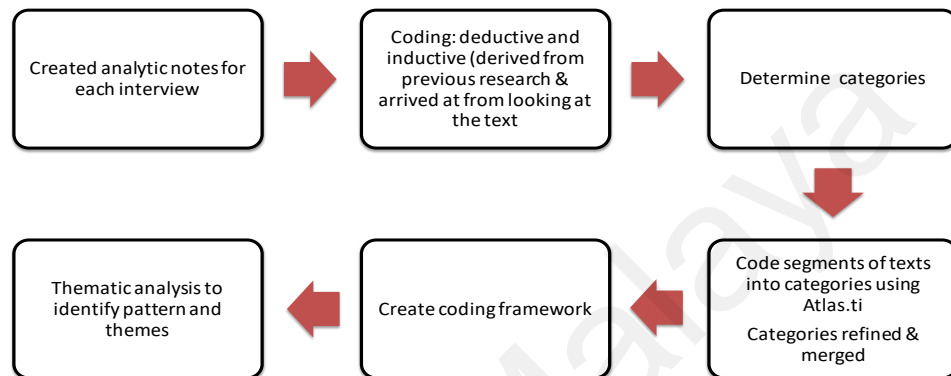
4.7.2 Document Analysis

4.7.2.1 Macro-level analysis of Project Reports

Document analysis was carried out on the URS reports for two reasons. Document Analysis refers to "a systematic procedure for reviewing or evaluating documents" (Bowen, 2009 p. 27). It is often used to complement other methods for purposes of triangulation as well as on its own, especially with studies which make exclusive use of documents. In this study, document analysis was used on its own as "stand-alone method" (Bowen, 2009 p. 29) as well as for triangulation purposes. Document analysis has been subjected to some criticisms with respect to the level of details that could be obtained and biasness, in terms of its tendency to align with corporate policies. However, document analysis is also considered an efficient and stable method which outweighs its limitations (Bowen, 2009).

The first stage of document analysis was to analyze the macrostructure (Samraj, 2016) of the report looking for discourse strategies of sections of the report. This is to determine the key functional units of the different sections. Applying Samraj's (2016) inductive discourse analysis of the manuscript reviews to the overall macrostructure analysis of the URS report, and guided by Kwan's (2017) descriptions of problem –solution patterns characteristic of "design science research" in Information Systems (IS), the collection of URS texts were read several times to identify a pattern of the overall structural arrangement. The texts were read again for discourse structure and strategies that differentiate the different parts of the text in order to identify "key functional units' (henceforth known as KFU) within the overall arrangement of the report.

Second, the codes used in the interview transcripts were applied to the content of the document. In keeping with the qualitative nature of the study, and the purpose for doing the document analysis, the codes were not quantified. Only relevant and meaningful parts of text were identified and coded. For example, the code "content structure requirements" were applied to corresponding parts of the report namely the requirements section. Other phrases indicating content structure would also be coded. Following Bowen (2009), the analysis of the URS documents was carried out in three stages: 1) content analysis of the URS based on the codes used in the transcript; 2) analysis of the documentary data together with the interview data to look for patterns 3) interpretation of the findings. This stage required assistance from a specialist informant to verify the coding. Analysis of the interview and documentary data enabled the study to identify overarching themes around the writing of the URS reports.

4.7.2.2 Micro level analysis of Project report

This level analysis involved tracking the drafts in order to track the writing process in terms of the drafting of the URS report for the MCP project. This is to examine changes made to the documents in terms of format and language and documenting reasons for the change. The heuristics for tracking the changes were adapted from Lillis (2008) "talk around texts" and Cuppan and Bernhardt's (2012) coding procedures. These were supplemented by Manami (2008) and Faigley and Witte (1981) on revisions (See Appendix C). Based on the heuristics, the report drafts were tracked and categorized according to the following procedure:

a. Specific language, stylistic, format changes etc. (Lillis, 2008; Manami, 2008; Faigley & Witte, 1981)

b. 'edits' as opposed 'comment' (Cuppan & Bernhardt, 2012)

To analyze the linguistic features in the text, document analysis was carried out on the URS texts. To get at some definable pattern of language use in the six project URS in general, the texts were run through basic keyword analysis using AntConc version 3.3.4w 2014 (Anthony, 2014). The data consisting of six URS reports yielded a total of 26 485 words altogether. However, to allow for a manageable analysis of the features identified, articles, determiners, prepositions, linking *be* verbs, terms used in headings, proper nouns identifying names of projects, countries or persons, abbreviations, terms in Bahasa Malaysia and others were not included. For example, article '*the*' yielded a total count of 1255, while 'to' and 'of' show occurrence of 1317 times. Likewise, abbreviated '*req*' yielded a frequency count of 301 times, but provided very little meaning other than the fact that it stood for the term 'requirements' and appeared in tables as sub-headings in numbered format. In summary, taking these words out of the analysis does not rule out

their importance but helps give sense to and greater focus in analysis with respect to the relevant linguistic features. After the first stage above, a more in-depth analysis of linguistic features of the MCP project URS was carried out. The data/findings were checked and verified by the supervisor, who is a trained linguist. These linguistic findings as well as the changes between drafts were later mapped against the interview data.

4.8 Limitations of the Study

As with any qualitative research, when dealing with small sample size or population, findings obtained in the study cannot be generalized to other contexts. However, every attempt was made to provide detailed analysis and explanation of the findings to arrive at a 'thick description' of the phenomena under investigation by using different sources and triangulating these sources where necessary. In relation to the URS report collected in the study, the sample size of the report did not permit quantitative analysis of the text data. This situation was unavoidable as the researcher was dealing with authentic texts obtained from outside sources where rules of confidentiality applies. The approach to the text therefore was informal and qualitative, and the analysis meant to be exploratory and complementary to the contextual data (that is the processes of text construction, which was the main focus). The qualitative analysis of the URS text in the present study was also deemed to be an appropriate approach to take given the text's semi- technical nature, hence the limited choice of words being used. Perakyla (2005 p. 870) argued that "in research designs where the qualitative text analysis is not the core of the research but instead is in a subsidiary or complementary role, no more sophisticated text analytical methods may be needed". The qualitative analysis of the URS text in the present study was complementary to the larger study on processes that drew mostly from interviews and field notes.

4.9   Issues of Reliability and Validity

Every effort was taken to ensure the reliability of the data. This was achieved mainly in three ways. First effort was taken to achieve reliability of the data through various data sources and triangulation, specifically between the interview data and documents. For instance, tracking the writing processes involving drafts was informed by interview set B and triangulated with interview set A. Examination of other textual data was also continuously triangulated with interview data. Likewise, the field notes were complementary to interview set B. Second, the researcher developed a small partnership with the main writer and two other key players in the project and the writing process by requesting each of them to trace the history of the documents/chain of events relating to the project and processes of construction. This information was continuously compared to the researcher's interpretation of the data to ensure accuracy.

This process tracing of the documents helped the main writer and the other key players talk about the developing project and the writing processes much more systematically. More importantly, it helped the researcher achieve coherence for what would have been a complex world of writing that only an insider would know, hence an emic perspective of the process. Doing so also ensured credibility of the findings and research. Where necessary these 'insider files' were compared with one another for purposes of triangulation. The third attempt at ensuring reliability involved carrying out participant verification. This was carried out with two specialist informants, namely NAZ and KAS twice over the course of the study. Lastly, the researcher spent more than a year at the research site. The first round of data collection was carried out from 2011-2013. The data obtained was analyzed and possible issues were identified. To achieve prolonged engagement and thus data saturation, a second round of data collection was undertaken starting between 2014 and 2015. This involved reviewing available transcripts,

identifying gaps and ambiguities, and conducting other interview(s) with a focus on clarifying and inviting further feedback until data saturation was reached.

4.10 Research participants

The research participants were approached as the study progressed. As the study was qualitative in nature, and much depended on the key players in terms of time, availability and willingness to participate, no specific sampling method was used. Nonetheless to obtain some rigor, a method like purposive sampling was undertaken, as was described earlier. This involved approaching the Heads of units and requesting them to identify participants of the portal project for the researcher to invite. For example, the Head of the Business Unit, upon agreement to help with the study, identified his other team members involved in the current project. That person then identified his/her own team believed to be valuable people to approach for data. Another stage involved seeking assistance from the project management team, namely the Project Director, who agreed to participate on the directive of the company CEO. He then proceeded to enlist the assistance of sub-project managers and the Document Controller. The latter person was a breakthrough for the researcher as she was the person responsible for keeping the documents and with the authority to release the document for inspection. Her assistance was sought through the Project Director and based on directive from the CEO. As the study involved study of reports both past and present, thus access to the document, gaining access to her was a bonus to the study. The participants can be divided into three main categories:

1) Administration – CEO of Group of Companies, CEO of Company A (subsidiary and chosen company)
2) Project management – Project Director, Project Managers and Sub-project managers and Document Controller
3) Heads of Units – Sales, Application Engineering and Business Consulting
4) Project Development team – Members of Business Consulting

As the study looked at project documentation, the Project Development Team (henceforth known as PD team) became focal team as they were tasked to develop the project, including the written documentation. The participants were as listed below. A pseudonym has been used for confidentiality purposes.

Table 4.2: The Project Development Team

Team member	Position
NAZ	CEO of Company A
KAS	Business Analyst & Head of Business Consulting
PHIL	Sales Manager
SAI	Software Engineer
MAN	Software Engineer
SHAS	Business Analyst
FAR	Web Designer
SAL	Information Architect
ANNE	Systems Analyst: Head Application Engineering

4.11 Conclusion

This chapter discussed the research design of the study. It provided rationale behind the choice of a qualitative approach and details on ethical considerations which included steps taken to gain access to the research site. The study adopted the case study approach and utilized semi-structured interviews, discourse-based interviews and document analysis, as well meeting notes to obtain the data needed to answer the research questions. Analysis of the data was qualitative involving a thematic analysis of interview transcripts and a linguistic discourse analysis of the report document. Before the data could be analyzed, coding of the transcripts was carried out and emerging themes identified. The chapter closed by briefly stating limitations of the study and identifying the research participants. Chapter 5and 6 which follow will discuss the findings obtained.

CHAPTER 5: FINDINGS AND DISCUSSION

THE PROCESSES OF CONSTRUCTION

5.0   Introduction

This part of the thesis discusses the writing processes involved in the construction of the User Requirement Specifications Report (URS) for the current My Current Portal (MCP) project. This is carried out to look at how the URS report was developed on account of the local situated context of document production and the shaping of the URS report in terms of structure and language. At a theoretical level, it is believed that writing should be investigated as it is situated within specific social practice. In the case of the URS, the stages involved in the process of constructing the URS report was situated within organizational practices, and it is the aim of the investigation to examine how these "local and situated practices" helped in the shaping of the document. According to Candlin and Hyland (1999, pp. 3) it is important to take account of the 'situatedness of texts and the processes which contribute to their creation and interpretation'; in particular because of the differences and specializations in today's professions.

This present study has two levels. The first is to explore the discursive practices in relation to an IT report, namely the user requirement specifications Report (URS), through an investigation of the writing processes involved in its construction. The second level goes further to examine how the IT report is shaped in terms of its structure and language. This chapter discusses the writing processes involved in the construction of the URS, beginning with the background to the My Current Portal or MCP project, which is the current project for which the URS was written followed by details of the writing participants. The chapter will then continue with the findings on writing processes and

communicative exchanges and discussion. The discussion in this chapter will address research questions 1and 2 as follows:

1. What are the writing processes involved in the construction of the URS report?

2. What forms of communicative exchange occurred between the players involved in the construction process?

5.1   Background to the "My Current Portal (MCP) Project"

In order to put the discussions on the process of constructing the URS report in context, general background details on the MCP project will firstly be provided. More detailed discussions on the said project will be carried out in later sections of this chapter. My Current Portal (MCP), as an existing portal, was the 'single gateway or one-stop-centre for the public to interact with government-linked agencies over the internet' (Company A, 2015, slide 10). It was linked to more than 1,200 portals and websites that provided relevant information and services to the public users. The Portal was also integrated with a payment gateway that enabled payment for services to be made via the portal. These exchanges were run from a one stop online centre called 'PortalXchange' (pseudonym) used for online interaction and transactions between public user and the agencies for the relevant services. Thus, the portal provided both information and transaction services. All the above services were provided by 'ICT Main' (pseudonym), a governing body responsible for the 'hosting of shared computing assets' that were linked to its specific intranet and internet sites (Tender document, 4 August 2011). ICT Main was also Company A's main client for the project.

Some of the key features of the portal included a personalized portal page for registered users to select content based on their needs and preferences, a single user interface online

transaction page, public service portal pages where all the homepage, notification and community services were listed, and search engine that enabled user to search for information using various websites, among many other features. All components of the portal such as the content management system were also identified in the tender document but cannot be revealed here in its entirety.

ICT Main's primary aim was to market the portal as "the gateway" for information and transaction (MAN, personal communication, May 21, 2012). To realize this aim, there needed to be efficient delivery of services – a "one-stop" centre of information and transaction from which both citizens and non-citizens of the country could gain benefit. That was ICT Main's primary objective. As will be discussed below, there were issues with the existing portal ranging from the usability of the portal to its design.

5.1.1 The Need for the Portal Enhancement and the URS Report

Company A's task was to revamp and redesign the current portal system. The need for the project arose because it was believed that the public were not using the portal to access the various services available (FAM, personal communication, May 18, 2011). According to FAM, some agencies were more active than others thus gained some public attention, but some were not too promising. He speculated that the main reason behind this lack of participation among public users could be lack of knowledge regarding the services available possibly caused by lack of promotion. However, the "usability" of the existing portal was also questioned. KAS defined "Usability" as "the ease of use and learnability" of a product created to accomplish a goal'. This means that for a portal to reach "usability standard", users should be able to navigate the portal and find the required information easily and efficiently (KAS, personal communication, July 7, 2015).

It can be said that the interest was high towards addressing the needs of the public end-users. As owner of the portal, ICT Main (the client) was responsible for addressing the problems behind the existing portal in order to attend to the information needs of the end-users. As vendor, Company A's focus and consideration was to address the client's needs and interests in all possible ways as the client was undoubtedly foremost in this case. According to SHAS who regularly worked on the project on site with the client, the main aim was to transform the current portal into main reference site for the public user. Now there seemed to be many problems – the forms were not working, the contents required were not available and the public/user did not know what the function of the website was. Thus, the important task for the PD team was to create the necessary solutions and translate them into what KAS and SAL described as a "visible" form in the URS report (that is, in the form of 'requirements' that specify the features of the portal website). The writing of these requirements had to be done clearly and accurately so that the audience could understand what the portal requirements were and the intended outcome for the general end-users.

5.1.2 Key Players in the URS Writing Process

At Company A, the URS document is regarded as a business document as it involves business processes required to achieve the specified goal of delivering the project (SAI, personal communication, May 26, 2012). However, there are sections within the report where the technical aspects of the portal/website are identified and described. Due to these two main aspects of portal development, the construction of the URS report requires a collective effort of different teams specialized in the various areas. For the MCP project two main teams undertook the main responsibility for the construction of the URS report and the accompanying activities – the Business Consulting unit (BC) and the Technical unit (TC).

KAS was initially designated as reviewer of the URS report for the MCP project, but due to specific project circumstances relating to timeline, he became the main writer and thus carried out the core writing activity that included the production of the text drafts and final draft. He was assisted by ANNE, who was the Head of the technical unit of the company (TC). Both were regarded as subject matter experts as they held the positions of Business Analyst and Systems Analyst respectively. They were assisted by other team members who played important roles in the construction of the URS report drafts by contributing sections of the report, according to individual expertise. KAS and this team of individuals formed the Project Development (PD) team involved in the construction of the URS report as detailed in Table 5.1. For purposes of confidentiality, pseudonyms will be used.

Table 5.1: Project Development Team in the URS Construction Process

Team member	Position	Role in the MCP project
KAS	Business Analyst & Head of BC	Project lead & main writer & reviewer
ANNE	Systems Analyst: Head of TC	Technical advisor; writer and reviewer
SHAS	Business Analyst	Usability team lead; IA, portal content & online services (forms)
FAR	Web Designer	Usability team: Web Designer
SAL	Information Architect	Usability team: Information Architect
AZZ	Information Architect	Usability team: Information Architect
SAI	Software Engineer	Project management: Project Manager & reviewer
FAM	Sub-Project Manager	Project management: Sub-Project Manager
REEZ	Project Management Officer	Sub-Project manager
IZZIE	Document Controller	Document Management

Although KAS was writer and reviewer, raw input on the requirements was obtained from his PD team members and a partner company assigned to handle some of the client's requirements (KAS, personal communication, June 23, 2015). He also received review feedback at different writing stages, which he referred to as "peer review" which helped him build upon the content of the URS report and make some revision on language (KAS, personal communication, Nov 25, 2015). As the timeframe for submitting the written document was short, he believed that it was necessary to obtain the cooperation of relevant members in his team for the required input to write the URS report and meet the required deadline for written documentation of the project.

In terms of the study, an important point to note here is that certain circumstances surrounding the MCP project made it necessary for the researcher to obtain assistance mainly from KAS. Firstly, in addition to the timeline, there was also some delay in kick-starting the project, leaving the project team with only two weeks to write the report (KAS, personal communication, March 26, 2011). To expedite all work in progress, all team members were fully deployed on site to work on delivering the required deliverables to the client within the specified time. As MCP was a large-scale project involving a strategic client (PHIL, personal communication, May 3, 2012), the stakes were high for the whole team. This meant that for greater efficiency, only one or two members took on the writing of the report to control for errors and avoid numerous revisions. As an outsider to the company, any authorized arrangements had to be respected to minimize any disruptions to the team's schedule of work. This also helped to establish greater respect and trust between the researcher and the team members.

Secondly, as the MCP project progressed, it was decided by project management that a different development process or method known as the "Agile' or 'Rapid' method

should be adopted. This meant that the project went by several 'Releases' where producing the documentation and sign-offs took place simultaneously with the developing project (that is, elements of the portal) - with some effect on documentation (FAM, personal communication, May 18, 2012). FAM admitted that the written documentation was indeed one aspect that would be difficult to control because the URS report had to be written up quickly and in a timely manner. These developments took place at about the same time physical access to the company was given to the researcher.

Due to the above, detailed account of the writing processes, and related communication practices among key players during the earlier stages could not be made fully as the project had already started and construction of the URS was underway; at least in its rough format. This gap in data collection did not affect the study in major ways except in terms of getting firsthand accounts of the earlier processes. To address this disadvantage, data had to be obtained from secondary sources such as meeting notes, email excerpts, slides of presentations, tender documents and proposal, report drafts and template relevant to the earlier part of the project. However, these documents were only those that KAS had in keeping and those to which access was given by the Document Controller, IZZIE, thus were perhaps not totally complete.

Tracing the process of the documents according to timeline (based on the chain of events prior to December 2011) was then carried out to look at the various exchanges and writing processes that took place. For this reason, interviews were also held with team members, especially KAS, given his position as head of project development (see Chapter 4 for further details and triangulation measures).The interview texts provided for the above gap in the data.

5.2 The "Context" of the URS Text Construction

The study tracked the writing processes involved in the construction of the URS report as it took place within the professional context of the workplace. In line with the RGS framework, the study specifically investigated the construction of the URS report as it was situated within a larger context of IT development project documentation practices. It thus looked "beyond the URS text to the context of the text production" in the shaping of the intended URS document (Pare, 2015). Tracking the processes of text construction in this study requires looking into the various practices and processes surrounding the text/document including the interactions among the participants. Rude (2009) argued that because texts/genre are often used within an activity system and related communication practices, an examination of the practices surrounding text construction is required, especially in cases where the texts are made to accommodate users with different needs and interests, such as the case with the URS report.

Looking at context as an activity system means looking at the construction of the URS report as a collective endeavor of the players involved directed towards a similar goal and mediated by material tools or resources that are called into play in its production.

In its diagrammatical form, the activity system (henceforth known as AS) of the IT development project documentation in which the URS report forms a part is illustrated in Figure 5.1:
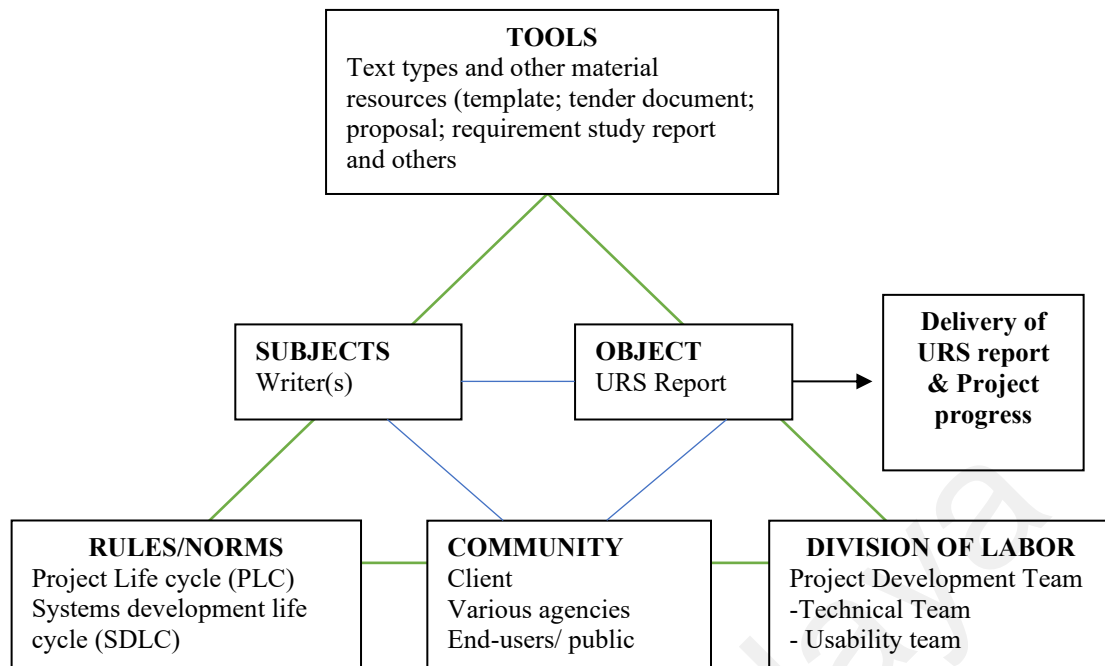
Figure 5.1: Activity System of Project Documentation

As shown in Figure 1, the "Subjects" refers to the writer working with team members on an activity to 'accomplish an outcome, which is the URS report ("object"). In the case of the study, the intended URS report was one that should be clear, simple and thorough enough to enable project stakeholders to proceed further with the project. In the process of acting upon the object, subjects utilized or looked to various material and semiotic tools as "mediational means". This whole task or activity was supported (or constrained) by 'rules/norms' or standardized procedures governing the various processes including the community that played important role in influencing the direction of the project. In the case of the MCP project, this community consisted of project stakeholders with direct interest in the outcome of the project. "Division of labor" refers to the different tasks and roles held by different key players in the writing process and the project. The focus of the AS therefore is on the interactions among these elements and the various players as they engaged in a social action of constructing the URS report.

5.3 The Writing Processes Involved in the Construction of the URS Report

The present study examined the writing processes involved in the construction of the URS report as well as the communication that took place among the players in the shaping of the intended report. In line with research on writing as situated practice, Rhetorical Genre Studies (RGS) was used as a theoretical and conceptual framework, thus situating the URS report as a text type of the report genre within specific organizational and professional writing practices and social relations among participants. This framework allowed the study to explore the social context of writing the URS report, hence the focus on investigating the writing processes. There is a growing body of research into the production of professional texts in terms of the practices and activities surrounding the text production (Graham & Whelan, 2008; Flowerdew and Wan, 2010; Hafner, 2010). However, studies have also started to investigate the processes leading to the production of the actual text such as Bremner, (2014) and Gunnarsson (2009). The present study is in line with the latter two.

Overall, findings of the present study show that the processes involved in the construction of the URS report involved activities that were instrumental in producing and bringing together a network of information required for the URS text. Specifically, these activities and the discussions and sharing of ideas taking place among players contributed to the creation of various text outputs that fed into the content of the URS report. In that sense, these findings are broadly similar to Gunnarsson's (2009, pp.134) study on legislative writing in that the writing process happened in two phases. This comprised "construction of text" involving generation of ideas and formulating those in words (the content), and "editing" of the text where "written notes were put to "an adequate text form".

However, while the main phases were parallel, the processes involved in the construction of the URS report in the present study were directed toward the need to build and present "content strategy" (SHAS, personal communication, 21 May, 2012) for a successful project outcome rather than a straightforward generation or brainstorming of ideas. The term "content strategy" can be understood as "the concerted effort to present meaningful, useful and relevant content within the contexts of the user experience so that the right content reaches the right people, at the right time, for the right reasons" (Public Relations Office, Web Content Strategy, 2016 pp. 4). Thus, the writing processes, guided by this longer-term objective of building the relevant "content strategy", can be said to be foundational to the URS report.

The present study also ties well with Bremner's (2015, p. 272) study on the writing of press releases as both studies traced the processes leading to the production of the intended text. In so doing, the studies were able to explicate the different stages of text construction, the activities involved and the collective writing processes that contributed toward the finished text. Bremner identified three "overlapping cycles of activity" and the roles of other genres and texts, both spoken and written, in the writing of the press release. However, when comparing the results of the present study with Bremner's, the writing processes in the present study varied in terms of the stages and the constellation of activities or inquiries within each stage. They served to coordinate work on the URS report as well as the development of the project, hence the social actions of the key players. These will be dealt with in this chapter along with the discussion on the various stages of the writing processes.

The writing processes involved in the construction of the URS report is based on Gunnarrsson's (2009) two main phases but further categorized into the following stages:

1) The Preamble stage comprising the tender and proposal stage
2) The generation of content stage
3) The production and verification of the URS content stage
4) The editing of the URS stage (the writing process)
5) Document review and acceptance stage

Further exploration of these stages revealed that the processes involved in the construction of the URS report were based on three main concerns:

1) The client's needs and demands
2) The stipulated requirements and allowed format of the report (the template)
3) Shared objectives of the project's outcome

The next section will discuss the writing processes involved in the construction of the URS report and look at how the three concerns or considerations above played out in the different stages of the URS construction. Excerpts from transcripts of interviews will be provided as evidence of the findings. As players are speakers of English as a second language, verbatim excerpts may contain insertions in square brackets [ ] to add to the clarity. Some details have been removed or pseudonyms given for reasons of confidentiality

5.3.1 The Preamble Stage

The Preamble stage of the URS construction involved the tender award and proposal stage, and hence is specifically a project stage in its true sense of the word. However, it was an important stage of both the project and the construction of the URS report where important work associated with identifying and addressing the client's requirements were carried out to convince the client and win the tender. In other words, this early stage defined the interests and needs of the client for important reasons to be discussed below.

5.3.1.1 The Needs of the Client and Value-added Solutions

(a) Reviewing the client's tender document

The main discursive practice at the Preamble stage was to review the client's (ICT Main) tender document, formulate preliminary solutions, place them in the proposal and table the proposal to the client for the general purpose of securing the tender. Tracing of the project documents along the URS construction process revealed that the client's tender document was an important document and the first point of reference for the PD team since it contained details on the objectives and client's specific requirements of the existing portal. According to KAS, head of the Business Consulting and Project Development (PD) team, the requirements were studied and then reviewed against the client's expressed need for a new improved version for the purpose of formulating preliminary 'solutions' for each of the client's requirements. Although tender activities are customary in terms of business practices, findings of this study suggest that producing the solutions; described as "high level solutions" had an important impact on the trajectories of both the project outcome and the text.

According to the CEO, the client had had a portal running since 2004. The main portal was in fact an integration of two portals; which the client wished to consolidate into one. An important thrust behind the client's tender initiative was the desire to offer through the internet a "single gateway of information or one-stop center" as main reference site for the user to access information and services. Despite this clear vision, the client had not been getting "a huge number of traffic to the site" thus sought assistance to improve the services that the portal provided to the public (FAM, personal communication, May 18, 2012). The two main tender documents therefore became important reference documents for the project team in terms of understanding the whole idea behind the desired portal, including the client's aspirations for it. This was an important process linked to broader organizational and social motives as will be described below.

The term 'solutions' refers specifically to the specific features of the portal, website or system that can support clients in delivering their e-businesses/services to their own clientele 'effectively and efficiently'. In the context of any specific project, 'solutions' are specific features that should be designed in order to address the specific issues a client has with existing portal or website, among other technologically- related issues. Before going further, it is useful at this point to clarify the difference between the terms 'requirements' and 'solutions' as they were used at the company. Table 5.2 provides an extract from a 'Solutions Overview' document produced by the Sales team in the writing of the proposal.

Table 5.2: Solutions Overview

Areas	Attachment	Implementation
User Generated Content		
…. should provide the ability to create, edit, and manage user generated content complete with both text, video, and graphical data (the solution)	web publishing easy Rich text Editors	Please refer to MCP Proposal and brochure
…should provide the ability to tag and search content (the solution)	Search and tagging	Please refer to MCP Proposal and brochure

(Adapted from "Solutions Overview", Tender Document, 2011 p. 1)

In the above extract, the phrase "user generated content" (highlighted in bold) refers to the client's requirement, while listed in the second and third row (in italics) are the solutions describing how the requirement could be realized most effectively. From the interviews conducted with the team members, it is understood that while the client's requirement can be standard requirement (as one might expect to find in most websites), the solutions would be specific to the relevant vendor's expertise and or specialty reflecting organizational interests and mission. In that respect, the solutions that Company A claimed to offer were not any solutions but workable, 'value-added' solutions in terms of what the client would be able to do with the new system and benefit from it

economically and technologically. Analysis of the interviews conducted with the team members show that indeed a general theme uncovered was the notion of 'added value' closely aligned with the company's philosophy of providing services of value to clients and communities. The following excerpts taken from the interviews with NAZ, the company CEO, KAS, head of the PD team, and FAR, head of Sales explain what was meant by value-added solutions:

EXCERPT 1:

> We are <u>always thinking of creating new things</u>. That's why *kita ada* [we have] not just from the technical standpoint the units that handle R&D but also ... something that perhaps work well four or five years ago does not mean that it will work well now because business is moving is so fast, so you need to [be] up to date in terms of what is happening coz clients do rely on us so you need to be a few steps ahead; then this [is] to bring value. I tell my salespeople that we don't [just] sell [a] product; what we sell is actually <u>value</u> to the clients." (NAZ, personal communication, April 16, 2012)

As underlined, creating new things refers to the creation of solutions where bringing 'value' to the client was foremost. The word 'value' again appears in KAS' comment below clearly indicating his interest in providing 'value' to his customers in relation to the various solutions created:

EXCERPT 2:

> Okay sometimes when we [are] awarded with a project, we will <u>create a solution</u> for our client. . . Of course, they said they want A-Z, but sometimes we say, <u>why not you do A +B+C. There's extra input</u>. If the client [is] happy they will appreciate us and [the] extra value is for our team. We can take from all the solution we already provide as benchmark to the other project so it will become a new trend.
>
> (KAS, personal communication, April 25, 2012)

Again, in the above excerpt, KAS made the same reference to the idea of creating a solution in line with the company's philosophy mentioned previously. His input is similar to NAZ's given above. It is likely that KAS regarded the philosophy as principles guiding his own team in the creation of the appropriate solutions beyond what the client initially expected, as suggested by the phrase "extra input" underlined in the above excerpt. A better understanding of this idea of giving extra input can perhaps be obtained from the feedback given by PHIL below:

EXCERPT 3:

…the client may want to solve a problem, but we add value if we could raise their productivity level, increase greater automation or integration for them."
If it was to "increase the number of customers online, we proceed to grow their membership.

(FAR, personal communication, May 5, 2012).

PHIL's feedback suggests that the increase in value enhances the services or products that the company provided thus benefitting the customer in the long run; apart from the required baseline website or system. His feedback can also be seen to be in line with the MCP's project outcome in relation to increasing customers online (as underlined), thus increased visibility for the client. Analysis of the interview data in the study found that "added-value" involved looking to incorporating elements of trends and best practices in both business and technological terms, as illustrated below:

EXCERPT 4:

Basically, we will base the solution on the latest trend, and we assign somebody to do the information architecture or the site map… they need to do some background search. If the proposal comes from a telco company, my team will search the best practices from telco industry…international.

We will refer to best practices, for example, for usability we have Jacob Nielsen the usability guru. For example, a website must have this menu, this menu. We also have MDEC requirement. Their best practices are focused for all government so will base on that. So basically, we will take the best practices and merge before we can propose something that give value to the company.

KAS, personal communication, April 25, 2012)

This collective interpretation among team members, or rather understanding, of the organizational interest pertaining to "value" was now dedicated to putting it in practice by recognizing and aligning it to the client's needs and desired social outcome of the portal project in order to suggest the appropriate value-added solutions. This task was not based solely on the tender document but in the team's interactions with the client through meetings/discussions and interviews held sometime during the tender process. NAZ stated that effort was also taken to meet with the client and identify the exact nature of the client's problem not only in terms of "what they would like to solve but what they hoped to achieve" (NAZ, personal communication, April 16, 2012).

As the project involved the redesign of the client's portal, with the aim of restructuring the site in mind, KAS and his PD team proceeded to work on what he called the 'redesign approach', that is the formulation of more specific design goals and concepts for meeting the business requirements of the portal. Although these were for the proposal to win the tender, it was reported that these design solutions were texts of visual outputs comprising a few design concepts and the information architecture diagram (henceforth referred to as the IA) that were to have longstanding use throughout the project. These texts were to be discussed, reviewed and refined further at a later stage for purposes of development, and formalized as the URS content.

Before going further, a brief description of what an IA is needs to be provided here. In general the Information Architecture as defined by The Information Architecture Institute is 'the structural design of shared information environments' and the 'art and science of organizing and labeling web sites, intranets, online communities and software to support usability and findability' (see The Information Architecture Institute, 2013, para 4). It helps users find information and complete tasks. The company has simplified the concept of IA as "a methodological process to structure a portal to enable it to communicate and deliver services to the target groups effectively" (MCP Proposal, 2011). In simpler terms, the IA sets the scene for how the website is going to look like based on the visual perspective of the team.

Indeed, for a vendor tasked at enhancing the 'front-end' aspects of client portal, the IA appeared to be an important element for both the company and client. According to KAS, the IA was regarded by the Business Consulting (BC) unit of the company as its own "added value" element; its own "niche", thus the IA might differ from those of other companies (KAS, personal communication, May 7, 2012). The Human Resource Manager attested to the importance of the IA saying that "the design of the IA requires thinking ability, design expertise and technical knowledge" (HR, personal communication, Nov 2011). It can be understood that how the IA is designed and organized along with useful and relevant content and content categories would speak much of the company's ability and expertise to translate the client's requirements (and with that, particular interests, vision and goals for the portal) into a viable form that illustrates specific content strategy. The focus of the PD team was to create an IA based on sound principles of design and architecture as it is relevant to the "digital landscape" because the end users' participation and utilization of the services offered by the MCP

portal rests on the usability of the design. All in all, the essence of the preamble stage of the URS construction can be captured from KAS' feedback below:

EXCERPT 5:

> First, check award document because (there is) initial requirement, then set up <u>interview session and meeting with customer, discuss, validate</u> then come back with the proposal (and) the visualized output (IA)…I mean <u>the proposal is the IA</u> and then match with the tender spec. (We also) make a mock up design doing the wireframe and sample reference site and then we present to them to check whether is this what you want… and <u>(if) they believe as (user of the site) this is what we want to see</u>**…**so they have their comment and everything and we show some sample designs and they give feedback – "we like this one but we like this part"…and then we combine the idea.
>
> (KAS, personal communication, April 25, 2012)

As indicated by the underlined phrases, the IA appeared to be the first to be designed and presented to the client for approval even before it was formalized into the proposal document and the URS. It would be fair to say that the IA can be seen to be a tool to communicate the team's ideas with respect to the relevant design solutions but more importantly communicate the client's needs in relation to the specific project goals. The underlined phrase "<u>(if) they believe as (user of the site) this is what we want to see</u>" demonstrates this point. As can be seen later, the IA also became a tool to interact with the MCP owner (the client ICT Main) and other users.

Thus, the tender documents and the discussions held around the portal requirements leading to the production of the proposal and IA can be seen as early communicative exchanges between the team, as vendor, and the client within the specific context (activity system) of project documentation. These exchanges helped the team to define interests and create a shared space for pursuing similar project outcome. This is an important

starting point. At this early stage of the writing process, KAS and his team were working from experience in doing portals and knowledge of technology to come up with these preliminary design solutions and tailoring those to ICT Main's needs and demands. In the case of the URS report content, KAS did not yet have any drafts written, but was informed and guided by the company's modified template of the URS in terms of the necessary information to include:

EXCERPT 6:

> Unless they (client) specify (a solution) …. that way we would follow. If not, we must provide our solution the best as we can *lah*. This is where our value added, our experience comes to the picture. Ok basically we will use our <u>template</u> and <u>using our template put our thought to it our experience</u> and go back to our customer. But we start with customer document first, template put our thought to it, our input and review with customer
>
> (KAS, personal communication, May 7, 2012)

In the comments above, the underlined word 'template' refers to the URS report template which KAS was using as a guide to formulate the different design ideas based on experience in doing portals. Obviously, generating the content was an important focus during this stage, but it can be seen that as assigned writer and reviewer of the URS text, KAS was shifting between two interconnected activities - studying the tender document along with communicating with other key players and thinking about the URS structure with the idea of bringing the different elements together to an organized text.

5.3.1.2 The Sharing of Interests and Outcome of the Portal Project

a) The Proposal

For the purpose of early identification of portal requirements, a 'technical' proposal was written, finalized and sent in early May of 2011. The writing of the proposal involved

a substantial amount of "cooperative writing" where each of the two main teams (Sales and Project Development) contributed portions of the whole text. What is pertinent to the discussion of the proposal in this chapter is the details that went into the proposal and other documents produced at this stage of the project and the relevance of the proposal to the writing processes involved in the construction of the URS report.

The finished proposal was a rather extensive document consisting of information that was additional to the client's original demands, reportedly to "educate" the client on the benefits of the various features proposed such as benefits of the recommended designs in relation to the user interface (PHIL, personal communication, July 2, 2012). In PHIL's opinion, client's understanding of the benefits of the design, or important elements like the proposed layout of the portal, or the technologies behind the system would ensure good knowledge and understanding of the technological benefits they would derive from the newly proposed portal. His feedback indicates the need to accommodate the client's needs and share the required technology for portals/websites.

The MCP project appeared to be an important project for Company A. Unlike previous project of a smaller nature, the MCP project was regarded as a "high stakes high profile project" (NAZ, personal communication, May 3, 2012) since its main interest was the enhancement of a portal to be used by the public and all relevant agencies. The decision to pursue the project can be attributable to two reasons. Apart from addressing the demands of the client, doing the project would firstly establish the company further as the vendor of choice. Second the MCP portal project would create a shared objective between the team/company and the client in terms of the project outcome in relation to the information needs of the end user. NAZ stated that:

Obviously, our objective is the intended portal. A lot of things is at stake; high profile. At the same time, <u>this is (our) bread and butter</u>. This is what we do. We are <u>expert at this</u>. We ask ourselves if we were (the portal) users, would we find this site useful? This portal is to <u>deliver services to the *rakyat (*the peoples*)*</u>. If we can honestly answer yes to that, we have achieved our goal.

(NAZ, personal communication, May 3, 2012)

The feedback given by NAZ in the extract above shows priority for demonstrating commitment to take up the project because it "is what we do". The fact that his use of the idiomatic phrase "our bread and butter" (underlined) in conjunction with the word "expert" strengthen the conviction further. One of the themes to emerge from an analysis of the interviews is the close relation between the company's practices and value systems borne out of the Group's corporate philosophy. One of the reasons as to why the philosophy seemed so important lies in the company's vision to be the company of choice and expert in the IT business, hence doing the project would strengthen the company's position in the market.

NAZ's comment is also an interesting one in another way. The reference he made to the "*rakyat*" (the peoples) along with the desire to give something useful to them suggests that the team's goal, experience and expertise were relatively congruent with the client's interest and social objectives of serving the general Malaysian public. In this case, the ability to create workable solutions that can simultaneously address the client's immediate problems with the portal and give value-added benefits to the public became a primary objective. These considerations would need to be conveyed clearly in the URS report, as is suggested by NAZ (excerpt 8) and SAI, Project Director (excerpt 9) respectively in response to whether the documents, including the URS, should reflect these aims:

They (the documents) should; different types of documents, but the underlying principles they must reflect. Of course, technical document not so much as these are documents that we test. I would say there is still room for improvement of the document.

(NAZ, personal communication, May 3, 2012)

EXCERPT 9

… so that's why they call for the tender for us to revamp. If Company A can do it properly it benefits (us), benefit our children…that's the value. Yes (in the URS, SRS) you can see the functionality how the different between the previous one and the new one. All those are inside URS. You can see it very clearly… the value, the benefit that the customer *gonna* get.

(SAI, personal communication, Feb 2, 2012)

Thus, the "redesign approach" that KAS and his PD team adopted and worked on throughout the tender and proposal stages illustrated the whole team's strategic focus to address the client's immediate technological and business needs, including the longer-term intended outcome of the project (to serve the public better in value-added ways); in line with organizational goals. This was clearly stated in the Executive Summary, whereby the redesign approach was said to be made using "user-friendly, robust, flexible, scalable and future proof technology" (Executive Summary, MCP portal project, 2011 pp. 2). At this early stage of the URS report construction, the project team can be said to be engaging in a social action of relating to the various interests of key players, in particular the needs of the client's (ICT Main) and its immediate clientele, which is the public. The study notes that this was evident from the review of the tender documents, the formulation of design goals and proposal.

According to KAS, the PD team would try to incorporate as many of the features mentioned in the proposal into the URS to 'comply with what was proposed' (personal communication, July 2012). Thus, apart from the design solutions/concepts mentioned in previous section (see 5.3.1.1) there were the architecture of the portal such as the content structure, the IA as based on the current input, wireframe and functional requirements among others. These form the "usability document" comprising the above preliminary "visualized output" (to use KAS' term) to be presented at the upcoming project kick-off meeting and built upon in later stages of the project. This whole 'redesign' task can be considered as one of the processes involved leading towards the URS construction because the tender documents, proposal and all the relevant elements derived from these texts to produce the usability document provided the basis for writing the URS report and further action in regard to the project.

5.3.1.3 Setting Preliminaries and Plans

a) Tender Award and the "Kick-Off" Meetings

Once the company was awarded the MCP Project, the 'kick-off' commenced. At this stage, it was more or less confirmed that the company was successful in securing the project/tender, thus project responsibilities and roles in the project needed to be established. The thesis sees the kick-off activity as an important one to discuss as, firstly, findings show that it was at this stage that the first distribution of the team's preliminary solutions was made formally to the client representatives.

The kick-off involved a project briefing conducted by NAZ that provided all details regarding the project, its implementation, methodologies, the deliverables, the financial aspect of it and so forth, including the requirements and solutions. The main objective was to instill understanding of the methods and approaches to the project and seek

agreement from client with respect to the requirements and solutions; before work on the project as well as preparation of the first draft of the URS report could be done:

Basically if the stakeholders agreed, then we draft the proper document because …we have been told that for this period we have to deliver something so that's why we present to customer with all the high-level solution and then basically tentatively they agree with the high-level solution that's why we prepare the draft of a requirement study URS.

(KAS, personal communication, May 15, 2015)

Secondly, the kick-off meeting stage is when various project needs and circumstances were discussed and several important decisions were made. The project management team was now evaluating the project, in terms of what it would be about, what approach to use and other important formal considerations. According to KAS, often in practice, the kind of approach depended on how "mature" the clients were in terms of their knowledge of and experience in the whole process of portal development. It was stated that while some clients were more adept at the processes and procedures of the system or IT project to the point of sharing their methods or specifying the exact solution required, some clients needed guidance and advice. This more detailed study of the project among the project team, including the project managers and directors was carried out to do the following:

- Ascertain the nature and scope of the project; whether it would be a simple 'generic' portal or an extensive one that include online services and transactions. This is required for planning the required resources and documents

- Decide on the project life cycle (PLC) important for determining the nature of the documentation to be produced. Accordingly, if the project was

extensive, there would be a need to "split" the documents (KAS, personal communication, April 25, 2012).

- Study the client's requirements for specific features that needed to be me, that is, whether specific solution(s)/features were specified by the client of just general requirements. With the MCP project, the client's requirements were mostly very brief, and the solution required unclear thus pushing the team to engage in further study of the portal (KAS, personal communication, Sept 5, 2012)

- Confirm the client's commitment to engaging the user when required. This means that if the project requires user details for which the client is not able to provide, there may be a need to reschedule the timeline. In this case it can be said that "the client's commitment is not ready" (KAS, personal communication, Sept 5, 2012).

While the above tasks were routine practices for the company when it came to the award and kick-offs, the two last tasks listed above required special mention because on the basis of these circumstances (the client's limited requirements and access to user details), it was necessary for the team to further study the portal and users to explore, clarify and confirm the various requirements and solutions. As a result of the above process (stage of the project), a decision was made to conduct further inquiries/activities that could further define and accommodate the different needs and interests of both the vendor and the client with respect to the portal requirements.

The kick-off meeting also revealed some other needs such as brand awareness which might not appear prominent but nonetheless important at this preliminary stage. According to KAS, with all clients, it was necessary to discuss the kinds of website they

would like to identify with or ascribe to because of a certain identity it carried, as is described below:

EXCERPT 11

> When we develop portal, the client itself has their own brand because the website that we are going to build will represent them, so they have some elements that they want to carry. Then they will give us the branding guidelines for example this kind of images you *boleh guna* (can use), logo *mesti ada kat atas* (has to be at the top) and the colour should reflect the logo. The important thing is that when we do the URS, you will be asked these questions: your branding guidelines. They *kena bagi lah* (will need to give us) and then *kita akan (*we will*)* follow.

> (KAS, personal communication, Sept 5, 2012)

In the case of the above situation, it is, for the team, a matter of catering to the clients' preferences. As it turned out, with the MCP project and the clientele, it was necessary for the team to take brand awareness into consideration as the project involved numerous important agencies with different interests to serve as well as protect. From the findings above, setting some preliminaries relating to the project was needed so that both the team and the client understood the project in advance and what it would entail. Given the extensive and large-scale nature of the MCP, the company enlisted the service of a partner to look into some of the requirements, but the redesign and usability of the portal was undertaken by Company A with Project Management taking the lead as far as the running of the project was concerned.

With the MCP project, it was reported by KAS that the project team played an advisory role to assist the client in understanding the methods and approaches to the project. However, findings indicate that it is likely that they took on a leading role too on

account of the various needs, interests and constraints of the client. Some of these considerations have been discussed above. From the discussion, it appears here that on-going communication with the client thus far up until the kick-off meeting provided the PD team with an indication of how and in what way to respond to the project and client's needs in order to accommodate those needs. A good case in point is the discussion on brand awareness and strategies between the team and the client. In terms of the writing processes involved in the construction of the URS, it can be said that the briefings and presentation of the project solutions, including the communicative exchanges around the client's needs determined the background work needed before the writing of the URS could be carried out.

5.3.2 The Generation of Content Stage

The generation of content stage involved the operational and development part of the project executed fully and intensively by the PD team led by KAS. In terms of the writing processes, the generation of content stage is somewhat similar to a pre-draft stage in preparation for the writing of the URS report later. Findings indicate that the PD team had an established structure for organizing and doing the project and the required documents from the very start. That structure was apparently text/genre- based. KAS saw this first stage as the brainstorming stage; however, the activities involved were not just restricted to simple generation of ideas but also the creation of various texts/genres that fed into the content of the URS. These were the results of various involvement and interactions among different project stakeholders consisting of the PD team, the project directors and managers, representatives from ICT Main (the main client), the client's different agencies and the public end-users. This second stage of the project and URS construction encompassed the following practices:

- Preparation of the URS template & format.
- Extensive requirement study activity (henceforth referred to as RQ study)

Table 5.3 lists various key players and activities taking place during this stage of writing towards the URS construction:

Table 5.3: Key Players and Activities of the URS Report Construction

Activity	Key Players
Preparing and finalizing the URS template for writing	Main writer: KAS and his team members. Main client
Survey of Internet Use	Client, PD team & members of the public & agencies
Requirement Study (RQ)	PD team, main client, representatives of the various agencies; project managers. Project directors
Website best practices & benchmarking study conducted internally including other research activities	PD team members: SAL, AZZ, SHAS, KAS and others
Production of Summary of Findings document and slides	PD team members
Production of Design concepts document and slides	Website designer: FAR & team members

With respect to the activity system (AS) of project documentation given earlier in Chapter 3 (see section 3.5), several elements of the AS were already apparent. There is the 'subject'(s) KAS, as writer, and his PD team as contributors to the URS text working towards constructing/writing the URS report (the 'object'). The activities undertaken throughout the writing process illustrate a continuous interaction and collaboration among key players with the main aim of implementing the project and constructing the URS report which met the needs of the intended audiences/stakeholders; albeit one that conformed to established format for URS reports. In that sense, the team was operating within certain rules (format) but as to whether these were constraints or opportunities remain to be seen. At this point in time, however, it can be said that these activities coordinated the running of the project, including the production of various texts/documents which KAS and his team utilized in writing the URS report in terms of the structure of the text and the content.

5.3.2.1 Establishing Structure for the URS Report: Preparing the URS Report Template

Findings of the study show that project work often involved working on and through stipulated format and guidelines not only in its various processes but also in the production of the necessary documents, including the URS report. The reasons for doing so relate to the technical need of IT development tasks involving software engineering and the professional need of the IT industry. However, rather than constraining the activity of the team, these requirements and guidelines allowed the team to exercise credibility and agency. This point will be further elaborated in the next section starting with the technical aspects to do with IT development projects.

(a) The Technical Need of IT Development Tasks:

CMMI Software Engineering Process

For most IT development projects at Company A, besides the project life cycle (PLC) developed by project management for monitoring and tracking phases of the project, there is a Systems Development Life Cycle (SDLC) that provides guidelines relating to the standard life cycle activities of software engineering processes. Adherence to the SDLC provides the company with the credibility it needed to position itself as the IT vendor of choice. The SDLC conforms to the industry's certification standard known as the CMMI Software Engineering Process which outlines development phases or life cycle activities of software processes. These include 'requirement study and analysis, solution design, development, product integration, acceptance testing, delivery, installation and implementation, system testing, training and documentation, as well as postproduction and maintenance' (CMMI Software Engineering Process p. 4).

CMMI stands for 'Capability Maturity Model Integration' which is a "capability improvement model' or process model that guides organizations in identifying processes and best practices that can lead to improved performance. It comprises a set of 'process' areas that are relatively discipline/industry-specific and are adaptable to the 'culture and behaviours of each company" (Broadsword, what is CMMI). It is believed that the CMMI is not so much about ranking but about guiding companies to build the capabilities to achieve meaningful business results and therefore improved performance (Mckinsey Global Survey Results, 2010). In short, the CMMI framework is all about process improvement defined according to maturity levels. There are levels 1-5 but maturity levels are awarded for levels 2-5.

Reaching a certain level of mature capabilities often means that organizations have met all the necessary process areas and have incorporated best practices throughout the product lifecycle. Some of the values often associated with mature capabilities are an increase in 'quality and customer satisfaction', improvement in 'delivery to the market' as well as 'performance' (McKinsey p. 8). Being awarded a CMMI Level 3 was an important achievement for Company A as it means that the company was recognized for its product and service development – specific to IT. In other words, in order to reach the standards required by the industry, close reference needed to be made to the CMMI – approved SDLC framework in the planning and execution of a large-scale project like the MCP project, including the construction of the relevant documents like the URS report.

Feedback from the project team members suggests that these guidelines helped them in the writing process in relation to keeping to the format and the important contents in line with industry's expectations and standards. The feedback given by KAS illustrates these concerns:

… we have a CMMI process implemented last time; a standard template, so whatever we did is based on some standard….during our first year or two years implement that CMMI it's very strict you have several process implemented; that means that I produce the report somebody else will check – the QA team will check on the document – the formatting, the (inaudible) not the content - the process; the quality of it.

(KAS, personal communication, April 25, 2012)

The Project Director, SAI, was also focused on trying to observe the relevant standards and processes (understandably referring to process standard regulated by the SDLC/CMMI) when reviewing the written documentation before delivering it to the client for sign-off. His feedback below was in response to a question regarding his role in the URS report writing and expectations. In the excerpt below, reference was made to 'UNI' (pseudonym), which was partnering with the team to do the requirements for online services and forms:

EXCERPT 13

First you have to comply to the documentation standard. First whether they fulfil the template or not. Comply to the standard of the template documentation. Second is the content whether they fulfil or not the objective of the study. Then the technical aspect whether it's good enough…that documentation we have to comply to the CMMI standard.

Some client require SRS; some require both URS and SRS it depends. The URS and SRS are deliverables….it is very important as it regulates the business in regard to how people communicate with one another…. But you have to go through the process. That's the reason my team now (is) there. To ensure that UNI deliver the documentation as per our expectation. You just comply to our standards how we want to deliver to ICT Main… our client.

(SAI, personal communication, Sept 19, 2012)

Again, in the excerpts above, both KAS and SAI made the same reference to the need to observe the 'process' involved in doing the project and producing the required document. SAI went further to provide his stand regarding the importance of complying with the CMMI documentation standard and the template, as can be seen in the underlined phrases in excerpt 13. The SDLC therefore is very much process-focused which, in line with previous studies, could explain why most IT organizations pay attention to processes and values that are "technologically-grounded" and are centred on stability and standardization (Leonardi & Jackson, 2009 p. 398). This configuration of elements in itself sets the practices of IT organizations such as Company A apart from other business organizations.

Observations carried out during the present study show that the company's practices were indeed focused on the processes leading to the writing of the URS. This is evidenced from activities like extensive requirement study, benchmarking against best practices for websites worldwide, and matching those with standard requirements such as the CMMI and the Malaysia Digital Economy Corporation (MDEC) standards for Malaysia's technology industry. These activities produced information useful for the PD team in designing the relevant solutions and crafting design ideas which formed part of the content required for the URS report (see section (b) below). There was also the production of various reference documents on software engineering process and standard processes and procedures adapted from the industry's CMMI guidelines for team members' use, including various templates for writing different documents.

In summary, the goal of the PD team was to produce a URS report to address the client's demand for an improved portal. It has also been seen that additional to this

immediate need was a socially shared goal of improving the outcome of the portal project for the user. In that process, the team was informed by the sets of rules and regulations stipulated in the CMMI and that had become institutionalized and practiced, in many ways such as through the various documents. For instance, several pre-designed templates and procedures for almost all activities and documents ranging from meeting notes, presentation slides and meetings with the clients to the formal documents such as the proposal and the URS report had been prepared ready for use. These templates guided the writing of the URS report as shall be further explained below.

(b)   Use of Template and Professional Requirements of the IT Industry

To adhere to the stipulated guidelines and format for writing the required report(s), a pre-designed template for URS was used, but one which had been customized from the industry's template. It was decided by KAS that the customized template could be used as it already contained the required sections that addressed portal development in general. Findings show that the use of a template provided the PD team with an efficient and acceptable way of writing the URS report that would satisfy both the professional and/or discipline-specific requirements of an IT development project as well as specific organizational goals and concerns. This point will be developed further in this section.

The URS report is the specified written output in the CMMI process document, and its construction often takes place between the requirement stage and solution design stage. To that end, a pre-designed template for URS for use in documenting projects with a longer lifecycle such as the MCP project was created by the company, modified from the industry's template, according to the nature of the company's business and practices. This template had been in use since 2008 and was CMMI-compliant. Below is NAZ's feedback on why a modified version of the industry template was needed:

> I think a lot of (our) work is centered around building portals and websites. The standard CMMI document looks at the typical software development. That is more related to doing system… Software development can be very customized so the SDLC very generic. We develop portals and websites. We don't have to follow strictly. We know already in order to do portals what do we know. What is in our user requirement - we have the IA, the design, the wireframe. The version is baselined.

> (NAZ, personal communication, May 3, 2012)

As underlined in the above excerpt, it can be said that the company's business and practices of doing portals formed the basis for adjustments to the industry's template. What is also important to note here is the fact that the different elements of the URS template had been baselined, meaning that it had been used, approved and set as standard for subsequent URS reports. This may be the reason why the company continued to use its own template for the URS. KAS' approach to the use of the template was similarly based on pragmatic reasons to do with project needs in terms of the standard elements of a portal. However, he also appeared to make use of the template for providing additional elements or features believed to be necessary to better communicate the portal requirements. He stated that:

EXCERPT 15

> We try to use our template …we put our thought into it; our experience ……We can suit the requirements to the project needs because not everything we follow the templates because when we create the templates we take into consideration every angle of the project. *Kalau takde* (if none/no relevance) just take out. For me I will look into the project scope. I will focus on the requirement first then I will put extra information.

> (KAS, personal communication, Sept 20, 2014)

It can be seen that both the nature of the company's business and the actual project at hand made it necessary to create a customized template, but one that is in line with the processes outlined in the SDLC. In addition, the comments above suggest that modification to the industry's template was also based on prior knowledge and experience of the team members in doing portals and websites. It is reasonable to assume that through continued use, the modified template along with its "typified" contents (the IA, the design etc.) had become the standard "recognizable form of communication" (Bazerman, 2004 p. 318) between members of the team and the client.

In addition, the MCP project lend itself to the customized company template. First the idea of doing a large- scale project such as the MCP project for a big client like ICT Main required some form of standardization that conformed to stipulated guidelines and format. In the case of the MCP project, it was decided by project management that the Project Life Cycle was to be a 'unified and integrated solution' meaning that it was to include stages beginning from the 'study, the concept, the design, customization and development, testing, documentation, and up until support and maintenance'.

The nature of the project itself therefore was extensive involving large applications and many user groups (Berezin, 1999). The practical need of standardizing the document(s) across most agencies could be understood in that respect. ICT Main was also a strategic client associated with leading companies around Malaysia and with widespread network of agencies. Given the scope and breadth of the project, and the processes involved, the guidelines and formalized structure provided by a template seemed necessary to ensure adherence to the proper format and allowed content. It is also possible that working with a client such as ICT Main would necessitate careful consideration of the required processes or procedure.

SAL, an Information Architect and junior member of the team believed that reference to established guidelines, such as the IEEE (Institute of Electrical and Electronics Engineers) was necessary in their line of business. Nonetheless, customization is still often required because of varying organizational and client needs. As contributor to the URS and SRS reports for the MCP project, the first step he took when asked to help with the document was to refer to the IEEE standards to ensure that the customized template being used was aligned with the necessary guidelines. Excerpts 16 and 17 illustrate these concerns:

EXCERPT 16

Actually (I didn't have to) study because we used the template from Release 1. But I have checked the template. It complied with international standard for documentation – IEEE standard. Actually, not all company can use that standard as all must follow the need of the company and need of the client. IEEE is like a guideline and then from the guideline we customize…like from Release 1 document, like did not cover non-functional requirements.

EXCERPT 17

The parts with all the diagrams (I think) there should be natural language. We have to explain because we cannot assume client know technical things, so we combined diagram and explanation. (For that) sometimes I do my own research from the internet and sometimes I asked Mr. KAS too. The (section on) document history, Company A is more detailed from what is required by the industry's template.

(SAL, personal communication, May 25, 2012)

As SAL was responsible for helping doing the information architecture (IA) and database structure, which are two of the most important elements in the URS and SRS reports respectively, the guidelines provided some form of an informal validation on his part with respect to standards (as stated in excerpt 16) and the sections to include and

adjusted. The underlined phrases in excerpt 17 suggest some of the different adjustments made to the required part in the industry's template. In KAS' case as the main writer of the MCP project URS, the template helped him to verify the accuracy of the content and format to see if 'all the necessary requirements for the portal/software development had been covered as per company's standards and procedure for URS at the basic level' (KAS, personal communication, April 24, 2012). Looking at the above comments, it is reasonable to say that the required standard set of format and content/solutions provided KAS and his PD team with the confidence in the validity in their approach and methods.

Second, the company's vision was to become an IT expert of choice. Taking that into account, and combined with the IT industry's focus on processes, certification and standardized documentation, the present findings of this study show that the template provided the team not only with a formal industry-approved structure and approach to the development task but also the credibility they needed as IT experts, in the eye of the client and the general IT business community at large. The findings also are in support of the argument given by Bazerman (2004, p. 316) that the template gave direction toward 'what information' needs to be presented and 'how' it is to be presented. Likewise, the template provided clarity in format and standard procedure consistent with the "accepted reference for format and content" along the lines of approved professional guidelines and "mature development practices" (Berezin, 1999 p. 4).

There is however room for modification and grow within limits set by the industry. Feedback given by NAZ indicates this point clearly:

EXCERPT 18

I think even when we were going through our CMMI certification, it does state that you have standards already defined but when we roll out, there are allowances for

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adjustments or customization to that document depending on the scenario. So, I think we continue to adopt that (approach). Usually the Business Consulting unit will decide collectively if to adapt to the client's own standard template. The adaptation might <u>help improve our own documentation</u> but that is decided at the organizational level.

<div align="right">(NAZ, personal communication, April 16, 2012)</div>

Besides talking about customizing the template to suit the client, NAZ also raised an interesting point. The underlined phrase 'help improve our own documentation' suggests that the whole process of customizing or adapting the template was a learning opportunity for the team in terms of producing better document/report. This is an unexpected comment but an enlightening one as aside from the fact that the company appeared willing to learn from others in the industry, it also demonstrates the company's actions at building trajectories for the development of their writing and documentation processes. This is an important finding in the understanding of the discursive practices involving writing in that the text itself is dynamic thus open to changes following changing situations and discursive practices even within the constraints of strict guidelines and standardization processes.

The importance of producing a sound URS report also lies in the role it plays in project progress. The URS report was regarded as an important document; without which the next step in the development process could not proceed (NAZ, personal communication, April 16, 2011). Given the scope of the MCP project, many different individuals with different roles in the project such as the usability team, the technical team, content experts, designers and others on both sides were involved to get the project going and delivered. The standardized structure of the report allowed multiple audiences of the URS access to the required information necessary for them to carry out further actions on the project depending on their respective roles. For example, the technical team consisting of

developers/coders would take up specific details in the Requirements section of the URS text in order to proceed to the 'design' phase of the project. Although these developers knew the standard procedure needed for back-end system of portals, 'everything about what the portal and required software will do must be spelled out' (SHAS, personal communication, May 25, 2012). In brief, the URS report, as reference document, coordinates future actions of other team members.

The writer(s) and contributors of the report were accountable to other team members, and as the URS report was also a deliverable to the client (agreed-upon in the tender contract), they were accountable to the client and external stakeholders, as principal users of the document. According to Searle (2010), for reasons of auditing, accountability and standardization, there was often reliance on standardized documentation procedures or texts based on industry standards. In the case of the MCP project, a configuration of these three elements was evident.

An emerging theme with respect to the interview data was the need to maintain or illustrate professionalism in all the company's processes. Doing things right can be said to demonstrate professionalism on the part of the team members and the company. This idea on maintaining professionalism relates to standardized documentation in terms of keeping to standards and best practices for professional reasons. It will be seen later how the company's template went through further adjustments to accommodate the nature of the project and client's needs.

(c)   Use of Template and Client's Needs

As mentioned, the MCP project was a big project involving extensive requirement study and a full lifecycle. When it comes to the written documentation, there was

therefore the need for a pre-designed template for the reason mentioned above. The thesis argues that use of a template provided the PD team member with a (safe) 'resource' that enabled them to act appropriately in response to different situations while at the same time negotiating around the pre-existing structure (format) to make some adjustments in response to specific project needs or interests.

This finding is consistent with the notion of RGS with respect to the issue of 'negotiated agency' where participants are 'controlled by and in control of the semiotic resources associated with a genre (Schryer, 2012 p.132). In the case of the present study, findings show that the writer/PD team worked around the template to pursue specific organizational goals while maintaining a discursive order of the project.

Two situations in the MCP project allowed the PD team and the writer to do so: the demands of the client and the nature of the project. These have been partly discussed in the previous section. The following section furthers that discussion with a view to bringing attention to how the template required further modification on account of the MCP project and the client specifically.

In most cases, the company's template was said to be appropriate for most private agencies or companies, although government agencies tend to produce their own template. The practice at Company A has been to allow clients to use their own template or suggest a format of the URS report other than what the company has available. The actual basis for doing this is not quite clear but as discussed previously, a recurrent theme that emerges from the interviews shows that commitment to the client is uppermost thus offering to 'share' templates could be one of the ways to demonstrate that value, particularly to strategic clients like ICT Main (the owner of the MCP).

From what I've gathered ICT Main (is) experienced client exposed to the leading companies. As far as document on the project side, they found our document acceptable, but they also give their own template for us to use what is relevant. Decision of the project team whether to adopt or not….

(NAZ, personal communication, April 6, 2012)

According to NAZ, most of the time his team tried to practise some flexibility but if the client insisted on their own format, the team would normally make some adaptation to the template to comply with the client's request (NAZ, Interview, April 16, 2011). As it turned out, ICT Main did show interest in using another template belonging to another IT company they worked with in the previous year called 'High Tech' (pseudonym). Feedback on this was, however, a little mixed. One team member stated that the client had expressed preference to use High Tech's format instead of Company A's, while another member said that the client had its own format but there was leeway as to which template the PD team might want to use. Given this space, ANNE, head of the technical team (TC) and writer and reviewer of the URS and SRS decided to use both templates on the reason that High Tech's content was said to be similar to the existing format the team had. The following comment explains the decision made:

<u>EXCERPT 20</u>

ICT Main clearly said if possible, the report should be this way; they did give samples from previous projects …one done by High Tech… (I see that) more or less our format in terms of what the content to be included (is) the same as High Tech's, so I need to make sure all (details) are in there, so more or less (it is) clear cut *lah* what ICT Main wants in the SRS.

(ANNE, personal communication, April 25, 2012)

KAS too went according to the normal practice of accepting the client's template but he took the step to match it with the company's template then modified section(s) of the original/existing company template to suit the client's needs in regard to the project (KAS, interview 2012). His feedback has been captured in the following excerpt:

EXCERPT 21

> We need to cater what client wants first because sometimes in the letter of award they will define what kind of report that they want and which area that should be covered. So, we take the (client's) template and match it back because the original (client's) template have so many sections, we will define whether relevant or not depending on the project type.
>
> So, from there we customize and make the report to suit the client. Basically (our) template already define what kind of information (needed)…we have the information architecture in the template; the wireframe so based on that (what we have) we match it with the (client's) requirements.
>
> (KAS, personal communication, April 25, 2012)

Unfortunately details of these interactions or negotiations; or exchanges, are not available but the interview feedback suggests that in both cases, the client reportedly accommodated and allowed for these modifications, provided that the required contents or requirements were being addressed. Thus, it is very probable that the adoption of the actual template, and therefore the overall structure of the MCP URS, was the result of some negotiation; perhaps a give and take between the PD team and the client. It could be that this agreement was the result of past processes (looking through templates and arriving at a standard template) or will continually be changing in response to variable needs. In sum, it can be said that the practice of 'negotiating' around use of template suggest that the company was operating within 'allowable' constraints, except that one

can question as to which standards or whose standards the 'modifiable' template should comply with.

When enquired whether these adjustments would compromise the industry's standards in any way, both KAS and NAZ stated that further adjustments to the template were acceptable because of varying project scope and requirements, including the specific client's demands. Based on what they said, this meant that some sections of the company template could be excluded depending on relevance to project needs. Looking at past URS of projects (namely projects A, B and C), there appears to be support for these views as there was some deviation from the original industry template in terms of format and language use across all three of the above URS.

However, contrary to what KAS and NAZ had said, a review of all the three URS reports show that the nature of all three projects were in fact quite similar. Participation verification on this matter was sought around late 2014 and early 2015, but KAS could not recall totally what transpired during the writing of the three past projects but did confirm that the differences did exist. It is also possible that different writing styles of various writers contributed to the differences, however, this argument could not be verified as none of the writers of previous URS could be interviewed.

To further get at the specific considerations behind these adjustments, questions were directed toward finding out how different the MCP project was compared to other projects. Despite the MCP project being high-stakes involving different key stakeholders, it seems that aside from factors such as the short timeline and non-traditional development methods selected for the MCP project, the MCP project was "a mix of old and new" (KAS, personal communication, Nov 25, 2015). For example, 'log in' and 'search' are

standard features, but additional feature of the MCP website such as 'Mypage' was considered to be 'different as it is a personal page'. In addition, the content representation was also different which according to KAS would require new 'algorithm'.

Development of the required system also required an understanding of the technology required to meet the information needs of the general public as well as their information-seeking behavior. NAZ reported that during the past year the team had had to carry out two design changes to take into consideration the current trend in technology, as is reported below:

EXCERPT 22

> We also did an assessment of the portals throughout the world such as Korea, UK, certain states in the US and leading ones such as Singapore… (and) map that against the trend in the market….people are using tablets, touch screen so we cannot design using the old way…In fact during the past year, we had two design changes during the process because of our observation of the trend.
>
> <div align="right">(NAZ, personal communication, August 2012)</div>

As underlined, the examples of the trend in the market involving use of the 'tablets and touch screen' are the technological consideration which the team had to consider when doing the portal/websites in general. The MCP project came at a time when these advances were widespread and the issues the client was facing were directly related to new technologies. Although these features might not have a direct bearing on the subject of template itself, the company's template was adjusted to take into account these considerations in terms of its content strategy to address current needs of technology for the benefit of the client. The content strategy encompassed elements such as the design

and design concepts, including design rationale as well as the content structure and how it was to be categorized and presented.

The extensive discussion about the template in the thesis is important to highlight the importance of preparing the template, as one of the writing processes involved in the construction of the URS report. The rhetorical situation around the construction of the URS suggests that a systematic approach to documentation was required in order to communicate information about the MCP portal and its various features clearly. The specific case on the design mentioned by NAZ above illustrates changing nature of projects because of the need to incorporate these advances in technology. The impact had been to produce requirement specifications that communicate these changes.

(d) Finalizing Structure of the URS Report for the MCP Project

Table 5.4 shows the overall structure of the URS report in terms of format to provide a general overview and understanding of its different sections. It is presented here in the thesis in its basic framework, not in full, for confidentiality purposes. Thus, the specific sub-sections as they appear in the actual document are not presented but will be included in the discussion where relevant in this chapter and in Chapter 6 where more detailed analysis of the structure will be dealt with.

Table 5.4: Overall Structure of the URS Report for the MCP Project

1.0   Introduction
    1.1   Purpose of document
    1.2   Scope of document
    1.3   Glossary & abbreviations
    1.4   Overview of the project

PART 1: USER REQUIREMENT SPECIFICATION

2.0   Requirement Study Methodology
    2.1   URS workshop
    2.2   Online Survey
    2.3   System Study
    2.4   Meeting with related agency
    2.5   Discussion and review (Internal & external)

3.0   Specific Requirements
    3.1   Target audience
    3.2   Content Structure Requirements
    3.3   Functional Requirements
    3.4   User interface requirements

PART 2: SYSTEM REQUIREMENT SPECIFICATION

APPENDICES

Looking at the above structure of the URS for the MCP project, the format appears to be different from the industry template as well as the company URS report template. The basic structure in terms of the format and sections appear to be in accordance to the original industry template (see Chapter 2, table 2.1) but with two main modification or adjustments. The first is in the overall format in that there are two main parts, namely Part 1, which is the User Requirement Specification and Part 2, which is the Systems Requirement Specification (SRS). This modification was only carried out for the particular MCP project due to specific circumstances pertaining to the client's demand, thus the resulting combined URS-SRS final report. However, as the study was focused on the URS report, only Part 1 is discussed in the thesis.

The second adjustment is in the addition of two different sections, namely section 2.0, which is the Requirement Study Methodology and sub-section 3.4 User Interface Requirement and Design Rationale within it (not shown in the above framework). A whole section on General Description specified in the company URS template was also taken out totally. Analyses of past URS report show that some of these sections, although not stipulated in the industry's template, had been quite consistent across four past project URS, including the MCP project. The discourse-based interview carried out in the study revealed some of the reasons for the different sections of the MCP project URS text. For instance, the requirement study methodology, referring to the activities conducted to study, discuss and review the portal/website requirements with the client, was reported to be an important section to include in the URS report as it detailed the various inquiries that lay the groundwork for the revamping of the portal/website (KAS, interview, April 24, 2012).

Aside from documentation purposes to give the audiences an insight into the work that was done, the specific addition had practical reasons to ensure transparency. According to KAS, clients had the tendency to change their requirements in the middle of the project, hence this section provided documentary evidence of what the client's initial requirements were and that these requirements had been documented and formally signed-off. Indeed, at the time of documenting the MCP project and planning for the URS, the team was dealing with the existing client's changing needs and requirements.

At one of the discussion sessions attended by members of the Business Consulting (BC) team, it was generally agreed by most members that the requirement study acted as 'proof' that the team 'had done their part' and therefore 'should not be faulted' if there

was any delay in the project as a result of the client's changing requirements (BC discussion group, 30 May, 2012). In addition, as the company was often looking to improve upon their requirement-gathering and documentation processes, details on the various data-gathering methods could be used as future reference point or improvement purposes (KAS, personal communication, April 25, 2012).

As for section 3.2 Content Structure Requirement, a comparison between the present URS for the MCP project and the industry template indicates that this is a specified section. However, in the case of the MCP project and a few other URS previously written for other projects (where websites and portals were concerned), this section could be distinctive in its details. It consisted of all the relevant information architecture (IA) diagrams of the different content categories – a visual and diagrammatical representation of the team's solutions captured in whole. As has been discussed previously in this chapter, based on the interview data, the IA was the company's own and seemed to be a distinctive feature of their project work and the URS report in comparison to other client companies.

It would be fair to say that given the primary importance of the IA, there was a need to make it a prominent feature of the URS report; aside from the fact that the IA diagrams communicate the content categories better. However, as the study did not make any comparison with URS of other companies with respect to the specific section, it must be acknowledged that this argument requires further documentary evidence as support. Nonetheless in retrospect, the interview feedback did indicate that these IA diagrams represented the team's design solution of restructuring the website, hence their value-added solutions responsive to the immediate need of the existing portal/website. These findings show that the URS text in terms of format and overall structure of the content

went through modifications in accordance to the project needs and client's interests. The variations seen in the URS text for the MCP project as well as past projects could be attributable to these needs or exigencies. The findings support Bremner's (2014) who found that the press release texts in his study went through different levels of modifications according to different needs and exigencies.

It is possible that inclusion of 'new' sections such as the User Interface Requirements and Design Rationale was required to address recent developments surrounding designs discussed previously. The Design Rationale is an interesting addition. It consisted of visual representations of the proposed website in the form of screenshots with written rationale in captions. According to KAS, the screenshots were the 'visualized output' important to the PD team in response to the client's preference for visuals over the more 'narrative' version of the designs and requirements. The same goes for the IA diagrams. However, while the IA had become the company's 'niche', the caption and rationale were new additions initiated by KAS and FAR, the creative designer and introduced into the URS report to become standard practice. KAS' earlier feedback on giving "extra information" and the company's mission of providing "value-added solutions" might explain the reason behind the addition. This finding is consistent with RGS, particularly the concept of situated cognition, where writers are known to use language or create texts strategically based on their understanding of the said genre (as well as intended users of the genre or text) and how it can be modified to achieve social ends most effectively. In the case of the URS for the MCP project, providing captions of design rationale within screenshots of the designs was an example of this strategic discursive choice.

It will be seen later that sometime after the URS report had been drafted, further adjustments needed to be made to the URS text as the document deliverable required by

the client was the Systems Requirement Specification (SRS) instead of the URS report, as is mentioned above. As this was stated in the contract and thus was legally binding, the team complied but in terms of the written documentation, KAS initiated some format modifications to combine both reports into one document deliverable for reasons which shall be discussed in a later section of the thesis. This is reflected in the template where the report was divided into two main parts, specifically Part 1 and Part 2 as shown in Table 5.1. What can be said at this point is that preparing the template was an important stage of the project and construction of the URS report because of the reasons discussed. At the Preamble stage, KAS as writer and members of his PD team had the structure of the URS report in mind while doing the necessary activities required for constructing the URS report. The second stage of the writing process saw the team having a confirmed format in place, with several confirmed content areas to fill in.

In summary, based on the findings thus far with respect to the use of template, project documentation at company A can be said to be rather formalized and structured. However, influences from the industry's conventions/norms and the community needs involving the client were nonetheless quite prominent and needed to be considered. In the case of the MCP project, these needs revolved around technological advances and the user's interaction with technology which influenced when and how the template was used. Both KAS and ANNE adapted the present client's template to suit the needs of the company while still maintaining the basic structure and covering the basic elements of projects involving portals.

This study has shown that the social action of customizing and adjusting of the template continued to be made not entirely because it was an existing norm for the team, but it was required to address the modern day needs of the client and address the need of

the MCP project URS report (Yates & Orlikowski, 2009). Looking at the above finding from the perspective of the RGS framework, derived from Miller's (1994) genre as social action, it can be argued that the URS text can be said to represent a genre with some textual regularities (pre-designed template) but through continued use in response to situations such as technological developments (the particular situations or "exigencies", according to some RGS scholars), has become "typified" and invites "typified symbolic actions" from relevant participants (Artemeva, 2008 p. 389). In the case of the study, these actions could refer to subsequent writers incorporating new ways of presenting the information on designs which in turn enabling understanding of the design requirements and the actions required to take the project up to the next level. Using the template allowed the writer to adjust the format and add content but still working within a framework or formalized structure that is acceptable to the authority/company.

5.3.2.2 Establishing the Basis for the URS Content and Features

Once the formalities to do with template and industry guidelines aside, rather than simply taking whatever requirements laid out by the client and produce a URS report, the team found it necessary to delve deeper into the project in terms of its aims, objectives and aspirations, not just at the level of the immediate client (ICT Main). The comment below illustrates this point:

EXCERPT 23

> URS is our own. Many companies go straight to the SRS but for us we want
> participation from customer; to put that into paper and they understand that
> knowledge. Because some other companies they use SRS which is very
> technical. So we pass to someone like they don't care much. They don't
> understand what it is. It's Company A's value, Company A's brand.
>
> (KAS, personal communication, Nov 30, 2015)

As the underlined phrases suggest, the approach taken by the PD team was to gain access to the actual user/stakeholders to build understanding of the needs of the portal in relation to its outcome. It was reported that the different stakeholders comprised the main client and its network of agencies and most importantly perhaps, the public user. The URS report, as a text which documented all the requirements and solutions, would have to be written clearly and thoroughly enough with the aim of informing the stakeholders of the requirements and increasing their level of confidence in the project.

Note that previous discussion on the kick-off stage of the project showed that the PD team became informed of the need to arrange suitable activities in response to project needs relating to the client's original requirements. It can be deduced from this finding that because the client's original requirements were basic 'simple' ones, yet the project was a big project involving many stakeholders with direct interest in the portal, it was necessary for the PD team to consider various perspectives of the clientele, further define the client's issues with the portal and gain further insight into the user requirements. Sections 5.3.2.3 onwards illustrate what these requirement activities were, the nature of the activities and the resulting outcome as it is relevant to the writing of the URS report.

5.3.2.3 Survey of Internet Use and Relevant Research Activities

Based on the findings obtained thus far, it can be said that ICT Main (the main client) shared the PD team's aims for the project in improving the existing portal thus seemed committed to the 'user' aspect of the project. To that effect, they had agreed to the following:

- to conduct a survey via its existing portal and Facebook on the public's use of the internet in general and the portal specifically

- to conduct a one-day workshop to discuss suggestions for improving the MCP portal

- To improve the existing portal based on the results of MDEC's assessment and the 2011 website assessment

It is not clear if the above survey was initiated by the vendor/PD team or the client or derived from a collective decision between the team and the client (the details of the meeting could not be disclosed due to confidentiality reasons). Nonetheless the communication that transpired was an indication of a close cooperation between the two towards achieving similar objective of improving the outcome of the portal for the general public.

Textual data showing communication among project members, derived from a review of November 2011 meeting notes, suggests that a basic understanding was indeed formed between Company A and ICT Main (the client) pertaining to the project undertakings. The study notes a statement given by ICT Main's MCP Project Director which said that 'all members must forge strategic collaboration between one another toward implementing effective program/activity' (ICT Main meeting notes, 2011). As it was a statement made at a meeting discussing the MCP project, it can be taken to illustrate the client's commitment to the project and useful starting point for pursuing the company's practices of doing the requirement activity, and subsequently the writing of the URS report. It is also particularly illuminating to the study that the client's objective of a strategic collaboration paralleled the company's philosophy.

Going back to the survey, results show that about half of the respondents were able to perform tasks using the portal but there were some issues. Some of these included difficulties navigating the site(s) and report of feeling 'lost' and problem finding 'complete' and 'comprehensive' information. Some services were also found to be irrelevant, among others. Suggestions for improvement included creating better web

design, making the site(s) more user-friendly, providing more structured contents, and creating personalized service based on profiling.

These findings attested to the initial assessments of the team and what the client had found to be lacking. Based on this knowledge, including an awareness of the client's concerns regarding the costs involved in maintaining the existing portal, the PD team could already sum up what their main tasks would be –consolidation of two portals into one, improvement of the site in terms of public usage and cost reduction (CEO, personal communication, 2013). Further inquiries into the problems were needed, which the PD team did via a formal requirement study (RQ study) which took place in the middle of October involving a workshop among various stakeholders (see section on Requirement Study).

The PD team also undertook its own studies about six months before the workshop by carrying out internal assessments of the portal and other inquiries to capture data that could be used in the discussions with internal stakeholders at the planned workshop. Many of these activities were already carried out during the tender award stage. It was mentioned that the outcome of these activities went towards producing the usability documents (see section for discussion of this) with the possibility of including these as the URS report content. At this point in time, these 'research activities' prepared the team members for the planned workshop in terms of solution ideas and useful discussion points with which to bring to the discussion table later. Some of the activities included:

- Benchmark comparative study to identify best practices for portals worldwide
- MCP usability review & experts review
- Study of websites and processes of transactions

- Study of MCP Design Principles
- Detailed study of the present portal (MCP)
- Study of the common features of web 2.0
- Detailed navigation research
- Gap analysis of requirement checklist vs "wish list"
- Online services research of the MCP against award-winning websites
- Site assessments

It is interesting to see at this stage of the URS construction that all these various inquiries and activities were derived from a mutual understanding of the need to investigate further towards improving the portal. The communication that took place during this stage prompted the various "research" activities necessary to understand the needs of the project better. Assuming that the client initiated the survey, the two key players therefore played important roles during this initial stage of the project in establishing aspects of the portal requiring attention and solutions.

The PD team took on their advisory role as expert vendors, as demonstrated by the efforts taken to conduct preliminary study of the portal and organize the workshop. However, it needs to be mentioned here that the portal enhancement was to be done within certain guidelines, which in this case was according to MDEC's assessments and guidelines. This implies that the PD team would be working on an existing portal, not an entirely new one, thus was constrained by the existing guidelines and existing structure and system, in a technical sense. How is all this relevant to the writing of the URS report?

Notwithstanding the usefulness of the research activities to the team in getting the required data to formulate solutions and address the client's requirements, this particular stage of the project warrant a place in the discussion of writing processes on the basis that the research activities generated and justified the contents of the URS report. It provides

the thesis with an understanding of the discursive dynamics behind the construction of the report, perhaps the developing drafts of the report too. An examination of various project documents through tracing the events in which they were produced and utilized show that several main outputs were generated as a result of the internet survey, benchmarking exercises and so forth. These include the survey results, usability review report and benchmarking reports which allowed key players to carry out certain actions that took the project to the next level. For instance, the benchmarking activities and website analysis validated the survey findings further and reconfirmed the issues which needed to be resolved. Some of these outputs were written up as power point slides ready to be presented and discussed at various points in the project such as at the planned workshop. The usability review of the existing portal was taken up and shared with the client during the workshop. NAZ had this to say:

EXCERPT 24

> Our role is we studied the previous site to identify from the internal stakeholders and public survey what they think, what it lacks. We had to be brutally honest to the client. They have to accept. We shared that with them. We also did an assessment of the portals throughout the world such as Korea, UK, Singapore and certain states in US as the leading ones.
>
> (NAZ, personal communication, Nov 25, 2015)

Probably the most pertinent of these activities in relation to the writing process (in general) is SAL's benchmark comparative study on best practices which was used to further identify relevant criteria for portal features as points of discussion during the workshop, and later found to be appropriate and incorporated into the URS report. Likewise, the survey results were incorporated into the URS report in the Requirement Study Methodology based on discussions carried out in a requirement gathering activity or study, which will be discussed in the next section.

5.3.2.4 Requirement Study (RQ Study)

Previous sections in this chapter have looked at the review of tender document and template as practices taking place in the Preamble stage (Stage 1), and the survey and internal research activities in Stage 2 as activities in the construction of the URS report. The next phase is the Requirement Study (henceforth known as RQ study), which is the main practice or a major part of IT development projects at the company and the main basis for the URS report. The CEO explains the relation between the RQ study and the URS report:

EXCERPT 25

> The URS is the result of a series of activities with the clients – requirement gathering and analysis involving interview sessions, workshop reports, surveys and others. The purpose is to document the client's needs and requirements. During this time the proposed information architecture (IA) and designs are produced.
>
> (NAZ, personal communication, Nov 25, 2012)

As the MCP project involved multiple stakeholders, the RQ study was seen to be necessary in order to accommodate various needs and interests of the stakeholders. It can be said that the RQ study provided the foundation for all subsequent work on the project, including the construction of the URS by allowing the PD team to further identify the exact nature of the client's problems and needs, conduct the necessary investigation, analysis and discussion of the portal in relation to current business and technical environments and, determine the portal requirements in regard to its functions and contents.

The formal RQ study was held as a workshop calling representatives from ICT Main, the agencies and other relevant stakeholders. The main aims were to 'share' the analysis and findings obtained from the survey and gather opinion from internal stakeholders what they thought of the portal. Many of these stakeholders were IT specialists and practitioners themselves thus the workshop was also looking to obtain gather users' requirements pertaining to the "usability" and "functionality" of the portal and to propose solutions in relation to the functions and contents of the portal (Workshop Overview presentation, 2011). As representatives of the various agencies, they had direct interest in the portal as they served the general public , therefore would know exactly was required of the portal. The key players involved in the workshop included members of the PD team, a master facilitator, representative(s) from ICT Main, representatives of the various agencies, and members of the project team such as the project managers.

Findings suggests that the communication and negotiation which took place between the PD team (vendor) and the client show that the construction of the URS was 'participative' in nature, which is consistent with previous study looking into the IT industry and processes of writing (Rude, 2009, Bremner, 2014 p. 181). The interactions and circulation of knowledge taking place during the RQ study sessions allowed the PD team and the client to achieve the following:

- establish common ground with respect to the problem and the need for the portal enhancement

- obtain valuable input that confirmed the requirements of the portal identified earlier and to identify potential solutions

- generate a written output encompassing all input and suggestions required to write the URS report

(a)   Establishing common ground and the need for the portal enhancement

With reference to the client's interest in improving the services the portal provided to the public, a requirement study for the MCP project was carried out involving workshop sessions with the main client and representatives of its various agencies. The MCP Workshop was basically a platform to interact and share ideas among participants, to voice opinion and collectively agree on appropriate requirements of the portal. The PD team had organized the workshop to include several activities which included the "setting of goals" to invite participants to identify website direction, analysis of the MCP portal against best practices in order to get participants to identify the features of the MCP portal, and analysis of existing portal to identify features that needed to be "retained, removed and enhanced" (MCP Setting Goals and Benchmark Worksheets, 2011). All discussions during the workshop made use of pre-prepared worksheets containing points of discussion derived from earlier studies. For example, the criteria on which the specific features were based were compiled from detailed study of websites and best practices carried out in May of the same year.

It was clear to the participants that the survey results when mapped against opinions gathered on the goals of a portal indicated that the issues expressed by the public as well as those observed by the client were important issues to be resolved. For instance, the analysis of the navigation features and content and tasks of the existing portal pointed to a user-centric website. When this was mapped against the participants' ideas on providing personalized contents, the issues raised by the public users had a good basis. An examination of the different group's worksheets showed similarities in proposed features of the portal but differed slightly such as what they liked to see as the graphical user interface. There was also drastic suggestion like a total revamp of the portal, which was opened for discussion but declined based on 'more balanced'

views of other participants. The PD team's role in the sessions was to facilitate the exchange of ideas among the participants. According to KAS, the worksheets helped as they pushed participants to give ideas compared to verbal only participation. As some of the participants were also experienced IT specialists, their ideas helped confirmed initial assessments and the need for the portal and its various requirements.

(b)   Confirming all Requirements of the portal and Identifying Potential Solutions

It has been mentioned that the group discussions and interactions helped to confirm the requirements identified earlier. However, there were also new ideas and demands which the PD team had to consider either as solutions or new requirements. For instance, the presentation of the IA to the participants invited further responses from the workshop participants which needed to be addresses. For example, one suggestion was to have a separate content category for "Government"; which meant an adjustment to the original content which the PD team had already segregated according to user types. When asked about this during the interview, KAS had the following to say:

EXCERPT 26

…we have done our study and we have agreed with the agency the portal should have segregated based on user type... (Isn't) government (included as) the citizen? But they insist... then we have to follow accordingly. (But) this one is totally different from the requirement document. Totally a new requirement so we had to take care of that.

(KAS, personal communication, April 4, 2012)

SHAS who agreed with KAS stated that although the new suggestion was not a bad idea, it was however a totally new requirement (SHAS, interview, 2012; KAS,

interview, 2012). Due to the team's commitment to the client, the new category was accepted and included in the content categories. The introduction of new ideas during the workshop also required fresh investigations into aspects of portal which originally was not included as a requirement or solutions. SHAS explains this point further:

EXCERPT 27

> I go to ask about mobile version and I ask "puan, if personal page macam mana? (puan, how would you like your personal page to be?). She said I nak personal page I macam google (I want my personal page to be like google)". That's all, but we will need to investigate further about google features …and ask programmer if this can be done.
>
> (SHAS, personal communication, May 25, 2012)

In cases like the above when there was an expressed need from one of the clients or stakeholders, it became important for the PD team to take that up for discussion, in the interest of the client. In any case, once the feature was accepted, it would have to be properly processed, that is described, analyzed and translated into solution, where applicable, and documented in the URS report. As a matter of urgency, given the method involving simultaneous development of the system with documentation utilized by the project team for the MCP portal, the required written notes or flow diagram would need to be produced, reported in the systems requirement report (SRS) and developed (coded). These notes and flow diagram need not necessarily be produced at the RQ study session, but the immediate practical application of the new client requirement(s) required immediate response from the team. It is not clear whether agreement was given on the day of the workshop itself or discussed among the PD team following the workshop. Nonetheless, it did seem that with the particular demand described by SHAS above, it was accepted on the basis that mobile versions were

much sought after and necessary, thus could not be sidelined if the PD team/company wished to appear updated and current. However, the feature was included in the second release of the project so will not be covered in the thesis.

(c)   Generating Written Output for Writing the URS report

The outcome of the discussions during the workshop provided KAS and the PD team members with valuable feedback which they mapped out across the various inquiries and documented in an MCP Workshop Summary of Findings. The feedback could be categorized into 1) the larger, general aims of the portal and its characteristics and 2) more specific features of the portal based on specific criteria. Table 5.5 shows excerpts of the findings obtained from the MCP Workshop Summary of Findings:

Table 5.5: MCP Workshop Summary of Findings

General Aims of Portal	Extract of details	Specific features	Extract of details
Purpose	To act as information disseminator to the public To act as platform for communication	Navigation	Mega menus; popular topic; social media; mobile application
Objectives	End-to-end services/one-stop center	Content and Tasks	User-centric; Alert or announcement
Goals	To function as virtual office To become platform for online services To provide personalized information and services	Unique features	Web assistance; Google map
Target audience	Various groups including businesses & residence	Graphical User Interface	Attractive, interactive and interesting
Content/specific tasks	Online services of various agencies; personalized content based on target groups	-	
Portal Characteristics	User-centric; personalized contents; user-friendly; easy navigation; multi-channel	-	
Unique features	Personal features; timely information; social networking	-	

(adapted with permission from MCP Workshop Findings and Analysis, 2011 p 4-9)

It can be seen from the summary extracts that the interest was high towards fulfilling the end-user's needs. The social contexts in which the URS activities were undertaken can be seen as a "situated call for efforts" (Swarts, 2016) towards finding ways to enable people/end-users to benefit from the proposed portal website in terms of their information needs. The tender document produced by the client as well as feedback in the workshops highlighted the need for a "user-centric" and "user friendly" website that contain "informative and personalized contents". In other words, the websites should be able to serve the needs of the 'online community'. These different features formed some of the requirements for the new website which the PD team needed to work on. In his analyses, KAS found that there was a gap between what the client offered and what the public needed. His team's assessment of the current website seemed to support this argument as the website was found to be "too focused on the client" (KAS, personal communication, 2012):

EXCERPT 28

> What can be improved for me in term of content? they…their style is still like if you go to their website it's all about their profile. It's not what (the people, as user) want to see. (Now) it's like the client has changed a bit. The content is more like what (users) want to find when they go to the website; what kind of service that they offer.
>
> (KAS, personal communication, Nov 5, 2015)

The comment made by KAS is an important one as it suggests that the focus of the project was on finding good content strategy to support the information needs of the user. What is pertinent here is not so much about a good content fit as that can be the task of any portal development. It is the fact that the PD team was responding to new exigencies surrounding the portal; that is the client's fresh approach to the portal/websites. The objectives now were not just confined solely to the client's

visibility or business growth but were socially motivated towards improving the outcome of the portal in terms of better advantages for the public user. This shared intent could already be witnessed through participation at the workshop and collective contribution to the proposed URS.

Based on the RQ study of the problems, the focus therefore was on the 'look and feel' of the portal and websites to ensure that content strategy was effective, the contents complete and informative and online services relevant and popular. The team was now presented with the task of ensuring that the newly-enhanced portal and relevant websites had all three elements: the right content, availability of online resources and accessible to the public, and a functional capable website (Interview, SHAS, Business Analyst, 2012). To that effect, the team's solution was to categorize the portal website based on user as mentioned above. This determined how the URS report would be structured. Another task was to describe these requirements and work out how best to present the information so that the URS would be clear to the client and others.

Therefore, once the RQ study had been completed, all findings and feedback were re-analyzed in order to identify solutions based on the agreed upon requirements. A short URS Findings and Analysis write-up was produced that mapped out various findings obtained from the tender document, the survey results and the workshop to the proposed URS report. Figure 5.2 provides a screenshot of one of the slides:

	Tender	Survey	Workshop	Proposed URS
Target Audience	• "Cradle to Grave" concept with content categories (topics) as secondary navigation	• Majority respondents between 20-40 yrs old, young executives • Behaviour: find info & news, social networking, online transactions • User of ( ) to find info about ( ), find job vacancy	• General public categorised by main user groups eg residents, business, with more sub-user categories eg students, youth, etc	• The primary navigation to be: Citizen / Business / Non-citizen / Government with secondary navigation being content categories (topics) for each target user group. Alternative navigation will be sub-user groups arranged according to lifecycle/age group
Website Direction	• User centric, user-friendly	• Citizen centric, personalised & relevant contents & services	• User-friendly, informative, personalised contents, online community	• User-friendly (max 3 clicks to find info), user-centric (targeted content categorisation), personalised contents & services (based on user groups & registered users profile), build community

Figure 5.2: Screenshot of Slides on URS Findings and Analysis

The above extract is an interesting example of the systematic way in which the portal requirements and associated solutions were identified. As illustrated on the slide, the details grouped under Proposed URS are examples of the PD team's solutions to the portal based on the client's requirements. It is understood that these details were going to be included in the URS. As one of the issues behind the portal revamp had been the declining number of visitors to the site and public use of the various services available, these solutions could potentially improve the improve the portal as requested by the client and in the long run improve the client's site rankings and visibility online. As to how the information was going to be presented would be entirely up to the PD team.

Before going further, it needs to be mentioned here that the details of the RQ study given here are necessary to illustrate two main things: 1) that the whole process of the requirement study itself was in tandem with the project cycle and the SDLC (see previous discussions this chapter) and 2) that various activities carried out had relevance to the URS report in terms of the details required. In other words, the information gathered

during the workshop was taken up to fill in the relevant sections in the URS text, for instance in the Requirements and the requirement methodology sections. In simpler terms, the foundation for the URS report was already being built through the RQ study and its accompanying activities.

This study has shown that the context of the URS construction is integral to the shaping of the URS report; and vice versa. Specifically, the RQ study as well as various text materials, helped shape the URS report, but doing the URS report also necessitated or constructed the RQ study. This finding thus contributes to the notion of New Rhetoric perspective of "genre as social action" (Miller, 1984; Schryer, 2012; Pare, 2015), in particular the emphasis on the relation between text and context. It is expected that changing nature of projects and clients' needs, as often argued by KAS and other members of the team, would cause some changes in practices, even to the textual outcome of these practices. Already, the customized template was being adjusted as and when new needs emerged. A case in point is the section on requirement Methodology which the PD team had included as it defined and justified the groundwork behind the progression of the project to the next level.

In summary, the RQ study illustrates the PD team's efforts at attending to the demands of the client and at improving the outcome of the portal. The RQ study, the workshop and benchmarking activities, presented a platform for collaboration among participants and the team to work on objectives of improving the outcome of the portal for users. Here one can see knowledge and expertise distributed across the URS activities and RQ study participants, and thus in agreement with findings of previous studies (Cuppan and Bernhardt, 2012; Swarts, 2017).

The idea around mutual exchange of and sharing of ideas could also possibly reflect the company's philosophy centered on value/added value. One of the themes uncovered from the interviews is inculcation of the company's philosophy often realized in the interactions between the client and the PD team as well as the other participants. The efforts taken to enquire further about the problem, to identify target needs of the portal enhancement and unpacking desired features of the portal website illustrate the company's culture of 'sharing' and working through different ideas together. In fact, the URS report itself could be another tangible means of espousing these values.

Based on the project objective, the assessment of the current website, the outcome of the research activities, the workshop feedback and discussion and an understanding of the client's interest and goals, the PD team proceeded to form a plan to restructure the site in the interest of the public user. The following excerpt illustrates this point:

EXCERPT 29

> …definitely we will refer to the current website and also from the workshop. I always put myself as the usability expert. What kind of solution that we want to provide so for this case, more or less we know already because…I would say as the user of the existing website ourselves, we know what we want because based on the current site we cannot find information. So me and my team re-structure the site based on what public user want in a website.
>
> (KAS, personal communication, May 25, 2012)

Earlier in a previous interview with him, KAS stated that his plan was to restructure the site "with a new concept" rather than just "revamping" to add "value" to the project outcome (KAS, interview, May 7, 2012). KAS also made an interesting comment in relation to his position as usability expert and user of the website, as underlined in excerpt

29. It can be said that by putting himself in the position of user, he was sharing experiences and interest in the portal/website on both professional and personal level. These observations could attest to the values held by the team towards achieving the intended project outcome.

As far as the writing processes involved in the construction of the URS report are concerned, Gunnarsson's (2009) 'idea generation stage' is applicable but in the context of the present study would need to be re-articulated. In this study, findings show that this earlier stage involved more than generation of ideas and formulation of the formal URS contents but the actual, formal production of the URS Content. Therefore, this present study has named an additional process/stage of URS construction as the Production and Validation of the URS Content.

5.3.3 Production and Verification of the URS Content Stage

It has been seen that the construction of the URS involved much background work that consisted of various practices and activities. However, what came out as being particularly prominent are the textual outcomes of the activities. There were numerous texts and documents that were not of the URS per se but were related and became part of the URS either physically or conceptually. These were documents which Spinuzzi (2004 p. 3) called "interrelated genres" that can either be formal or informal but "interact with each other in particular settings". Swarts (2016 p. 413) in his study of composing practices using mobile network found that the composing process was 'coordinated through various documents'. The present study uncovered a similar finding regarding the evolving project. The writing of the URS report was situated in the project being documented where information in written and visual texts as outcome from the different RQ study

activities were shared throughout the team members for purposes of identifying, redefining and confirming the portal requirements.

These texts such as the workshop report, the benchmarking report, including many others not discussed previously such as concept paper and diagrams, various prototypes and samples, workshop reports, benchmark comparative study, the findings and analysis reports were "attendant" to the URS, but nonetheless important for their roles in consolidating the information required for identifying the portal requirements, and subsequently going into the different parts of the URS text. In Stage 3 of the URS construction, the team members were taking these texts to determine the portal requirements for certain and produce usability documents. These documents were the IA diagram, wireframe, and designs, as required in the URS template.

Referred to by the team as the 'visualized output', these materials were in fact given to the client for review and formalized, rather than serving as just reference texts. As the IA and wireframe as well as the requirements ultimately were going to the technical team, this stage of the URS construction involved both internal and external verification. Internal verification was done by ANNE. External verification was done by the client (KAS, interview, April 4, 2012). These outputs were basically representation of requirements in visual form that illustrated the 'look and feel' of the portal. The IA diagrams and the design concepts were already created by SAL, KAS and FAR, the web designer, during the award and tender stage, but once the RQ study had been completed, these were revised and updated to be placed in the URS report document. Information from these documents were taken up or reformulated or re-represented to produce the usability documents required for the URS and the project itself.

From this point on, communication between the client and the PD team was aimed at confirming the requirements and negotiating the designs, the IA and the solutions proposed by the team as the PD team came closer to the writing/editing of the URS report. Thus, one can see versions of designs and IA as well as prototypes being produced as and when they went through the reviews, internally, and most importantly externally with the client. The whole process sees the different roles that different teams played in helping to construct the URS text. The different roles and tasks played by the different teams were instrumental towards producing the content of the intended URS text. However, findings of this study show that rather than merely supporting and informing the activity, the teams became the subject directly acting upon the URS report; thus, can be considered as one of the main "subjects", besides the writer, KAS. For example, the task of generating the designs and the IA was done by the usability team, led by SHAS. The wireframe and IA were done by SAL, who were in both the usability and technical teams. At different points during the project, SHAS would be interacting with the client to discuss and negotiate requirements, after which she would return to discuss the feasibility of the requirements with SAL and AZZ.

FAR, who was the website designer, belonged to the usability team thus would conduct review sessions with KAS on the proposed designs. It was during these sessions that ideas on providing design rationale were brought up, discussed and implemented. As SAL too represented the technical (TC) team, his IA and wireframe designs were reviewed by both KAS and ANNE. The TC team led by ANNE provided expert opinion on the feasibility of the various designs from a technical point of view. In fact, their input was essential to the design team as whatever was designed needed to be checked against available technologies and expertise. A few times during the project SHAS had had to go back to the client to say that some elements of the portal could not be included due to technical

reasons. As SHAS put it simply, "the client might want this and this and we can design as we like, but if the TC team can't do it then we have to change" (SHAS, personal communication, 2012).

There was also a cycle of client review and revision of the diagrams and design concepts. Throughout the process, constant dialogue with the client was carried out to ensure that the proposed designs and other solutions were meeting the client's requirement for the desired portal. An examination of the Design file provided by KAS for the study showed the creation of a number of different designs ranging from 1st design concepts until 3rd design concepts. Likewise, the IA went through several versions as well before finalizing. Graham and Whalen (2008, p. 75) referred to such process as "proof cycle" involving the client. This process apparently had started earlier during the Preamble stage where the proposed IAs were subjected to a few reviews and revision. Tracing the documents vis-à-vis the chain of events conducted in the study revealed that during the first stage, the IAs itself went through two versions, meaning two revisions based on feedback from the client.

How is all this relevant to the URS report? One is that all the above texts in their written and visual forms were verified and checked and given to KAS to be compiled and included formally in the URS report. In other words, these different material resources all culminated into the writing of the first draft of the URS. According to KAS, the URS formalized the requirements to fulfill the documentation component of project work. This is the normal pattern of activity followed toward documenting the proposed solutions to the client. Written texts and documents derived from all the different materials form an established genre system that directed the team members' actions.

As mentioned previously in the earlier part of this chapter, the list of "tools" called upon as "mediational means" is not exhaustive, as has been revealed here. At this point, the "genre system" could be included as an important mediational means towards constructing the URS report, although given its prominence in the particular context of the company's practices, it could also be placed elsewhere as one of the other elements of the AS. The study sees the placement of the genre system as encompassing all other tools and is contingent on specific projects or specific writing situation. This argument however requires further investigation which fell beyond the scope of the study.

Second, like the other texts produced during the RQ study sessions, the IA, wireframe and the proposed designs allowed the client and team members to "visualize" the portal website in question and assess it for usability and functionality. Thus, specific to the context of IT development project, the visuals played important roles. In form, they are a representation of the content (that is the website requirement or solution features), but in terms of function, they are social artifacts used by the relevant stakeholders to see how the actual product would look like and to communicate meaningfully about the portal and system being designed or revamped.

These visuals also indicate another important aspect of the URS report text. As they were to be included in the text, it can be said that the URS demonstrates a hybrid construction of both written and visual forms of the requirements. According to SHAS, the client preferred the visual forms over prose as "they could see exactly what the website would look like". Despite this practical need, there is, however, an alternative interpretation in relation to the widespread use of visuals or diagrammatic representations of the content.

… They will question 'what does it mean?' *Dia akan* (They will) question '*apa maksud you dengan this statement*?' (what do you mean by this statement?) That's why we translate into wireframe so that (it) will represent the visualized input so they can understand.

(KAS, personal communication, April 25, 2012)

The comment given by KAS above indicates that the choice or strategies for using visual representations of the content (the requirements) could also be attributed to language issue where use of visuals and diagrams simply provided better clarity of information as opposed to written texts. The underlined phrases, in particular 'they will question…' and 'will translate into wireframe so… they can understand', clearly suggest this to be the case. Given the local context where participants were non-native speakers and writers of English, this recourse from textual to visual is understandable. In relation to further queries regarding language use in the report(s), NAZ gave the following response:

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…writing skills in English goes to the ability to correctly produce the report in such a way that it doesn't leave you with ambiguous statement that they translate it differently. This is where when we say about the URS earlier…how you use the words in the report we try not to have ambiguous or grey areas because the problem will come when you do testing later.

(NAZ, personal communication, April 10, 2012)

The above comment suggest that the use of visuals helped prevent ambiguities associated with inaccurate use of words or sentence construction which could be critical to the project in terms of development and testing, as indicated by the underlined phrase 'the problem when you do testing' in the last line of excerpt 30 above. In fact, further

work on the project after the URS report was completed sees increased use of slides to present various ideas and proposition in relation to 'Release 2' of the project involving enhancement of the portal features. This phase of the MCP project was not covered in the present study. It is also interesting in the above excerpt that NAZ mentioned the use of words in the report which suggest that language use was a matter of concern besides content.

All in all, stages 1 and 2 of the writing processes leading to the URS construction can be said to be extensive, both in the communicative exchanges (interactions and negotiations, discussions, meetings) between the team and the client as well as the production of the required texts or documents. The processes involved in stages 1 and 2 including documents/texts produced and used throughout the first two stages is illustrated in Figure 5.3:
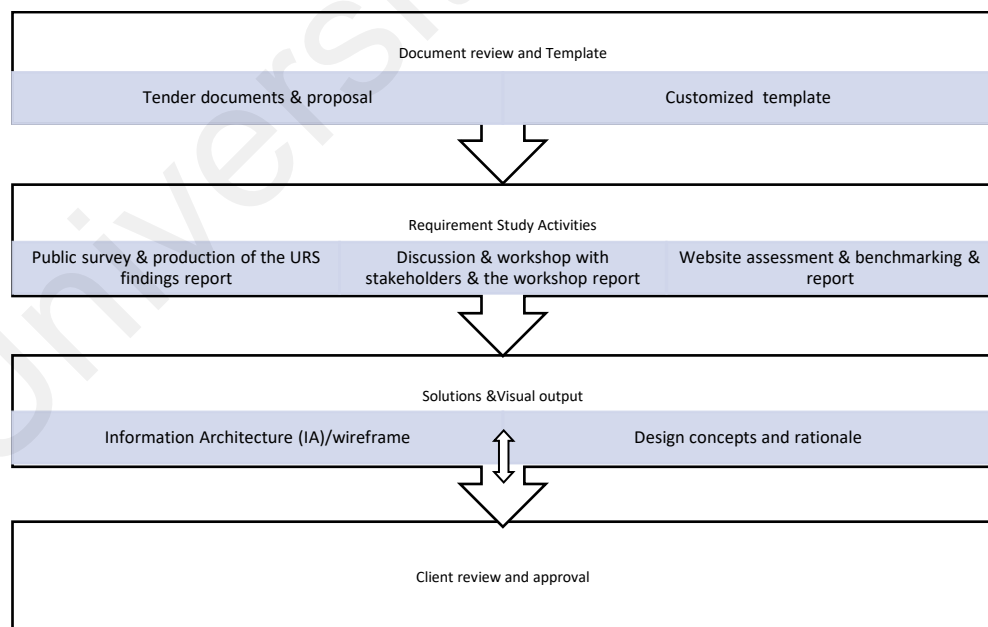

Figure 5.3: Stages 1 And 2 of the URS Writing Processes

5.3.4 The Editing Stage

The editing stage of the URS report uncovered in this present study appeared similar in nature to the process Gunnarsson's (2009 p. 134) described in her study of legal writing, which involved taking the written materials/documents prepared earlier to "an adequate text form". In the case of the study, this "text form" can be said to be the URS report template consisting of the different sections already in place or pre-specified on the company's customized template (see template this chapter). It is not quite clear when the editing process took place but feedback from KAS suggests that it was done after all contents had been produced and approved in stages 1 and 2. For the purpose of discussion in the thesis, the editing stage will be referred to as the writing process and used interchangeably to indicate the actual writing of the URS as in putting pen to paper.

It is evident from previous discussions that the construction of the URS took place before the actual drafting/writing of the text in its formal sense. Each of the stages produced specific output leading to the drafting of the URS text. NAZ's feedback regarding the flow of activity leading to the URS report further supports this finding:

EXCERPT 32

> The purpose (of the URS) is to document the client's needs and requirements. During this time the proposed information architecture (IA) and designs are produced. It then goes through a process of validation with the technical team. It also goes through drafts…clients may not sign off at first draft as there can be revisions. Once signed off, the development team proceeds with coding. <u>Their work is based on the written URS report</u>."
>
> (NAZ, personal communication, May 8, 2012)

What is also an important point to note in relation to the above comment is the reference (see underlined) made to the development team (coders) and how their work in relation to developing the required system was connected to the URS text. This is

indicative of the importance of a clearly written URS text. At this stage of the writing process, KAS basically had most of the information required to write the report obtained from various sources such as the tender document, usability document, the workshop report, the URS findings and summary and so forth. Generally, writing of the URS report began with the pre-prepared template to comply with standards and to thoroughly address the client's requirements. KAS saw the task simply as 'filling in' the required information, that is the contents of the report in the relevant sections of the URS texts, such as designs, progressively as and when he obtained them from his team members.

With the MCP project, apart from project delay, shorter timeline, and new development methods that affected the documentation process (FAM, interview, May, 2012), the PD team was dealing with newer features and content representation, unlike previous URS reports where the content categories were said to be quite 'standard'. KAS provided the following comment regarding the URS text:

EXCERPT 33

> MCP is a mix of old and new. Log-in is standard, Search is standard. Mypage is different as there are different features added like personal page. Content representation is different. We want to sort the content based on popularity so they (the programmer) need to write an algorithm to show which content is popular and how it should be sorted – something they have to think about – to write the code. <u>Our challenge is to write those requirements so customers can understand; the developer can understand, so… (language) in between. The layman term….</u>
>
> (KAS, personal communication, April 4, 2012)

It can be understood from the above comment that the need now was to write about both standard and new features/requirements, and as the underlined phrase suggests, writing the text or 'putting the different information together' (as KAS described it)

needed to be done in ways that could be understood by all the different audiences. His comments can be related to NAZ's comment earlier found in excerpt 30. It can be argued at this point that the editing/writing of the report was carried out based on the awareness of the need to clearly communicate the content and ideas.

As both the business and technical aspects of the portal needed to be described, two main teams were involved in writing the report. These were the Business Consulting team led by KAS and the Technical team led by ANNE who worked on the drafts in terms of producing and revising them. Due to the short project timeline, therefore a much shorter time frame within which to deliver the report, the main review of the drafts was carried out by KAS to expedite the writing process given his experience. However, the drafts were also subscribed to a process of 'peer reviews" involving members of the project development (PD) team, as contributors to the report, working in smaller teams on the different parts of the report.

Table 5.6 lists out the main players involved in the writing of the URS report in relation to the MCP project. As mentioned, the writer of the report as well as the contributors were all members of the PD team, but during the writing process, each person assumed the role of subject matter experts based on their specializations and role at the company, namely usability, technical or design. During the writing process, each team was responsible for different sections or parts of the URS report, or certain content/item of the project/document like the IA diagram/website blueprint, the flow structure, the various requirements specified according to categories or modules as well as the various sample designs. These were outputs prepared beforehand, derived from the previous activities, communicative exchanges and negotiations, and verified by the client during Stages 2 and 3 of the URS construction. However, features such as designs of the website were

perhaps continuously being updated as the smaller teams worked separately to refine and revise the outputs.

Table 5.6: Main Players in the Writing Process

Persons	Team	Roles Division
KAS	Head of Business Consulting & Usability	Main writer & reviewer Usability & design Format & layout
ANNE	Head of technical	Co-writer & technical The technical aspects such as the IA; overall language and content features
SHAS	Usability team lead	Usability & design
SAL	Usability & Technical	Usability & Information Architecture (IA)/website blueprint
AZZ	Usability & Technical	Usability & Information Architecture (IA)/website blueprint
JAZ	Usability	Usability & design
FAR	Designer team	Website design, creative brief & rationale

Therefore, based on the input from KAS, the general or skeletal framework or procedure of the editing/writing process can be described as Draft + peer review + main review as follows:

1) Draft 1: KAS – for placing all required contents in the different sections of the URS report depending on what were available to him at any one point in time during the editing stage/writing process.

2) Draft 2: Peer review; ANNE, SAL & AZZ – for the IA/website blueprint and wireframe and the relevant flow structure/ database structure for the SRS section of the combined report.

3) Draft 3: Peer review; SHAS & FAR – for usability and design.

4) Main review: ANNE – for content, layout and language

It needs to be mentioned here that the line between one draft or step to another is not clear-cut as there was some overlap but the various exchanges taking place among the smaller teams of experts above occurred in a similar fashion. For instance, ANNE was also working to produce the technical details of the report with her own team of information architects and developer, in terms of seeing to whether the requirements were achievable based on the technology available or the capability of the technical team. SHAS was often on site with the client to verify most of the requirements and various solutions, but she too was at the same time working with KAS and her own team of content writer and designer, among others. The practice was following the requirement study, these teams would meet to further to study, revise, redefine and, if applicable, review new requirements towards producing the required written and visual texts. These will then be reviewed by KAS.

His task at this point was to see if the written or visual outputs (thus the solutions) were meeting the requirements and were designed according to specified guidelines. If not, or there were other visible errors in format, language or design, he would dictate or suggest changing, revise or improve before the written and visual outputs were included into the URS final draft. It is possible that the smaller teams consulted with the client again and negotiated certain items at different points in time after the workshop, but this could not be determined for certain. But all in all, it is apparent that these teams were working within their own activity systems, with their own team members, outside the context of the formal writing and editing stage of the URS report. What is also evident here is that the editing/writing processes were similar in fashion to the overall bigger process of the URS construction in terms of its cyclical, recursive and dynamic nature. The following interview feedback from SAL exemplifies some of the work carried out by the technical team:

> From release 1 ANNE created all the flow (diagram); Release 2, I re-did the
> flow (changed here and there) and she verified. If there's any mistakes, she
> will tell me. I think the documentation she did on her own but got her input
> from her team. I had to verify with KAS as well – the technical input from
> ANNE; the writing input from KAS too.
>
> (SAL, personal communication, April 4, 2012)

Cuppan and Bernhardt (2012) stated that writing of a report requires the contributions
of experts of various specializations who are responsible for different sections of the
report. It was further added that review "acts as a trigger to foster collaboration'. The
results of the present study with reference to the writing process have shown this to be
quite true, although the peer review taking place in the writing of the URS for the MCP
project might not have been collaborative but only to build upon each other's work. The
main task was developing the drafts through a process of interaction among the writer
and contributors that allowed them to pull details of the report together to produce a URS
report that clearly and effectively described elements of the proposed portal. Hence, the
URS writing overall can appropriately be seen more as a "collective process". The chain
of writing seems to be motivated by two important elements in the project: the
technological and business elements albeit the constraints of strict timeline.

5.3.4.1   The Developing Drafts of the URS Report

At the level of specific drafts, it can be said that the process of editing the URS was
predominantly content-driven. This is perhaps expected given the team's focus on the
requirements and creating the necessary solutions, as evident from the investigation of
the writing processes involved in the construction of the URS report thus far (before the
editing stage). The main goal of the URS report was to communicate what the portal is
about, that is what it does and its various features and benefits to the user. With the MCP

project, ICT Main (the main client) was aware of the current information needs of the users (the public), thus approached the portal rather differently. They wanted it to be "user-centric", meaning that the design of the document needed to incorporate details of the requirements placed within the text that went by the needs of the different users in Malaysia. For the team, this had an impact on the selection of contents and the design creation, hence how these were to be organized in the report.

Table 5.7 shows a summary of changes made to the developing drafts following the heuristics for tracking changes in drafts adapted from Lillis (2008). The full table can be found in Appendix F. Talk-around-text (Lillis, 2008) and discourse-based interviews were carried out to examine the developing drafts and changes. The investigation revealed that changes to the drafts mainly consisted of content and format changes; less so language. This could probably reflect the user-centric orientation which the team had been working on. At the early stage of writing drafts 1 and 2, the addition of contents could be described as more or less adhering to genre conventions generally characteristic of the URS reports written at the company. For instance, the Introduction contains sections on Scope of Project, Overview of the Project, Project/Client Background and Mission and Vision of the MCP project. As discussed before, the template had already been prepared and some of these details placed within the specified sections, though not complete.

According to KAS, the above details were taken from the tender document almost verbatim to retain the accuracy of the information, particularly client details and the original objective and the scope already specified in the tender. No rewriting or rephrasing was done to stay "safe". He added that "copy and paste" is acceptable but would have to be "accurate with the 'necessary modifications". Similarly, 'formatting and important details for tracing the document must also be accurate'. In SAI's viewpoint, section such

as the scope of work needed to be "adhered to strictly" as this was stated in the proposal. At the editing stage, the important thing was to make sure that all the user requirements were included and that they were within the scope of the project as agreed upon during the tender and award stage. In a way, it can be said that the introductory details were added and revised for formal reasons. However, it is interesting to note KAS' own decision as writer/reviewer and head of team. It seems that many parts within the introduction such as client background and mission and vision were not required sections, or 'deliverables' as he said it, but KAS made a choice to include 'everything' as it was said to be 'more valuable to the project' (KAS, personal communication, 2012).

Table 5.7: Heuristics for Changes in the URS Drafts

Drafts	Changes in and between documents	Heuristics	Participants' reasons for changes	Participants involved	Other material and genre resources sought
Drafts 1&2	Content added: Project Overview Project/client background; mission and vision; user interface requirements & screenshots of designs	Edit: addition New section on user interface requirements	Company's practices	Writer: KAS **Peer review**: Designer: FAR on designs	Tender document, proposal, workshop summary report; creative brief and design concepts
Draft 3	Content deletion and addition: RQ Methodology – Online survey Language changes: Intro 2nd para, line 1: word *initiated* added to sentence Overview, 1st para, lines 1-2: word *improvise* changed to *implement* Sentence reformulated from "*will make the portal will be more interesting...not bored*" changed to "*will make the portal more informative and useful to the target users*"**.** Style changes: reformulation at sentence level such as from active to passive: interface 1st para lines 3-4: *clean concept was used* changed to *clean concept is proposed*	Edit: content deletion Edit: content addition: new section on methodology Comment and edit: language lexical addition, substitution and lexical changes; sentence level changes and reformulation re-positioning and formatting; text-level changes, representation of texts (screenshots etc.)	Writer's own changes Better word choice to make the sentence more meaningful & simplifying the point; RQ method- 'value to add' in terms of justifying the proposed solution (IA); showcasing findings; to map the IA clearly for easy reference; making the format presentable & accessible. The client is part of the consideration - 'visualization' of the end product	Writer/reviewer: KAS **Peer review**: ANNE on language and technical requirement sections **Peer review** FAR on design concepts and rationale; **Peer review** SHAS (systems analyst) on IA and designs and client input	Tender document, proposal, online survey, IA diagrams, benchmarking reports

Table 5.7: Heuristics for Changes in the URS Drafts   Continued

Drafts	Changes in and between documents	Heuristics	Participants' reasons for changes	Participants involved	Other material and genre resources sought
	Document design changes: Functional requirement in D3 has made use of numbering Design rationale added but need to be in bold and arranged accordingly				
Draft 4	New content additions: Citizen content matrix; citizen content mapping; business content mapping; Non-citizen content mapping etc. New visual addition- Proposed designs	Edit: content addition Edit: visual representation of texts Positioning of texts	Writer's own For easy reference for user to relate and map the IA together with other online tools and services. Client can view the expected outcome or find relationship of the content and IA	KAS **Peer review:** FAR and SHAS **Peer review**: ANNE	Revised versions of IA and designs based on input from client Revised prototype

Table 5.7: Heuristics for Changes in the URS Drafts Continued

Drafts	Changes in and between documents	Heuristics	Participants' reasons for changes	Participants involved	Other material and genre resources sought
Draft 5 combined URS and SRS	Document design changes: the whole document divided into two parts: Part 1 URS and Part 2 SRS Reformatting: Section 2.0 Requirement Study methodology goes into Part 1 New Content addition: Meeting with related agency; Just the heading; entry none New Content addition: Discussion & review; Just the heading; entry none Title change: *Proposed Design* in draft 4 to *Proposed Theme* in Draft 5	Edit: genre conventions; positioning / re-formatting Edit: word deletion Edit: content additions; pending. Edit: lexical changes (with meaning changes)	Customer feedback & need to follow the required deliverable stated in the contract, that is to submit the SRS report, hence we combined URS+SRS into one document restructure generic conventions changes writer's own parts rearranged to be more structure The designs are company's practices. Language is writer's own	KAS, **Peer review**: ANNE on the technical SRS report **Peer review**: SHAS	Previous drafts of URS v 1.1, 2.1 Dec 2011; prototype review document; SRS report; Traceability Matrix
Draft 6	New content added: Systems Study; meeting with related agency (entry available); Discussion and review The rest is the same as draft 5	Edit: content addition; genre conventions	Company's practices and writer's own	**Peer review**: ANNE	MCP URS & SRS Specification Report v1.1 21 Dec 2011
Draft 7	Combined URS-SRS Report	Reformat	Due to deliverables stated in contract, the URS doc has changed: renamed to SRS doc.	Main review: KAS and ANNE	MCP URS & SRS Specification Report v1.1 21 Dec 2011; Release 2 output of services and forms.

The user interface requirement section of the URS for the MCP project was a new section consisting of design concepts and theme. These are in the form of screenshots of the website with design rationale in captions which had been through some reviews by the client, revised and ready to be placed in the URS report. The design rationale, which justifies, clarifies or explains elements such as choice of colour and placement of certain menu, among others, was a newly added element to the designs; perhaps as an alternative to the section on Design Briefs seen in earlier drafts of the report. As mentioned in previous discussion, the design rationale was innovated by FAR and KAS on account of the varied stakeholders who would be using the document/report for various reasons. The rationale adds written clarity to the visuals which might benefit stakeholders unfamiliar with IT -related terms and concepts. At this point, FAR (web designer) played an important, perhaps leading role, in deciding on changes further to the ones agreed upon earlier before finalizing.

At the time draft 3 was being edited, the RQ study findings and relevant output were being worked on and finalized by the usability team. As can be seen in Table 5.7, several peer reviews were taking place with the respective teams along the following roles or tasks:

- The usability team looking at the overall "look and feel" of the portal

- The technical team looking at the Requirements, the IA and wireframe

- The website designer, who was in the usability team, working on his own to look through the designs based on his expertise and experience

The main interest at this point was on deciding what information to include and how to write or present it in a way that would be accessible to all the relevant stakeholders. For example, in the interest of the technical team, clear description of the content structure (written or in other forms) was required as, according to KAS, 'whatever was described

should be clear for the relevant coders 'to perform coding and development' (KAS, Interview, May 2015). Based on the workshop findings and initial assessments of the MCP portal, it was decided that the content structure would be user-centric, best represented as the information architecture diagram (IA). To sum up, the main concern across the key players was to be able to write the URS report clearly and accurately to enable the relevant internal project individuals to proceed to the next level of the project, as well as externally the client's project team members.

As can be seen, draft 3 underwent the most changes, particularly with the addition of the RQ Methodology section. Lengthy discussion on the reasons behind this non-standard addition has been given in section 5.3.2.1 (d). At this point, it can be said that based on feedback from the PD team members, the decision to create the RQ Methodology section constitute the idea of "adding value" to the project and the URS text (refer to participants' reasons for changes in Table 5.7 above). This means, additional to the reasons previously discussed, additional reasons such as the need to show research findings, showcase feedback from the public and 'justify' the IA as proposed solutions added support and substance to the team's URS efforts.

Draft 4 seems to be focused on incorporating visual representation of texts such as the new addition of content matrix applicable to the various groups of users of the portal as well as the IA diagrams. Content matrix refers to the actual contents that were going to be included on the website that were relevant to specified groups of users. An example has been given in Table 5.8.

Table 5.8: Example of a Content Matrix

Main categories	Sub-categories	Contents	User Group map
Health & Environment	News & announcement		All
		Children health	Children
		Adult Health	Youth, Adult, senior Citizen
		Caring for the Disabled	Adult, Disabled
	Diseases & Conditions	Communicable Diseases	All
		Chronic Diseases	All

The details on the categorizations based on the different groups of users had already been formulated previously during stages 1 and 2 so editing the drafts was also about how to best present the information. Based on the comments given, it can be said that in similar nature to the other sections, clarity of information and accessibility to the required details were key considerations in the writing and editing of the URS text. The phrase the team was using at the time was to design a portal website that is "clear, simple and easy to navigate" (SHAS, interview, 2012; KAS, interview, 2015). All in all, the drafts reflect the writer's concern for producing a clear, usable document for the clients and main stakeholders.

From drafts 6 onwards, there was an overall change to the format and content. At the submission of the final draft, it was realized that the client had wanted only the Systems Requirement Specification (SRS) document rather than the URS report. Due to that, with agreement from ANNE and his team as well as the client, KAS created a combined URS-SRS report to provide a full thorough account of the project and the portal in terms of the redesign aspect of the portal. It was also at this stage that the client had a change in project direction. However, this particular project circumstances fell beyond the scope of the study thus would not be included in the discussion.

It has been mentioned that editing of the URS drafts was more focused on content rather than language, except for draft 3. Here the editing made to language appeared to be more prominent with greater participation from ANNE. Generally, feedback from the team members indicate that they did not see language as 'an important factor' in writing 'provided the URS report was clear' to the intended readers and that the audiences were 'able to understand the requirements of the portal'. According to KAS, the grammar 'need not be perfect' but the 'statements used must be clear to avoid any unambiguity' (KAS, personal communication, April 2012).

There are many possible reasons for this relaxed approach to language use; one of which could be the nature of texts such as IT specifications where a mixed composition or a hybrid of narrative and diagrams or visuals tend to be prevalent. In other words, the content representation is in the form of table format, flow/database structure and visual designs other than written narrative. These communicate some meaning to the relevant key players, as demonstrated in the following comment:

EXCERPT 35

> …whatever features we need to describe in terms of diagram and explanation. Because without the diagram, the user cannot visualize what we wrote, so in our practice, we make it standard to show the flow so that user can understand. Plus, they should view the visualized solution.
>
> (KAS, personal communication, April 4, 2012)

In the case of the MCP URS, these representations were decided to be fitting to the needs of the project and the client in relation to improving the portal website for each user group, hence a user-centric content strategy. An examination of the URS report supports this argument in that there is considerable use of table format, diagrams, specifically the

IA, wireframe, designs, statements in bullet point form and others. SAL did state earlier that the reason for putting information in visual or diagrammatic forms was to avoid potential ambiguities associated with the narrative format or prose.

However, the above did not obviate the necessity of making some revision to the language in the URS text. It can be seen in Table 5.7 that most revision was on word choice, specifically lexical changes, and a few sentence reformulations. KAS stated that the main reason for making specific lexical changes was to provide better word choice. It is noted that these changes involved both lexical addition and substitution that minimally required reformulating the sentence. Isolated sentence reformulations were mainly advised by ANNE usually to correct grammar mistakes and sentence structure. In other words, the lexical changes were quite minor, though the changes did provide better description of the portal. In KAS' words, the choice of words would make the 'sentence more meaningful'. For example:

- '**improvise**' changed to '**implement**'
- 'will make the portal more **interesting**' changed to 'more **informative and useful** to target users'
- '**was used**' changed to '**is proposed**' (tense change inclusive)
- 'Hi-resolution **imagery** changed to 'high resolution **images and graphics**'
- 'Up to date **information**' changed to 'Up to date **information and services**'

It is possible that since many written parts of the texts were taken from other sources ('copy and paste' by other writers/contributors to the text for practical reasons), KAS did not find the need to make much changes to the sentences but mainly substituted certain words for meaning. When enquired further regarding this 'practice', KAS gave the following comment:

Definitely the overview part we just copy and paste, and we adjust a bit and reference it. The most crucial part is the requirement itself…there is the terms that is standard for us *lah*…like 'my page' is the private page right, so I rewrite to make it 'personal page' because 'private' will give different meaning from the user perspective. Features like 'dynamic search', right, when we google or find the solution from other partners, they already describe 'search' so we would take that and re-write. The word dynamic itself will be interpreted differently in different industries. For us 'dynamic' for example like when you kick in something, the search engine will push you the solution already. That's what we meant by dynamic.

(KAS, personal communication, May 25, 2012)

Despite some of the team members' views on language use in the written document, there were evidently some concerns with using the right language. In some ways, KAS did contradict himself on the language issue by saying at one point that the 'grammar must be perfect' and that he often made sure to check and revise the writing of his team members. The CEO stated that 'plain, simple English' was necessary if he were 'to make sense of the text'. SHAS made a comment during one of the meetings that she was concerned about the accuracy of the terms and wordings used for the various headers and content matrix. KAS had always been consistent in his views regarding the use of 'simple and clear', although it is difficult to determine what is meant exactly by simple and clear with respect to language use. Later during participant verification, KAS revealed another concern that suggest a different view of language use; despite the technical orientation of the URS, which requires further investigation. The following is the interview excerpt:

EXCERPT 37

Language is a selling point. Is it convincing enough? It is one of the goals for writing (the URS). If we do a really technical document but not meaningful, *takde value lah* (no value).   What really can give an impact? The customer

should be able to imagine (see) what is the product. The rationale and benefits we put in will help the business…how is your 'reach' different from others?

<div align="right">(KAS, personal communication, Nov 25, 2015)</div>

Chapter 6 will discuss language use in the URS report, specifically as it relates to the MCP project. For now, results of the study have shown that there is indication that the writing processes involved in the construction of the URS report helped in the shaping of the intended URS text/document. This is particularly more evident in terms of format and content than language. It can be said that Stages 1 and 2 gave the URS structure or frame for writing and tools for content. Stages 3 determined the general layout and design of the document in terms of what information needed to be included and how it was to be presented that would consider the expectations of the client including other organizational considerations.

5.3.5 Document Review and Acceptance Stage

Before the URS report could be accepted, it would need to be delivered and reviewed by the client. This task seemed to be a formal affair in that a special Technical Committee Meeting (TCM) chaired by the client was held to approve of the report and approve payment. The key players involved in the document review activity were high level management from different departments with the authority to approve of the report and release payment. The TCM could be considered as the first formal distribution of the URS report in full. It is believed that the URS report was delivered before the actual meeting. On the day of the meeting, KAS went over the report for purposes of explaining and clarifying some aspects to do with the portal further. According to KAS, from experience, clients did not often read a thick document such as the URS report preferring instead for the vendor to present and explain the report/parts of the report to them (KAS, interview, 2012).

In a nutshell, the URS report pertaining to the portal redesign/enhancement was approved 'but with condition to take whatever comment and make changes in Stage 2 of the project' (KAS, interview, Nov 25, 2015). Thus, it can be said that there was going to be continued communication and negotiation between vendor and client given this latest development. Firstly, there was the need to resubmit the URS report as the client had initially only required the SRS report. Thus, the decision for KAS was to combine both the URS and SRS into one report and resubmit. However, according to KAS, this involved some reformatting of the document. Secondly, perhaps more significantly in terms of the work to be involved, was reexamining some of the earlier features due to a 'change in direction.' Nonetheless, URS document itself was accepted both in terms of content, layout, and format and thus approved. According to KAS:

EXCERPT 38

they just give their comment whether - think they are balanced. We do get compliments, but we also get improvement opportunities.

(KAS, personal communication, Nov 25, 2015)

When asked about what the client thought of the designs seeing that those underwent numerous changes and discussions, KAS gave the following comment:

EXCERPT 39

First impression okay wow! Then when they comment 'why this colours dull grey' something like that. And then somebody else probably have a technical background saying 'I don't think this is visible …the page loading might be slow because of the…

(KAS, personal communication, Nov 25, 2015)

It can be deduced that there were features of the portal in terms of its look and feel requiring further improvement. According to KAS, the 'change in direction' meant that

the client requirements had changed requiring changes in the content. As these changes were 'dictated' by the client, they would often be considered as client's needs were foremost. Later in the project, it was concluded that the change in direction was necessary due to current needs of the client. Available data indicates that the client's comments in relation to the new changes were features of the portal, hence all content related rather than format or language related.

5.4   Communicative Exchange in the Construction of the URS Report

Thus far the thesis has attempted to describe the discursive practices in the construction of the URS report through an investigation of the writing processes involved in its construction, and together with that, the communication that took place between the PD team/company and the client in the shaping of the intended URS report. These processes have been extensively discussed in this chapter. The investigation has revealed that various practices/activities seen in this study involved communication, or specifically the exchanging of ideas, facts, opinion and sharing of practices and resources (Schuur, 2013), which facilitated the collective involvement of the different key players towards meeting the immediate project goals including the construction of the URS report.

An important point needs to be mentioned before going further. The writing of the URS text took place in an activity system of project documentation where all practices such as requirement study, 'production and circulation' of various text outputs, 'visual design' and review etc. 'involved communication' (Rude, 2009, p. 181). Therefore, it is important to note that the discussion on communicative exchanges here is not to separate writing processes from communication practices as two distinct entities or events. The exchanges formed an integral part of the whole process of constructing the text and doing the project, as this chapter has demonstrated.

In other words, the construction of the URS report involved activities that were spread throughout the writing process as a whole. In the previous sections of this chapter, the processes and the communicative exchanges between key players were discussed iteratively to retain the flow of the events that took place via the different practices. This part of the chapter will unpack these different forms of communicative exchange to highlight their contribution to the writing processes and the URS text.

5.4.1 The Processes of Communication

Table 5.9 illustrates the chain of events/ activities throughout the entire URS report construction process based on the findings of the study thus far including documentary evidence provided by the PD team members. (The letter 's' indicates 'spoken', 'w' written, 'v' visual.) The discussion will start by looking at the spoken forms of communicative exchange that took place throughout the construction of the URS report.

Table 5.9: Chain of Events within the URS Construction Process

Writing Processes in stages	Event/Activity	Materials/Forms of communication
Preamble	Tender Award & proposal	Tender documents & materials (w) Discussion & interview sessions with client (s) Solutions Overview document (w) Proposal for client (w) Information Architecture (IA) (v) Internal meetings & discussions (s)
	Design approach/concepts	Preliminary designs (v) Discussion with client (s)
	Best Practices research	Research and Best Practices (w)
	Benchmark Comparative Study	Benchmarking profile (w/v)
	Proposed IA	Modified IA (v) Meeting with customer for review (s)
	Kick-off presentation- updated IA & wireframe & design	Project briefing (s) Presentation slides - project methods, deliverables, requirements & solutions (v) Proposed IA & wireframe (v)
	IA- v1	Revised IA (v)

Writing Processes in stages	Event/Activity	Materials/Forms of communication
	IA- v2	Revised IA (v)
Generation of Content	Workshop Plan	Workshop Agenda (w)
	Research & best practices	Client design principles (w)
	Workshop Plan	Handout- MCP Overview, Analysis, Benchmark and Setting of Goals (w)
	Benchmark Study	Benchmark Study Report in Excel (w/v)
	MCP Usability review	Expert review checkpoints in Excel (w/v)
	URS workshop survey	Survey to the public (w)
	URS Workshop	MCP Overview; MCP Setting Goals; MCP Survey result (w/v) Presentation (s) Group discussions (s)
	Findings & Workshop activities	Worksheets for workshop discussions (w)
	URS Workshop report	Discussions among PD team members(s) Workshop Summary Report (w)
	Meeting	Meeting with client (s) MCP URS meeting notes (w) Meeting & discussions among internal key players (s)
	Discussion & URS meeting	URS Discussion (s) URS meeting notes (w)
	MCP Blueprint	MCP Blueprint (w/v) Presentation of blueprint (s)
	Design work	Design Rationale (w/v) Discussions among internal players (s)
	MCP Findings & Analysis	MCP Findings & Analysis Summary Discussions among internal players (s)
Production & verification stage	Confirmation of the requirements and solutions	Internal & external verification – discussions among internal players and the client (s/w) Text outputs (w/v)
Editing/writing stage	Writing of the URS report	URS report draft/template (w) Peer review sessions (s)

As Table 5.9 illustrates, throughout the writing process, spoken activities such as meetings and discussions took place internally among the PD team members and externally with the client. In its broader sense, one can basically see a two-level process where meetings and negotiations (throughout the preamble, generation of content and verification stages) took place before the writing up of the actual URS report (editing

stage). Putting it this way makes the process appear rather sequential, however, there were in fact continuous cycles of interactions between the spoken and writing activities in the production of various textual and visual outputs leading up to the URS report. This is evident from the communication practices involving the PD team and the client throughout the URS report construction process.

Gunnarrsson (2009, pp. 159) found in her study that the spoken and written activities were 'intermingled' where in some cases the written texts were complementary to the spoken event, while in others, the written texts were the 'main events'. Often the writing was done in combination with discussion and talking with colleagues. These discursive practices could also be seen in the present study, although the predominance of the written outputs/document grew in importance and became the main events in subsequent stages past the tender activities.

In addition, while Gunnarrsson found that there was increased need for writing and discussions for those in higher positions, the present study did not find this to be too evident as findings showed that the team consisted of experts whose feedback and work had a direct impact on the URS text. For example, FAR worked on the designs and design rationale, ANNE was responsible for the technical content and acted as co-writer and reviewer; SAL and AZZ as information architects specialized in doing the IA diagrams, wireframe and others in consultation with ANNE and KAS). Throughout the URS construction process, they were also quite independently working in smaller teams to produce the required written and visual outputs. The results of the present study, thus, show evidence of collective strategies (Pare, 2014) involving discussions and writing to get the various contents out so the URS document could be produced and delivered to the client.

In terms of the PD team's communicative exchanges with the client, as the written discourse grew to become more prominent, the PD team took on an advisory at times leading role in relation to their interaction with the client. However, this finding could be described as tentative as direct observations of all meetings and discussions could not be carried out due to constraints of time and access (confidentiality reasons). The finding is therefore limited to the data that could be obtained from the interviews, meeting notes and other process documents. Indeed, there were many instances when the client had the upper hand in determining the content of the report by changing requirements and later on, at the point of the document review and acceptance stage, making a total change in project direction. Nonetheless, findings did show that in their varied forms, the communicative exchange offered the key players (client and the PD team/company) discursive space to either form mutual understanding of each other's positions, interests and goals or implement certain actions and decisions. How these were achieved specifically will be discussed in the next section.

5.4.2 Forms of Communicative Exchange

In terms of spoken exchanges, meetings and discussions appeared to be prevalent. As far as the meetings go, these can be categorized into two. There were more formal meetings when a project documentation had to be approved and endorsed for payment purposes and project implementation such as the kick-off meeting and the technical meeting to deliver the URS report to the main client. These took place at various stages of the writing process and documented as meeting notes by team members who were present at the meetings/discussion. The other were more informal ones that took the form of discussions usually involving the requirements and associated solutions. Usually external meetings involving the client could be described as formal since meeting notes were produced for reference. In the absence of observational data, the study regarded the

meeting notes as textual data that provide an inside look at the communicative exchanges taking place between the two key players; that is the PD team/company as vendor and ICT Main, the client.

Based on an examination of three meeting notes in November of 2011, it can be said that particularly at the earlier stage of the URS report construction process, the meetings were basically focused on issues and proposed solutions, thus not directly related to the writing of the URS report document per se. Although the concerns were directly project-related, the meetings did however illustrate the team's efforts at meeting or accommodating the client's needs in respect to the portal. This coincided with the efforts taken by the PD team at defining the interests and needs of the client before the solutions to the client's requirements were formulated (see section 5.3.1).

During these meetings, the representatives from the PD team had to be aware of the issues faced by the client in relation to the portal as well as the progress of the project. They would also have to be updated in terms of knowledge of the system and the technologies in order to propose the necessary solutions and resolve any competing differences. For example, a meeting held in the first week of November 2011, at about the same time the preamble stage was taking place, issues with the existing portal were discussed including broken links, irrelevant services and unavailability of the required services (Meeting notes, Nov, 2011). While the PD team members were able to suggest several solutions, ICT Main was also requesting other features to be designed into the system. It is believed that the team accommodated the client's requests. Also discussed were issues with the current design and the choice of the user-centric format suggested earlier but the company as vendor was given the freedom to decide on the layout and the

different processes involved in developing the required system. Thus, it can be said that the meetings provided a discussion as well as negotiation base for both the key players.

The meeting notes also gave rather interesting insights to the position of the client regarding the MCP project . The present study takes note of a statement made by the project director on the client's side asking members to forge strategic collaboration between one another toward implementing effective programs /activities. As this was expressed during a meeting of the MCP project, the statement illustrated the client's commitment and readiness to work on the project with the PD team. This is particularly illuminating to the study as the client's aims for strategic collaboration on projects went in tandem with Company A's corporate culture that espouses value-added services. The meeting also had relevance to the PD team's plans for the requirement study (RQ study) (see section 5.3.2.2 on establishing the basis for the URS content).

The actual form of this exchange as well as the date of the meeting could not be disclosed for confidentiality reasons, but based on personal communication between the client and the company's representative, it was revealed that the client agreed to the planned RQ study, but had several expectations – that the team send in an exact schedule and plans for the URS sessions as well as details of supporting documents to be used during the session. It was understood by the team members that ICT Main was interested in the team's readiness to meet with the various agencies as well as the appropriateness or validity of the questions to be asked during the session. This is an important finding as it illustrates shared objectives between vendor and client as to the objective of the RQ study and subsequently the project outcome.

Another important observation here is the client's request for details of supporting documents at the RQ study session, specifying clearly to the use of slides during the session. It was stated that apart from wanting to provide "clear visualization of the requirements", the client also wanted the agencies to have a "clear understanding of their aim to solve the current problems" (ICT Main, personal communication, Nov 2011). This data is directly relevant to the RQ study in terms of the visual output produced by the PD team during and after the RQ session. It also supported the PD team's practice of creating "visualized output" such as the designs, IA and wireframe throughout the writing process. In that respect, the study takes note of the widespread use of slides for presenting to the client the Design rationale on 23/11/2011 (ppt file of 15 slides) and the proposed IA on 21/11/2011.

Lastly, the discussions provided space for team members to decide on areas which needed focusing. This kind of exchange usually took place during internal meetings where team members sat together to decide on appropriate course of action pertaining to the client's requirements for the portal. The extract of conversation given below took place in an internal meeting among SHAS, sub-project manager and a team of developers/coders during the production and verification of content stage. The main agenda was to decide if one part of the requirement could be developed. The discussion was centred on the client's requirements and whether the company had the capability or technology to take those up for development. These requirements necessitated the use of 'Liferay', which is an open source platform that manages the content, pages, and all components and applications allowing business owner to make available his/her site to all clients or user (KAS, personal communication, July, 2015). The following conversation is an extract from that meeting. SHAS wanted to discuss several aspects of

the portal requirements before presenting them to the client for verification scheduled the following day.

SHAS: Can you standardize admin page? There is possibility of changing. How does Liferay position the content page?

Coder: I don't think Liferay can do that. Not all things can be done. These things not so easy

SHAS: at least give us something. Okay this is what ICT Main want, ok. They want to edit text and upload text – the agencies want to be able to do that. Is there a need to learn Liferay? There are so many agencies uploading content using the main portal-thousands of people will do. Not possible *lah*. I think must have a system to do that. They also want a page where admin can tell agencies problem in the system

Chair: this might trouble Liferay

SHAS: well, if difficult, we do e-mails only

(at this point, upon SHAS' request, one of the developers was trying out a suggestion SHAS had given on his computer)

It is clear in the above extract that the discussion facilitated the collective involvement of the different members towards making decisions that could affect the project outcome in relation to the client's needs and interests for the portal. The discussion gave the members space to explore choices in order to be accountable to the client in terms of delivering the correct technology. In the interview conducted with SHAS after the meeting, she revealed that confirmation from the coders was necessary as she would only present the various options, decisions or changes to the client if the team was capable of delivering the technology required for the specific requirement or feature (SHAS, personal communication, May, 23, 2012).

As leader of the usability team, she was often involved in a two-way communication with three parties – the client, her team and the coders, thus her job was often very challenging. Thus, she saw the client on site the most and was able to bring in input from the client to her team and vice versa. The production and verification of the content stage was an important part of the whole process, both in terms of performing the project and the delivery of the required URS report. At this stage, all output derived from the RQ study would need to be checked, confirmed and verified by the client. However, as the written texts as well as visual grew more prevalent in the successive stages, they became the 'main event'. This finding is in line with Gunnarrson (2009) but differs slightly as the meetings and discussions (spoken discourse) went hand in hand with and complemented the textual and visual outputs, and vice versa. Perhaps the nature of project work in IT was not just delivering the document, but also the project at each stage. There were other forms of exchange such as the presentations, smaller briefings and short discussions that took place at corridors and in little teams of experts. However, there is limited data and cannot be described here .

5.4.3 Texts as Forms of Communicative Exchange

From the interview findings and process tracing of the documents along the chain of events, forms of communicative exchange between or among players in the construction/writng process could also include written texts or texts other than spoken. To be specific, these texts were the IA diagram and the designs, including design rationale, PowerPoint slides of solutions, or benchmark profile and meeting notes, among others. The IA diagram conceptualized the client's vision for the portal and displayed a visual representation of the actual site. These were often produced, reviewed and distributed among key players, including the client representatives. It was perhaps a tool to communicate the enhanced portal in total. Perhaps, like the designs and the website,

the IA formed a part of an emerging strategy in communicating ideas, concepts, solutions and to some extent corporate brand and identity, using new media as platform. Indeed, it was stated by KAS that the IA was the company's own, or niche which had become a practice as far as the URS was concerned. The IA and designs within the context of writing in the present study demonstrated social characteristic as it helped achieve a social action of accomplishing the project outcome.

Based on the findings of the study, there is a need to conceptualize communication practices/exchanges in a broader sense to 'capture the different kinds of exchanges' that can reflect the different forms of professional communication taking place in situated, modern workplace contexts. This argument agrees with Schnuur (2013, p. 5) who defined professional communication to include both spoken and written genres/texts such as meetings, discussions, phone calls, email exchanges, faxes, corporate intranets, websites, and internal documents like brochures, among others. Intended for business partners, clients, employees or the general audience, these are genres/texts 'through which companies communicate their goals and values for professional purposes'.

The thesis argues that like the spoken discourse, the written/textual/visual form of communicative exchange are forms of interactions or meaningful exchanges around situated work-related activity or practices that are essential for meeting specific goals. This has been seen to be true in the case of the IA diagram and designs. This argument is in support of Smart (2003, p.18) who identified 33 discourse genres associated with a central bank's technology-mediated "communications strategy", that were inclusive of both spoken and written genres. It can be said that the present study is original in some respect in uncovering in an empirical way evidence for a broader definition of communicative exchanges or communication practices, at least as it is applicable to the

modern needs of a knowledge society. Gunnarrsson (2009) shared similar contention arguing that 'for an analysis of writing in modern society, it is more fruitful to proceed from a concept which covers both media, oral as well as written communication' (pp. 148).

5.5 Consolidation of Findings

The case study tracked the writing processes involved in the construction of the URS report as it took place within the professional context of the IT industry. This section will consolidate the findings on processes thus far by firstly reiterating the findings relating to the professional "context" within which the URS report was constructed. It will then present a diagrammatic representation of the flow of the processes of the URS report construction (writing and communication included) which would encapsulate what the discursive practices around the construction of the URS report involved.

5.5.1 The Activity System of IT Development Project

In line with the RGS framework, the study specifically investigated the construction of the URS report as it was situated within a larger context of IT development project documentation practices. It thus looked 'beyond the URS text to the context of the text production' (Pare, 2015) through an examination of the writing processes involved in the construction of the text. The concept of the Activity System (AS) was used to operationalize the theoretical framework of RGS thus the context of the text production was looked upon as the interaction between the different elements operating within the documentation practices of IT development project involving the URS report.

In its diagrammatical form, the activity system of the IT development project documentation in which the URS report formed a part is illustrated in Figure 5.4:
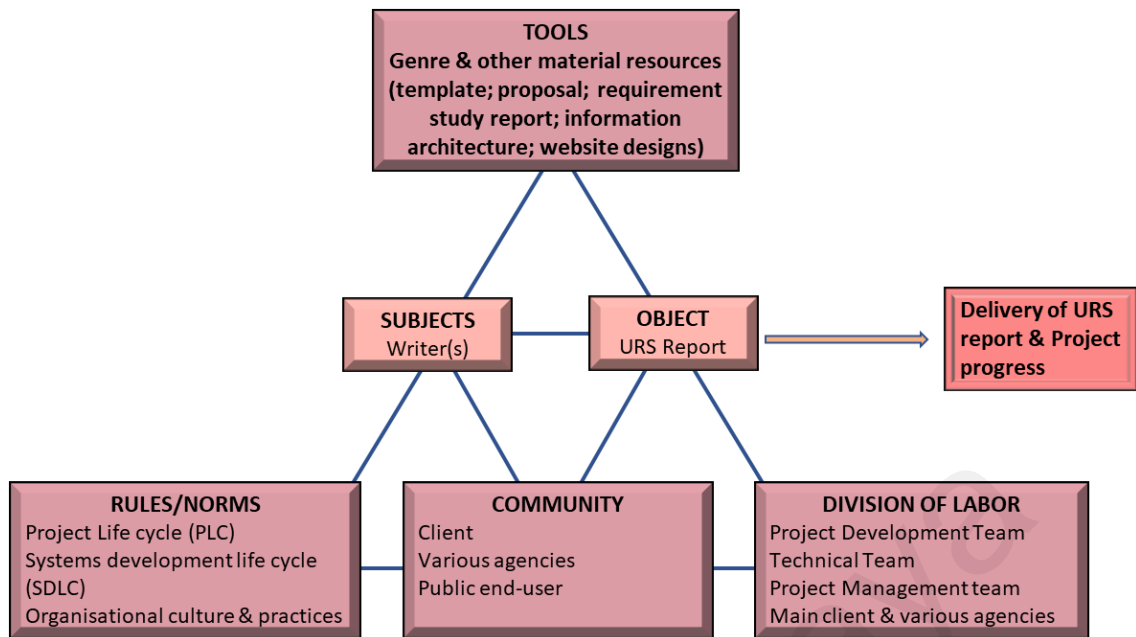
Figure 5.4 Activity System of IT Project Documentation

It is now known that in the present study the "Subjects" refers to the writer working with team members on an activity to "accomplish an outcome", which is the production of a URS report ("object"). However, due to the extensive nature of the project, the team members assisting the writer (KAS) became active contributors to the text, thus could be more appropriately regarded equally as the Subjects. In the process of constructing the URS report for the MCP project, that is in the process of acting upon the URS report (object), the writer and team members utilized or look to various texts or materials, most notably of which were the template and the IA diagram.

Several activities were involved in the process of constructing the URS document and within each activity, various discussions between the company and the client, and internally among PD team members were held. In these different sessions, ideas and texts took shape and were developed further into other texts which became reference texts for the writing of the URS or were incorporated into the URS in different forms. For instance, the IA diagrams were one representation of the content structure which were specifically

created and verified to be placed within the text. The workshop findings reports were incorporated into the URS as content structure requirements.

What was most important appears to be the pre-existing template; which went through some small modifications to accommodate the client with respect to their own format preference as well as needs for the project. This and the IA, as well as the reports became very important "mediational means" or tools to the project team as well as the client in terms of the shape, form and content of the URS document as well as progress of the actual project. It would have to be said that the activity sessions as well as the resulting visual and textual outputs were tools for the writing of the URS report. This list may not be exhaustive as findings have shown that the nature of the project, and various exigencies have the potential to affect and change the activity system, as well as the mediational means used. As the last stage of the construction process have revealed, acceptance of the URS document was contingent upon changes to some parts of the content and design borne out of the client's changing needs (see Chapter 5 for details).

Throughout this whole activity, the participants were informed or supported by the Project Life Cycle (PLC) and the Systems Development Life Cycle (SDLC) acting as the 'rules/norms' governing the activity or the production of the URS report. As mentioned previously, adhering to these elements of the system demonstrated professionalism which the team needed at that point in time. The "community" had various influences on the direction of the activity as the nature of IT development project, and the company's own work ethics were dependent on the interests and motives of these other players. It is interesting however to see the team accommodating the various interests but also kept to their own as far as the URS was concerned. The "division of labor" specifying the roles

and responsibilities of the different players was clear-cut, although at the beginning these needed to be defined clearly to avoid potential conflicts.

On a practical level, the AS provided a conceptual organizing structure that illustrates the context of the URS text production in terms of the interactions among the various elements within that activity system. It is the interactions of these elements which had helped the PD team produce the URS report within the specified time and within the stipulated format and guidelines for URS report and the client's needs and demands.

5.5.2 Diagrammatic Representation of URS Report Construction

Based on the investigation carried out in the study, Figure 5.5 illustrates the flow of the writing processes involved in the construction of the URS report starting from the first stage labelled as the Preamble until Document Review and Acceptance Stage. The diagram shows the activities involved, the outputs produced, and the key players involved contributing to the development of the URS report. The processes appear to be conducted in a linear fashion, however, that was not the case in total. Perhaps this was true at the beginning stages but as the diagram illustrates, there were cycles of activity involving discussion, production of output, reviews and revisions. In fact, there were cycles of activity and negotiations between the company and the client, or among the players such as in the preparation of the template, and during the RQ study, but these could not be shown in the diagram to maintain visual clarity. The major processes however are still visible in the diagram.
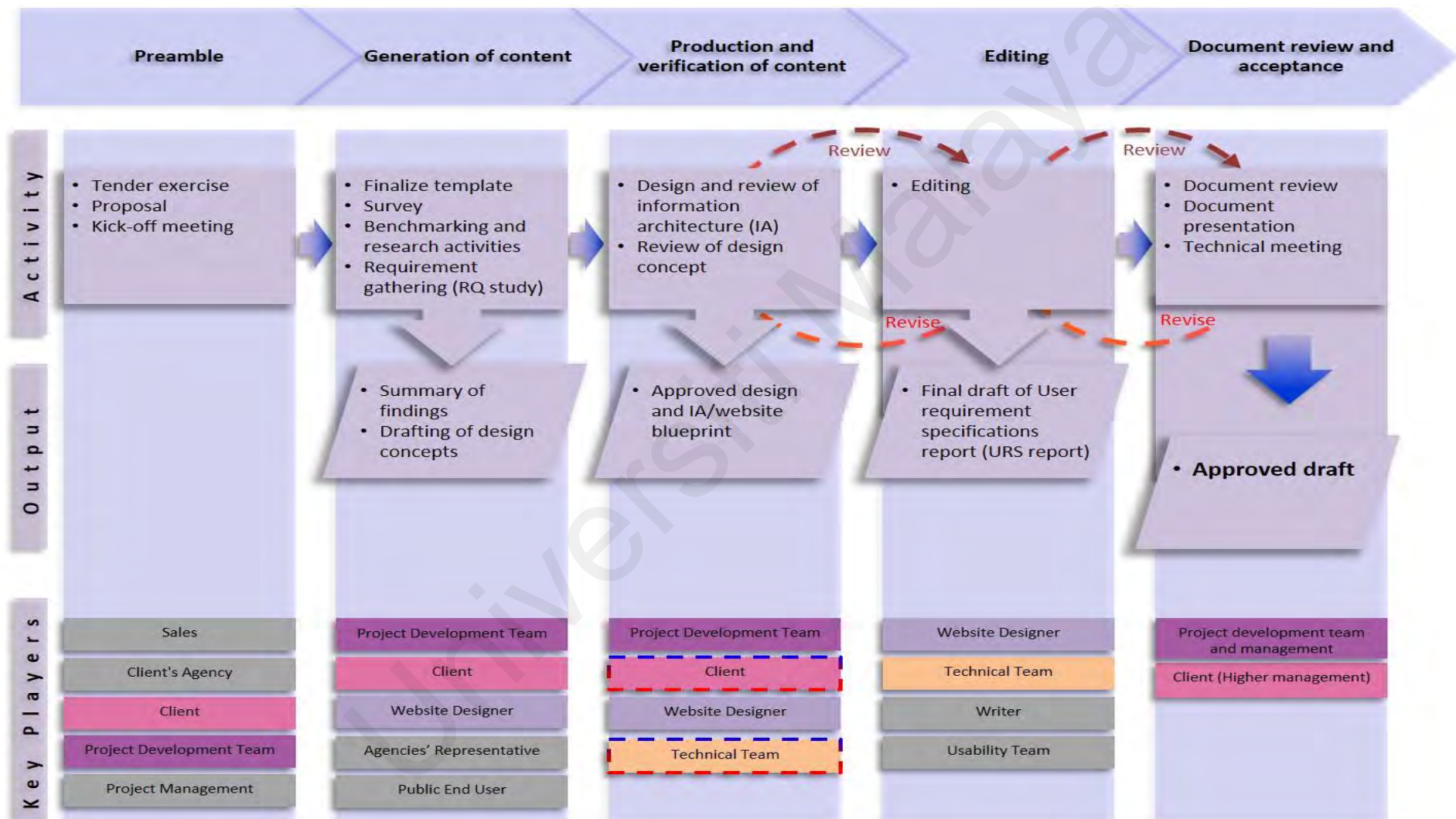
Figure 5.5 The Processes of the URS Report Construction

As discussed, and further exemplified in Figure 5.5, the horizontal axis illustrates the writing processes involved in the construction of the URS report. These processes were based on a concerted effort at building good content strategy for a successful project outcome, and thus was potentially foundational to the URS report structure in terms of the organization of the content. This effort can be seen to be manifest in the way one writing process led to another. For example, doing the URS summary and findings text was one writing process, and that process was related to, or led, to other writing processes such as in translating those ideas into a form or an output that was acceptable to the different key players. These texts were revised to become more permanent and incorporated into the URS report.

The vertical axis shows the activities and the production of the above textual and visual outputs at every stage of the construction process. These key activities parallel the writing processes based on the three main concerns - the client's needs and demands, shared objective of project's outcome and the prescribed format for the URS. The present study also found evidence of the significance of 'discipline-specific methods of inquiry' as proposed by Kwan (2017, p. 19) and knowledge work & distribution as possible areas of concerns and interests, but these were not explored in the study in great detail. The production of text outputs, in particular the usability documents comprising the IA, wireframe and designs in their revised form after verification were drafted, built upon and revised to be placed into the URS text in varying representations of textual and visual forms according to the company's reporting practices and the client's preferences, as has been previously discussed. In addition, these outputs also effect actions of expert members in relation to developing the required system.

In addition to the writing processes, the present study also looked at the communication which took place between the key players (see the vertical axis illustrating the various key players). It has been found that the exchanges were collective, participative and purposeful and the chain of communicative exchanges were relevant to both project outcome and the construction of the URS report along the following development:

1. Relating to the needs of the client

2. Sharing of values and aspirations for the project outcome

3. Accommodating and consolidating client's needs

4. Validating the requirements and solutions as well as commitment to the project and the URS report as deliverable

5. Accepting the URS report document

Overall, these discursive practices, as captured in the study, resulted in a URS report which accomplished the objectives it set out to achieve.

5.6 Conclusion

This chapter has provided a detailed account of the processes involved in the construction of the URS report for the current project. Four main stages were involved which reflect various considerations similarly found in previous studies. However, in the case of the study, underlying the client's immediate need for a portal and the project documentation, there is an interplay of organizational, disciplinary and social concerns that may have some influence on the shaping of the intended URS report. The discursive practices in relation to the construction of the URS report included written texts and genres that were utilized to communicate the goals of the URS and deliver the project to

the clients, as they were applicable to specific project and in response to specific rhetorical need of the document. For instance, the development team found it necessary from their interactions with the client to table the requirements and to visually present the actual designs of the portal as they would appear on screen. These designs were accompanied by rationale and brief explanation and were incorporated into the URS report. Looking at the template for URS, the rationale accompanying the designs were not a prescribed element of the report, nor was the requirement methodology section. These were added features deemed to be necessary by the team in order to provide clearer and more workable documents for the client and respective team members. In other words, this reflects a clear modification of the URS report by the company. There remained the structure of the URS, as based on industry standards, but modified to achieve more social ends.

The main aim of the URS document is to thoroughly and accurately address the client's requirements and for clients to understand the requirements of the proposed portal or website. Findings of the study indicate that the changes to documents were mostly content and format changes rather than language. A key consideration in the written documents is clarity of description and accuracy of information within. As evident from the interview findings, clarity and accuracy were reflected in structure/format and concise use of language, and most interestingly, use of visuals and diagrammatic features. Chapter 6 provides a discussion on the language aspect of the URS report.

CHAPTER 6: FINDINGS AND DISCUSSION

THE MAIN DISCURSIVE FEATURES OF THE USER REQUIREMENT

SPECIFICATION REPORT

6.0   Introduction

This chapter presents a description of the main discursive features of the user requirement specifications (URS) report with reference to its organizational cum textual pattern and language features. The URS was a document on the specifications of a website project by Company A for a client. This chapter will address research question 3: What are the main discursive features of the URS report?

These features to be described are based on the final URS report for the MCP project portal. However, its analysis was informed by an analysis of past report in both structure/textual pattern and language. The focal point of this study's analysis is on the final URS report of MCP project in greater detail in order to relate the process of construction (as presented in Chapter 5) to its textual and language features. The overall approach in looking into the text in this study was to examine how the contents were organized and expressed on account of the collective writing process and its various considerations uncovered earlier. In other words, according to Gotti (2002 p. 424), the analysis considered 'how the text was constructed to express certain meanings' and not 'merely to ascertain its contents'. Throughout this chapter, excerpts and quotes from interviews with the PD team and the assigned writer of the URS report will be included.

6.1   Approach to the Analysis of the URS Texts

In Chapter 5, an overview of the overall structure of the URS report in terms of its various headings and sub-headings were provided. There is a need to go further into

identifying if there is an explicit structure or format and language use in the URS in relation to the various processes of production. Despite coming across as an elusive 'genre,' online searches of articles revealed that the URS is not an uncommon document and is in fact regularly used in IT projects. The URS is often regarded generally as a specification, rather than labelled as a report, but as discussed previously, it is also a business document. It is possible that the URS report at the company is an "overlap across two disciplinary domains", which in this case are the business and technical/technology domains, with possible "appropriation of generic resources; linguistic and discoursal" across the two domains (ibid p. 83).

Thus, for this study the URS report was taken to be a 'report' and approached as a text type belonging to a "colony of reporting genres". A stronger basis for choosing to see the URS as a form of report is the fact that it was the company who assigned the generic label 'report' to the text. All the URS examined in the study was titled accordingly as "User Requirement Specification Report. Amidon (2008) citing Devitt (2004) stated the following viewpoint regarding genre identification:

> The decision to assign generic labels to texts should belong to the user and that the task of the genre scholar is to identify what it is that makes users recognize these as genres.
>
> (Amidon, 2008, p. 457)

The study however was faced with one limitation. Due to the sample size of the URS collection, as well as unavailability of an established corpus of URS text to which to compare the URS report, a comprehensive text or moves analysis could not be performed. In addition, analyses of past project URS did not reveal a definite move structure because of the variations in the different sections that existed across the five URS reports.

6.2 Structural Features of URS Reports for Past Projects

Table 6.1 shows the structural features of the URS reports for past projects. For confidentiality purposes, especially the 'sensitive' nature of some projects (Chief Administrative Officer, personal communication, 2012) the names of the project will remain anonymous but will be known as projects A, B and C. Details on the other two past projects could not be disclosed.. Effort has been taken to exclude specific details in the excerpts taken from the original document. Having looked at all three URS reports, it is rather difficult to ascertain a definite move structure for the URS reports written at the company; except if one goes by the template and the required format. First the number of texts examined was too few to arrive at a reasonable conclusion regarding a definite move structure. Secondly, despite sharing the same format and purpose in writing, that is to describe what is required of the system, the structural pattern, content and style of writing of all three URSs differed.

As mentioned previously, the URS report for Project A did not conform to the typical business report genre. With Project B URS report, there is a difference in terms of how the different parts fit together that resulted in a slightly different structural pattern. It is possible that these differences were due to the nature of each project whereby Project A was carried out to develop a centralized database system, while Project B was undertaken to enhance an existing portal. As can be seen, the structural pattern of URS B differed from URS A, and even more so from the industry/company template for URS in terms of how the different parts or sections were categorized as well as the details included.

Table 6.1: Structural Features of URS Reports for Past Projects

URS A	URS B	URS C

1) <u>Providing a general description of the system/project</u>
  1.1 By stating the purpose and scope of the document
  1.2 By stating the requirement-gathering methods employed in determining the system's requirements
  1.3 By stating a general overview of the project in terms of purpose and benefits
 	
2) <u>Providing specific description of the system to be developed in terms of specific requirements</u>
  2.1 By providing a general description of the system
     2.1.1 Product perspective (in relation to other related products/system)
     2.1.2 user characteristics
     2.1.3 the system's operational environment
	1) <u>Providing a general description of the system/project</u>
	  1.1 By stating the purpose and scope of the document
	  1.2 By stating the requirement-gathering methods employed in determining the system's requirements
	  1.3 By stating a general overview of the project in terms of purpose and benefits
	
	2) <u>Providing URS study findings regarding the system/project requirements</u>
	  2.2 By describing specific requirements of the product/system
	     2.2.1 Content structure requirements
	     2.2.2 functional requirements of the system in terms of modules
	     2.2.3 non-functional requirements
		1) <u>Providing a general description of the system/project</u>
		  1.1 By stating the purpose and scope of the document
		  1.2 By stating a general overview of the project in terms of general and specific purposes and what is required.
		
		2) <u>Providing specific description of the system to be developed in terms of specific requirements</u>
		  2.1 By providing a general description of the system
		     2.1.1 Product perspective (in relation to other related products/system)
		     2.1.2 the system's general capabilities in terms of benefits
		     2.1.3 By describing specific features of the portal and user characteristics
		     2.1.4 Operational environments, constraints and dependencies

Table 6.1: Structural Features of URS Reports for Past Projects   Continued

URS A	URS B	URS C

2.2 By describing specific requirements of the product/system
    2.2.1   key areas of the system requirements
    2.2.2   functional requirements of the system in terms of modules
    2.2.3   general requirements of the system in terms of key features
    2.2.4   documentation requirements for successful deployment of the system
3) <u>Identifying any design and external constraints</u>
   3.1 By identifying the issue the system will address
   3.2 By identifying the risks involved and assumptions relating to the system
   3.3 By providing recommendations for the issues identified
	3) <u>Providing the proposed solutions based on the URS study findings</u>
	   3.1 Information Architecture design
	   3.2 Information Architecture brief
	   3.3 Wireframe design
	   3.4 Design visual
	   3.5 Design rationale
		2.2 By describing specific requirements of the product/system
		    2.2.1 key areas of the system requirements
		    2.2.2 functional requirements of the system in terms of modules
		    2.2.3 general requirements of the system in terms of key features
		    2.2.4 documentation requirements for successful deployment of the system
		2.3 Identifying design concepts

However, judging from the more simplified and varied versions of the existing reports, it can be said at this juncture that modification to the general structure and details included depended on the PD team handling the project, and more significantly the actual writer(s).

The URS written for Project C went by the template quite closely in both the structural pattern and the content but was also developed further in section 2.3 to include design concepts, that is visuals of the web designs in place of the written, linear prose. Evidently, some parts were missing such as the requirement study details along with the findings. According to KAS, the visuals were a new development for company A. Placed as the 'sole content of communication' (Mirel, 2004 p. 383), the writer transformed written facts into a form that was believed to be more meaningful for a technical audience. It is difficult to describe a specific move for parts like this especially in using genre theory originally developed for 'alphabetic practice' (Graham & Whelan, 2008, p. 68). Nonetheless, the communicative purpose of the URS remained similar with respect to specifying and describing what the user required from the system.

In summary, due to the above constraints, the textual part of the study and the main discursive features in this present study were analyzed to explain and substantiate the findings on context rather than performing an extensive quantitative analysis of features of the text. The analysis of the URS text can be said to be complementary to the investigation of its processes of construction, thus the analyses in this chapter will be focused on examining what is in the text and how that relates to the context. It is not aimed at establishing a pattern or regularities across texts or generalizing the findings.

6.3 Overall Structure of the URS Text for the MCP Project

In chapter 5, the editing stage of the URS report for the MCP project showed that revisions to the report drafts were mostly content related. Table 6.2 illustrates the content of the URS report extracted from the findings obtained in chapter 5.

Table 6.2: Content of the URS Report for the MCP Project

Section/details added	Content
1.0 Introduction (Drafts 1-2)	
1.1 Purpose of document	States briefly what the document will be about. Usually a standard statement evident across other URS reports at Company A.
1.2 Scope of document	States what specific requirements the document will cover
1.3 Glossary & abbreviation	A two-column table of abbreviation and descriptions. Defines terms which some client may not know. Standard section.
1.4 Overview of the project	States the aim(s) of the project and explains in bullet point form the different criteria or requirements required to fulfill the objectives of the portal. This section was taken/adapted from the client's tender document and the company's proposal. Also consists of two subsections: 1) Project/Client background section which explains briefly the general features of the portal (MCP) and client details. 2) Mission and Vision of the MCP project

Both these subsections were taken from the client's tender document, not rewritten or rephrased to preserve the accuracy of the client's details – to stay 'safe'.

Both (1) & (2) were not stated as required sections but KAS made a choice to include 'everything' as it was said to be 'more valuable to the project.' |

Table 6.2: Content of the URS Report for the MCP Project Continued

Section/details added	Content
2.0 Requirement Study Methodology (Draft 3)	
2.1 URS workshop 2.2 Online Survey 2.3 System Study 2.4 Meeting with related agency 2.5 Discussion and review	Provides details on the tools used to obtain the requirements of the portal as well objectives of each method. A summary of the findings is also given including proposed content and services of the portal Details 'filled in' as and when received from team members.
3.0 Specific Requirements	
3.1 Target audience	Provides brief details on the user group of the portal (MCP). Four main user groups have been identified based on the requirement study.
3.2 Content Structure Requirements	Gives brief details on how the content of the portal is to be structured in terms of the main categories, their specific contents and target users. Also provides diagrams of the Information Architecture (IA) or website blueprint and IA briefs for each content category.
3.3 Functional Requirements	Provides brief details on the functional elements of the portal such as Login, Search, and Settings, among others.
3.4 User interface requirements	Provides details on the MCP design and interface including the various features and purposes or aims. With the URS for the MCP project, screenshots of designs are also given.

The overall structure based on the interview data and the format of the URS provides an overview of the sections and content of the report. The next section takes this up further in order to carry out an analysis of the macrostructure of the URS report followed by micro level analyses of language use in the document. The investigation on the processes of the URS report construction in this present study has revealed that the nature of the

problem to be solved and the requirements for the intended portal had already been identified or established before subsequent work on the project and documents were carried out. Taking on from that first step, the PD team's task, therefore, was to create technological solutions that can deliver the business owner a business advantage. The URS then is the document which describes in totality the "requirements" of the portal (what the portal is all about and what it should be able to do) encompassing the original client's requirements and the associated solutions. In the process, the team consulted the actual user and relevant material sources to get an understanding of the context of the project in relation to the client's aims, needs and aspirations for the portal. It has been seen in Chapter 5 that the PD team observed all processes of the document production starting from generating the contents right through to the drafting, peer reviews and delivery. The URS took shape from these different practices and activities. The question is how is all this conveyed in the URS text?

A total of six URS of six projects were collected in which only reports produced from 2009 onwards and written by different writers were chosen for analysis. This is to ensure URS reports were standardized according to the required company guidelines. The analysis of the URS reports, although small in sample, did reveal three different sections which can be classified broadly as:

1) The introductory section, or the Preliminaries introducing the project and its needs (sections 1.0-1.4)

2) A middle section devoted to explaining the steps taken to obtain and verify all requirements (sections 2.0-2.5) and

3)   A Design solution section containing all the necessary requirements and solutions.(sections 3.0-3.4)

Looking at the three sections broadly suggest that the URS report resembled a pragmatic, problem-solution pattern. These results are consistent with those obtained from previous studies such as Yeung's (2007, p. 164) and Kwan's (2017, p.18). Yeung's overall framework of business reports shows that business reports often begin with a problem and ending "with particular solutions" that are of "practical value of application". Kwan's analysis of Information systems (IS) articles showed a 'problem-solution paradigm' or methods of inquiry found to be prevalent in the computer science and IS fields (Kwan, 2017, p. 18). As discussed in Chapter 2, with the URS report, there may be some similarities in the overall framework where the focal point of discussion or analysis is the actual requirements of the system, application or portal. The resulting findings were used to formulate the solutions which were then . described in the URS report. No concluding section was found, as could often be seen in a conventional report. The textual features of the URS report will be further described below.

6.3.1 The Introduction: Setting the Preliminaries

The overall purpose of the whole Introduction section was ascertained by viewing it as a unit of discourse. Analysis of the sections appearing in the collection of the URS reports show that the Introduction provides the preliminaries of the project, but important ones that introduces and establishes the project 'initiative' and its parameters. In other words, the preliminaries establish the intended or desired portal and features in general terms. Looking at the general pattern of description within this section, there is a general progression of ideas starting from a statement of the purpose of the document, followed by the rationale behind the initiative/project or objectives, and the 'product' initiative in

question. The requirements of the said system or applications then are introduced, and in some URS, are explained in detail.

Of course, the specifics of the Introduction can readily be seen from the overall structure (format and content) as are shown in table 6.2 in its simplistic form. These are the purpose and scope of the URS document, a list of project team members, the Requirement Methodology, results and findings, and an overview of the project respectively in that order. Feedback from the writer of the URS and other team members suggest that the Introduction was often regarded as 'general information' or preliminaries and given less priority than the requirements and solutions due in later sections of the URS. It was stated that the client sometimes 'don't bother to read these parts" as they were already in the know of the project and their requirements of the said portal or system and the solutions the team was proposing (KAS, personal communication, July, 2012).

However, the same cannot be said for the requirement methodology section as it was an important aspect of the project, hence was a required section in the URS report. An analysis of the final URS shows that the methodology section was given its own place exclusively from the other parts within the preliminaries. As the writer of the MCP project URS, perhaps he had this freedom of choice to move the different parts/section around depending on what he saw to be important and deserving attention.

In this case, the methods used to obtain the information on the requirements (RQ study methodology) was to him one of the important elements of the URS as well as the project. Closer examination of the specific section shows use of language that did not just report the findings in a general way but could be interpreted as justification for the RQ study.

What is also interesting is that despite giving just the preliminaries, words were carefully chosen to show initiative and commitment of the team to the client. Here are some excerpts to illustrate this:

(1) (The client) proposes to migrate and revamp the current portal in the new version using (system/application). The portal <u>must fulfill</u> mandatory features required by (governing body) …the mission of this project is to develop a portal that would be <u>a reference point</u> for the local agencies……

<div align="right">(Project C, Overview of project p. 2 lines 10-16)</div>

It can be said that the underlined words such as "must fulfill" show commitment to the client by modal 'must' and reinstating the main requirement of the portal as a 'reference point'. As mentioned previously, the client's interest was to enhance the portal into becoming a 'one-stop portal' and 'main reference point' for its users, particularly the public end user.

(2) The MCP project <u>is envisaged</u> for the (client's name) need to enhance the current set up of (current platform) from providing links of services from multiple agencies to a single platform for services via the MCP…. The MCP project aims to implement and <u>fulfill</u> certain criteria which will make the portal <u>more informative and useful</u> to the target user:

- <u>Reduce the cost</u> of managing the portal. <u>Using content aggregation features of our proposed portal engine</u> will allow content to be updated . . .

(MCP Project, Introduction & overview of project, p. 2-3 lines 4-6 & lines 16-22)

In the above excerpt, "is envisaged" fulfill" and "more" illustrates the company's commitment in improving the portal for the user. In addition, the added adjectives "informative and useful" are features of the portal . The point "reduce the cost" is also noteworthy of mention. As cost can be a major consideration in any project, this could be a discursive strategy to appeal to the client's business interest.

In example (2) above, the idea of reducing cost is set against the technology that the team had in plan for reducing cost. The phrase 'using content aggregation features will allow content to be updated once at source…' placed after the objective statement of reducing cost laid out explicitly the technology that the company would introduce or implement to do so. In that sense the company appears to appeal to both the business and technological aspects of the portal. Another example taken from URS Project B show a similar discursive strategy, as is shown below:

(3) This (new) system <u>will</u> enable to store and retrieve (…) information via the Internet. Having a <u>centralized system</u> <u>will enable</u> (…) to <u>have a concise, detailed and accurate information and statistics on (...) in this country</u>…. The (name of system) will be developed using Microsoft platform and to be installed in (client's) existing server at (location)…

(Project B, Overview of project p. 2 lines 3-6)

In example 3, aside from the use of the modal "will" indicating certainty with respect to the capabilities of the system, it can be seen that within one small paragraph, the objective of the portal or system is interspersed with the technologies required. Looking at this rhetorical pattern, it can be said that the URS does address the business and the technological interests of the various stakeholders. In addition, by introducing the portal

or system as being "centralized", the URS is clearly indicating the portal's benefits to the end-user with respect to the   information needs of the public or end user.

It must be mentioned at this point that the sections across the URS analyzed showed some variation in the details provided and in the arrangement of the different sections within the introductory/preliminaries section. There are a few URS without the project overview section but instead going straight into the purpose and scope of the document. This can be observed with the older URS report written around 2009. The arrangement of the sections can also differ. With the MCP project URS, the project overview comes after the middle section on methodology, while the others are positioned before that.

The rhetorical pattern in the development of ideas in which the aims, objectives and requirements are explained within the different URS texts also varies slightly. This variation made it rather challenging to ascertain specific move pattern but in spite of these variations, the discourse structure of the specific introductory unit remains identifiable.

6.3.2 The Middle Section: Justification Unit

Analysis of the URS reports show that the middle section of the URS verifies the requirements and sets the ground for the formulation of solutions. With reference to Yeung's (2007) model of business reports, the URS reports appear to have a similar section where the methodology or steps taken to justify the recommendation are given. In the URS, this step refers to the RQ Study used to gather the client's requirements. Although labelled as the 'Requirement Methodology' by the writers, not all the URS projects used the same methods, and not all methods were conventional methods of data

collection such as survey and questionnaire. In the case of the MCP project the study of best practices and benchmarking activities, as well as internal meetings and discussions with the client were included as data collection methods and thus described fully by the writer.

It would be fair to say that with the URS report is research based but with respect to IT, and based on the nature of the RQ methodology and findings sections, the report specifically reflects the existing state of the field in relation to portal or systems development. As mentioned in Chapter 2, Kwan (2017, p. 18) referred to this situation as " seeking knowledge bases" to ground the research/study within particular fields thus increasing the study's credibility. In the case of the URS report, the RQ methodology illustrates credibility in terms of method of acquiring the information on the client's requirements and in terms of the design of the respective solutions as exemplified in the extracts below:

(1) Research on the current trend of corporate websites has been done in order to find the best practices.
(2) Distribute the questionnaires to the project owner and relevant stakeholders (sector and unit) in order to get their feedback on the requirements
(3) Distribute questionnaire during URS session, meeting with project owner
(4) Conduct internal group discussion with development team, usability team and project management team.

By specifying the methods of data collection, and on that note being specific as to the detailing (e.g. 'current trend' and 'best practices'), The RQ Methodology section not only justifies the requirements but constructs knowledge of the appropriate solutions. From the perspective of discourse structure proposed by Samraj (2016), the middle section of the

URS can therefore be regarded as one key functional unit (KFU) appropriately referred to as Justification. In the extracts above, these justifications are provided in the underlined phrases in (4) 'a study on current trend of corporate websites' and 'best practices' as well as distribution of 'questionnaires to project owner and relevant stakeholders…' that signaled reliable sources.

In examples (2) and (3), the URS report made use of details to convince the stakeholders (audience) of the reliability of the requirements obtained. For instance, meeting project owner, and followed by site visit shows efforts taken by the team to get first-hand pertinent information from the key stakeholders concerned. Similarly, in extract (4), 'internal discussion' with 'development team, usability and project management' indicates the extensive way that the requirements were being sought, discussed and verified. Extract (5) provides another example, but this time to illustrate use of language to justify the RQ methods used by the PD team:

(5) The <u>workshop successfully resulted in</u> determining the direction of the MCP, setting the objectives and goals to achieve, defining the portal's target audience and identifying contents and tasks of the portal. In addition, the participants also provided their feedback on the <u>preferred</u> Graphical User Interface (GUI) for the portal <u>based on analysis and benchmark</u> of other similar in nature portals.

In example 5, one can see several ways in which 'justification' is being achieved. First, the underlined phrase ' the workshop' which 'successfully resulted in…' illustrates the use of words as justification. The fact that the insertion of the adverb 'successfully' itself justifies the workshop as RQ method. Without the word, the sentence would not be wrong grammatically or in meaning. The word "successfully" only amplifies the result of the study, thus illustrates the meaning-making potential of language use.

6.3.3 The Solution Design Unit

The Solution Design Unit reinstates all requirements and describes the proposed solutions. For instance, the "user-centric' nature of the MCP, as mentioned previously, was being designed as following a content structure that was based on four main user groups, listed by topic and further categorized into sub-groups. These were described briefly, with each of the features listed out in bullet point form and table format. However, the URS does not provide elaborate explanations, but rather showcases the solutions vis-à-vis the requirements. KAS stated that the design of this section should be able to clearly and concisely show all relevant details so that they are easily understood by the respective persons who need to act upon the various details. The solution design unit is divided up into several sections as listed below. In order to discuss them as discourse structures, they will be referred to as sub KFUs namely as follows:

- General requirements

- Specific requirements

- Content Structure requirements

- User Interface requirements

Analysis of the URS for the current project MCP, the above sections, or KFUs provide details on the solutions, be they content structure, wireframes or designs. Kwan (2017 p. 18) called these "artefacts" or "outcomes". However, analysis of the URS reports of past projects show that not all the sub KFUs apply. According to KAS, these were dependent on the nature of the project, therefore the nature of the solutions. This is perhaps understandable for any requirements specifications. The requirements for an engineering

product might differ from IT products, to quote an example. What is perhaps interesting with these sub KFUs is the way the information was presented and arranged. It can seen that the different sub-KFUs differ in their content details but are similar in the way the various features or attributes of the portal or system is described using the table format. This observation is consistent with Kwan's (2017) who found that the 'artefacts' such various 'constructs' of the requirements, prototype of the solution and others could be presented in different ways.

With the MCP project, due to its nature, there is a very detailed content structure requirements section that is accompanied each by graphical 'artifact', namely the Information Architecture (IA) diagram or website blueprint and content matrix for each of the different user groups. Looking at previous data, the PD team, or rather KAS, called these 'visualized output' representing the team's solution in visual or diagrammatical format. Accordingly, these IAs and wireframes were important, and which differed across different projects and most likely different vendors. Certainly, Company A took pride in the IAs, referring to them as their niche. The IA supplemented by the web designs are conceptualization of the client's ideas, vision or goals presented in the form that is preferred by all stakeholders. Below are some excerpts of the requirements sections taken from the MCP report in the same way as they were presented as examples:

(6) Specific Requirements:

Attributes	Description
Search	Help navigate users to most <u>popular</u> search items and provide the admin with search statistics
Content management	(name of system) <u>simplified</u> three-tiered system of articles makes organizing <u>your</u> content <u>a snap</u>…Your users can rate articles, email them to a friend.

(7) The requirements gathered for content structure lead to the following directions:

- Content presentation is user-centric based on four main groups, i.e. citizen, Business……...
- Main content structure to be based on Topics

(8) Functional Requirements

The registration process involves filling in and submitting a registration application form…….

(MCP Project, p. 42 line 1)

(9) To create a <u>high-usable</u> website, this registration form has been created to <u>maintain</u> <u>simplicity and usability</u>……….

(MCP Project, p. 42 lines 3)

Examples (6), (7), (8) and (9) are extracts taken from the Requirements sections of the MCP project URS report. In this section, the technical requirements of the portal are presented in a brief manner, often in a table format such as in (6) and as KAS described it, written in a 'straightforward' manner (KAS, personal communication, April, 25, 2012). There were also few uses of technical terms or jargons. Again, like the preliminaries, language wise, one can see use of subjective words and phrases which express the positive elements of the portal. This is a point worth noting, as the Solution Design section albeit the Requirements are meant to state the facts of the system. The rhetorical intent is to inform the client and other stakeholders of the facts. However, this might not be true in total.

For instance, as underlined, "popular" and "simplified" are adjectives that highlight the attributes of the portal. The phrase "your content a snap" is idiomatic on the most part, while "high usable website" and "maintain" simplicity and usability are features of the portal which act as an appeal to interest. Putting this usage in the context of the MCP portal project and the processes of the URS construction, one can extrapolate from these

findings and say that sociorhetorically, the company's commitment to the client and of wishing to provide value-added solutions as well as sharing of interests and project outcome would necessarily impact upon the text in terms of conveying all possible details of the portal in achieving these goals or motives. However, the writer(s) were also constrained by the template or industry-specific needs, thus the more structured content and approach.

The Solution Design Unit/section is highly graphical whereby tables, diagrams and visuals are used to represent and organize the content. As mentioned, the project team members called these the "visualized output" designed to improve accessibility and understanding among the stakeholders. They are reportedly preferred by the client for their clarity especially in helping them see the actual website and how it might function. These graphics such as the IA can also be referred to as various "instantiations" of the solution necessary for doing the project. The IA, as the website blueprint, structures the website content showing visually what headers and footers will be used, the different categories of content and their placement, the actual contents as well as the overall design. This diagram is designed by the Information Architect but would be used by the technical team and Systems Analyst to design the database structure required for coding of the system.

Some of these visuals, if provided within the context of portal development, are used by a different team to assess the look and feel and usability of the portal. With the MCP project, design concepts were included in the form of actual screenshots of the website. To further aid understanding, the writer and the website designer provided design rationale to accompany the screenshots or placed in captions within. It was stated by KAS

that this use of captions was only practiced for the MCP project URS. All in all, it can be said that the whole solution design section promotes understanding of the portal in terms of its user interface.

The "sociorhetorical" spaces (Kress, 2008) for each relevant player in the project are quite clear. The present study revealed this to be true. For instance, the table of requirements and description are to be used by programmers for coding purposes. The designs are to be used by the usability team responsible for the "look and feel" of the portal; not to mention the client whose interest was for the usability and functionality of the portal website. The multimodal construction of the URS report for the MCP project URS was necessary, and the IA diagram unique to the company. One can see a pattern whereby text is interspersed with images for the basic reason of making the project more visible, but also for educating the audiences. The rhetorical intent of the Solution Design Unit or section of the URS is rather clear in that respect. However, what can be said about the texts in terms of its coherence or purpose if it were made to constantly adapt to the different readers? More importantly, how can scholars better analyze these texts to get at an understanding of their structures? Swales (2016 p. 33) in writing about analyzing cultural artefacts such as artworks stated that "structural arrangements of context and image" is inherent in these genres, resulting in the production of "fluid" texts that "resist the traditional move structure" analysis common in the humanities.

In the URS texts, broadly structural arrangements could also be seen. The writer(s) sees it to be necessary for describing and showing the benefits of the various features in relation to the positive outcome of the portal project. In fact, with the MCP project, several design concepts were included, for choice, including the inclusion of design

rationale placed within the actual design. This discursive strategy was innovated by KAS and FAR, the website designer, as it was seen to be useful for multiple stakeholders involved in the project, in particular the non-technical members on the client's side. To share Swales' argument on this, the PD team members, as experts, "convey their expertise by adapting the contents through use of text and images" (Swales, 2016 p. 33).

Yeung (2006 p. 165) argued that the business reports had a "rhetorical intent to persuade readers to act", thus evidence of a promotional intent. Findings of this study show that there may be evident of promotional intent but more so for purposes of identifying the needs and features of the portal and relating to the stakeholders through shared knowledge of the proposed portal. The URS report was written to inform stakeholders of the requirements and associated solutions/features that would increase the level of confidence in the team's solutions. The next section deals with the discourse strategies realized linguistically by the writer and various contributors of the URS.

Findings of the study have revealed that the processes involved in the construction of the URS report resulted from the communicative exchanges among the key players that led to the production of written and visual texts coordinating work on the project and the URS report. Manifest within these processes were adherence to organizational standards and industry guidelines, which textually had a bearing on the structure of the URS, recognition of the social needs of the client and end users, and observance of the company's culture with respect to its working philosophy.

By taking the perspective of a text or genre as social action, the URS report can therefore be seen as performing two roles: one as fulfilling the documentation

requirement of IT development project, and second as providing a socially-shared space for sharing knowledge about the intended portal in question, thus an understanding of its requirements and longer-term outcome for the relevant stakeholders. The assumption is that the users of the URS report (the client, representatives of the various agencies and internal PD team members) recognized these dual roles of the URS based on their knowledge of its typified form and the action that it is used to accomplish.

Pragmatic because the writer and contributors to the URS for the current MCP project was basically interested in documenting details about the portal - what it is and what it does or should be able to do in as clear a manner as possible within a formalized standardized industry approved format or structure. According to NAZ, all this was done "within the project scope; nothing more and nothing less (CEO, interview, 2012). In that regard, as far as the writer was concerned, all that is required in terms of the different elements and sections have been pre-determined. Thus, staying within standardized practice of software documentation and allowed format fulfilled the professional aspect of writing the document.

Nonetheless, there could be rhetorical considerations which might have a bearing on the structure and language use in the URS text. It has already been seen that the content and progression of ideas within the different sections could reflect what the team believed the client would want to see or know in terms of the project outcome for their own clientele – the public user. For instance, the business needs, the technological strategies/measures and the wording used show a rhetorical intent of persuading the client quite clearly. KAS saw this as "writing from the client's point of view" (KAS, interview, 2012). It can perhaps be safely said that the writer(s) of the URS reports wished to remain

within the stipulated guidelines and allowed format but exercised some agency to modify within the different sections and around the overall structure.

6.4   Language Features of the URS Report

The URS report is all about the requirements and solutions and to that end the writer was interested in informing the client of the portal requirements as clearly as possible. Thus, team members pointed to the need for 'clear description' of the requirements by means of "simple, basic English" to avoid the potential 'ambiguity" that could result from "wordiness" and use of "jargons and big words" (CEO, interview 2011). Here the discourse surrounding clarity in writing/language use seems to be prominent and attended to the pragmatic need of the URS report. In the same line, there was the rhetorical situation around making the portal website more user-centric for the public end-users as a result of increased awareness of the need to provide accessible information regarding all aspects of living in Malaysia for the different groups of users. How are these more subjective aspects of the requirements communicated through via the URS report? This section of the thesis will attempt to address research question three, that is 'what are the main discursive features of the URS report?' In the discussion of the discursive features in this thesis, a few considerations need to be put in place: These are:

- The analysis of language features in this section of the thesis was qualitative in nature and complementary to support the findings on processes of construction; which is the main focus. Thus, the quantitative element in this thesis is also complementary.

- The writer and contributor to the text modified certain parts of the text, but they were also keeping to the official URS format. Thus, the text is quite limited

in the choice of word being used. The analysis of language features was not extensive but exploratory to support the qualitative findings of the study.

The information on context in this study is derived from the investigation on processes of the URS text construction, which has been summed up as leading towards a text which is oriented towards clear, layman description of facts but which assists the user or consumer of the text in their understanding of the proposed requirements or solutions for the portal in question. This has some relation to the feedback on language use given earlier by KAS, the main writer and reviewer of the URS report. The thesis revisits this comment here to help provide an emic understanding of the use of language in the writing of the report. It was said that:

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Language is a selling point. Is it convincing enough? It is one of the goals for writing (the URS). If we do a really technical document but not meaningful, *takde value lah* (no value).   The rationale and benefits we put in will help the business…how is your 'reach' different from others?

(KAS, personal communication, Nov 25, 2015)

The thesis sees the subjective aspects of the requirements as being communicated through both structural organization, which has been discussed above, and language use, whether the writer(s) intended it to be. In terms of language features, a good example can be found in the Requirements section, where despite being "technical" there was evident of language use that could be described as promotional or persuasive of the PD team's proposed solutions. There is the aim of achieving clarity in writing but there appears use of language features that made a certain appeal to the client; either in business sense or technological, or both.

The fundamental consideration for the PD team members was to provide a service that is useful to the client as well as the public. If this is taken to be the key issue, then the URS report can also be regarded as a document which establishes the company as the vendor of choice. Connecting the sequence of descriptions throughout the text, it can be seen that the company's commitment to the client's interest in serving the information needs of the public users can be seen in the way the URS report was constructed in terms of its overall structure as well as language. Language was used to describe the portal in terms of what it should be able to do as well as to highlight its technological capabilities or positive outcome. It is interesting to see that these discursive features were realized within regulated and standardized practices of software documentation and standardized template for URS report.

In addition, the company's aim of providing value-added solutions was not expressed directly in the text but rather demonstrated in the text through the requirements (KAS, interview, 2014) as has been seen in the discussion above. Analysis of the URS texts show that 'value' was also realized linguistically through various language features, which will be discussed in the next section. To explore these various considerations, a discourse analysis of the texts was conducted on the URS texts, paying emphasis on language features that reflect these considerations. It is surmised that based on the overall macrostructure of the URS report and the communicative purpose of the report, language use in the texts would be centred on informing and specifying actions (what the portal should be able to do) and evaluating positive aspects of the portal.

Grounded on results of previous studies on linguistic features of texts that inform and specify actions and those that evaluate, the following features were selected as representative of these discursive needs :

- Verb forms to analyze how the content of the discourse surrounding the portal enhancement was being represented in the texts (Mason & Mason, 2012)
- "Evaluative lexis"/ "positive lexis" (Yeung, 2007; Tse & Hyland, 2010) indicating how the portal is positioned and evaluated for both descriptive and possibly persuasive elements

To avoid doing a random selection of features and to get at some definable pattern of language use in general, the texts were run through basic keyword analyses using Ant Conc version 3.3.4w 2014 (Anthony, 2014) to examine the general pattern of language use in the six URS texts. It was found that there was prevalent use of verb forms in the text as well as adjectives which provided confirmation as to the features that needed to be explored. Although doing so might appear selective, it was required to explain the use of language in the report in its authentic form. Later, the data was analyzed 'holistically' to get at different categories of the features to account for the data; before conducting an in-depth analysis of the URS text for the MCP project. It has to be mentioned here that the analysis of the text in the study was exploratory and was based on the linear parts of the text. The study gives full recognition of the importance of the non-linear parts of the URS report (IA diagrams, designs etc.), but these were beyond the scope of the study.

6.4.1 Commitment to the Client's Interest in the Project Outcome

As previously mentioned in this chapter, and the findings obtained from the processes of the URS construction, the client was interested in improving the portal, particularly in relation to the information needs of the end-user. Results show that there is a pattern in the use of linguistics features, notably "actional" verbs (Mason & Mason, 2012) that describe actions often associated with activity or processes. It can be said that the prevalence of the action verbs distributed across the various URS reports attests to the overall communicative purpose of the URS which is to describe the portal in question in terms of what it should be able to do either in general ways or specific to the actual nature of the project. These verbs were also found to match the purposes of the different key functional units (KFUs) in the report texts, that is to establish the portal or system, to justify the requirements and methodology and to highlight the design solutions formulated for the proposed portal or system. The following examples show the occurrence of 'actional" verbs generally found in the collection of six URS texts:

(11)   Verb 'provide': frequency of occurrence 40 times

        i.   Provide value-added services…
        ii. Provide information and content
        iii. To provide users a platform for…
        iv. The gradients/shadows are to provide the sense of depth….
        v. Document is intended to provide

(12)   Verb 'develop': frequency of occurrence 25 times

        vi. ….is to develop partnership and compromise among government, NGO and private sectors.
        vii. Key areas…to analyze, design and develop the architecture for the system
        viii. (The company) will develop the initial website…

ix. The ( ) system will be developed using Microsoft platform.

(13) <u>Verb 'update': frequency of occurrence 27 times</u>

  x. User will be able to perform data entry….and to update the incomplete data

  xi. These are the users who will manage and update the contents of the website

  xii. The document is prepared to update the defined requirements that was captured or identified….

(14) <u>Verb 'view': frequency of occurrence 25 times</u>

  xiii. Users will be able to view the services by topic based on category

  xiv. Members will be able to view certain files which public cannot view

  xv. System administrator will have the privilege to view the data….

  xvi. The public can view comments, to reply….

(15) <u>Verb 'design': frequency of occurrence 36 times</u>

  xvii. Our proposed portal engine…is also design (ed) with an Information architecture (IA) proposition…

  xviii. The registration form is design(ed) for SSO readiness….

  xix. This is the proposed concept design(ed) for the new website.

(16) <u>Verb 'Access': frequency of occurrence 39 times</u>

  xx. …and allow them to access online services

  xxi. …improve the usability of accessing the content and services….

  xxii. …prevent unauthorized user from accessing the system.

(17) <u>Verb 'allow': frequency of occurrence 15 times</u>

  xxiii. …obtain user information and allow them to access online

  xxiv. To allow integration from another application such as e-Notis

  xxv. This functionality allows the authorized (name) personnel to perform data entry

The following examples show use of verbs that express action specific to the actual project in question.

i.   Based on the functionalities of the (name) portal, a user would be able to *navigate* through a series of functions….

ii. Clean, simple easy *to navigate* and find information…

iii. The right bar layout – able to *change* the position /arrangement of the banner and module

iv. The polling survey – able *to generate* report based on survey…

v.   This system will help (name) to *have* access on up to date and accurate information….by viewing reports and being able to *manipulate* the variable to see….

vi. The system should be able to *populate* relevant cases to……

vii. To *create* a high(ly) usable website….

With many of the verbs, either as they occur in a phrase or stand-alone, one can see that they are IT specific and are most likely to be familiar to those in IT and those generally familiar with IT terminologies. For example, '*populate*', '*manipulate* the variable', '*navigate*', '*update* the incomplete data', '*access*' and '*accessin*g the system', '*designed* for SSO (single sign-on) readiness' and others. It can be said that apart from signifying actions, these verbs when used within the different phrases, with a noun entity indicates capabilities of the relevant portal or system or applications. It can be assumed that the meanings the verbs carry are shared among the stakeholders who can associate the meaning and function or capabilities. Analysis of the URS text for the MCP project shows similar occurrence, as can be seen in the extracts below:

(18) Introduction section of the URS report for the MCP project

a. The purpose of this document is to **collect, analyze and determine** high-level needs and features of MCP

b. The document **defines** the target audience of the portal **and focuses** on the features and functionalities of the portal

c. …**to fulfill** the needs of the target audience.

d. All these requirements **shape and mould** the development of the portal

(19) <u>Preliminaries: Overview of the project section</u>

a. **Reduce** the cost of managing the portal

b. using content aggregation features of our proposed portal engine such as feeds will **allow** content to be **updated** once at source and **utilize** many times to ensure information currency;

c. **Increase** the number of government agency services. Our proposed portal engine would not just **cater for** increase services but is also **design** with an Information Architecture (IA) proposition that is **personalized to attract** users retention;

d. **Provide** value-added services that are currently **not provided** by other industry player

e. **To improve** the appearance of a more comprehensive portal, interactive, integrated and communicative through the latest technology; and

(20) <u>Preliminaries: Project/client background section</u>

a. **It links to** more than 1,200 (name of agency) portals and websites using navigation method which **simplify** and **facilitate** the search for relevant information...

(21) <u>Solution Design: Content Structure Requirements section</u>

a. Content presentation **to be** user centric based on the ….main user groups

b. Main content structure **to be** based on Topics

(22) <u>Solution Design: Functional Requirements</u>

a. The registration process involves **filling in** and **submitting** a registration application….

b. This search is **design to search** content within the portal

c. This easy to use registration form has been created to maintain the simplicity and usability….in order **to obtain** user information and **allow** them to access online services and transactions….

With most of the examples given, similar pattern of text phases and sequence of meaning appear at the different sections of the URS text. However, the sentence form and

how it is presented vary. Some have been written in the passive form and arranged in bullet point format, which suggests a style oriented towards presentation of facts. According to KAS who was the main writer of the report, this pattern was the norm for requirements sections to ensure clarity of the requirements stated. Objectivity therefore appears to be a key element when writing the parts identifying the various requirements.

It can be said that the discursive strategy observed in the URS reports goes in tandem with the primary purpose of the URS report in terms of telling readers what the system/portal is and what it does. Feedback is consistent across participants regarding the nature of the URS describing it as a document which "strictly detail" the 'what' of the system in a 'straightforward' manner. KAS stated that it was all about 'sticking to the facts' and making the URS report 'brief and to the point'. A junior member of the team whose role in the project was producing the Information Architect (IA) diagrams rejected the use of 'flowery' language to avoid ambiguity that is often associated with narrative writing.

The approach to the URS in this case is a pragmatic one in that the URS is regarded as a transmitter of information (Rude, 2009), and thus the need for objectivity and accuracy in the description. However, further examination of the URS for the MCP project revealed that language use also reflected meaning-making strategy or resource for the writer to do more than state what the portal/system is, but describe benefits of the technology behind the portal in relation to the information needs of the users and the user experience (in using the website).

6.4.2 Expression of Value

As suggested in the previous section, although the goal of the URS report seems to be objective reporting, further analysis of the text shows that this was not totally the case. The URS report for the MCP project can be said to be more descriptive in nature, even in the sections which KAS had said to be more technical. A general observation of the text shows substantial use of adjectives and verb forms that appear to function as *evaluative resources* to describe the portal positively as one that can fulfill the client's requirements and thus is persuasive. These adjectives and verb forms illustrate the 'value' aspects of the portal which have been used in the report. Contextualized within the context of the report construction, and the sociorhetorical needs of the writing situation, these features when used in the URS report, related to the needs of the client as well as the outcome of the portal. The tables that follow provide examples of words and phrases used and the different sections in which they are found, as well as how they have been described.

Table 6.3: Use of Adjectives 1

Phrases/excerpts from clauses	Section of the URS Report	Linguistic use evaluating the feature
(23) Purpose is to analyze **high level** needs and features of MCP	Purpose of document	Grading- 'high level' instead of 'low level' needs.
(24) **One-stop centre**	Client/project background Establishes the MCP portal	Improving outcome of the portal: lexical choice; probably IT-related
(25)…which **simplify and facilitate** the search for information	Project/client background Establishes the MCP portal	Relating to the needs of user: use of verb showing capabilities
(26)…and remains **interesting** for mobile users	Functional Requirements: Highlights design solution	Relating to the needs of user: lexical choice- positive adjective; positive attribute
(27) **Functionality rather than style**	Functional Requirements: Highlights design solution	Nouns; probably field-specific terms when applied to IT

Table 6.3: Use of Adjectives 1 Continued

Phrases/excerpts from clauses	Section of the URS Report	Linguistic use evaluating the feature
(28) **Detailed** information without the public having to go to……offices	Overview of project Establishes the MCP portal	Relating to the needs of end-user: using lexical choice- positive adjective
(29) **High(ly) usable** website	User Interface Requirements Highlights design solution	Relating to end-user's needs : lexical choice- positive adjective
(30)…has been created to **maintain the simplicity and usability** without **neglecting** the security	Functional Requirements Highlights design solution	Relating to end-user's needs and values using verb form + lexis. Field-specific; positive attributes

From the above examples, it can clearly be seen that the URS describes the portal in positive ways using adjectives and verb forms evaluating the features of the portal. Interestingly, these terms, words and phrases are also not restricted to the introductory section, where the preliminaries are but also in the requirements section.

Table 6.4: Use of Adjectives 2

Phrases/excerpts from clauses	Section of the URS Report	Linguistic use evaluating the feature
(31)…which will make the portal **more informative and useful**	Overview of project Establishes the MCP portal	Persuading. Use of comparative form 'more' as intensifier
(32) **More comprehensive** portal, **interactive**, **integrated** and **communicative**	Overview of project Establishes the MCP portal	Persuading. Use of comparative form 'more' as intensifier
(33) It uses the **barest minimum** of available space	Functional Requirements: Highlights design solution	Persuading. Use of grammatical superlative -est as intensifier
(34) **Well-labelled** text links	Functional Requirements: Highlights design solution	Relating to end-user's needs . Use of intensifier 'well'

Table 6.4: Use of Adjectives 2 Continued

Phrases/excerpts from clauses	Section of the URS Report	Linguistic use evaluating the feature
(35) The layout **makes** the segmentation of information **clearer** hence able **to improve** usability of accessing the content and services offered …	User Interface Requirements Highlights design solution	Intensifier: grammatical: comparative 'clearer'
(36) Make your MCP portal **more personalize (d)**	User Interface Requirements Highlights design solution	Relating to end-user's needs. Use of comparative form 'more' as intensifier

Table 6.5: Use of Adjectives 3

Phrases/excerpts from clauses	Section of the URS Report	Linguistic use evaluating the feature
(37) **Secure** environment	Project/client background	Lexical choice: positive adjective
(38) **High level** needs and features	Project/client background	Lexical choice: positive adjective
(39) To provide **personalized** information and services to the target groups	Requirement Study methodology	Lexical choice: positive adjectives
(40) **User-centric** approach	Content Structure Requirements	Lexical choice: field - specific adjective. Positive attribute
(45) Centralized online services from various agencies	Requirement Study methodology	Lexical choice: field - specific adjective. Positive attribute
(46) Usage of popular topics	Requirement Study methodology	Lexical choice: positive adjectives
(47) **Highly usable** website	Functional requirements	Lexical choice: positive adjectives. Use of Grading – 'highly'
(48)...this **easy to use** registration form	Functional requirements	Lexical choice: positive adjectives; positive attribute

Phrases/excerpts from clauses	Section of the URS Report	Linguistic use evaluating the feature
(49) **To enhance** communication channels	Requirement Study methodology	Use of verb form showing capability
(50) ...has been created to **maintain simplicity and usability**	Functional requirements	Verb form + lexis. Probably field-specific; positive attributes
(51) **Ensure optimum and effective** navigation	User Interface Requirements	Verb form + lexis. Field-specific and Positive adjectives

It can be seen from Tables 6.3, 6.4 and 6.5 that in showing commitment to accomplishing the project outcome, there is similar use of positive adjectives and verb forms to relate to the needs of the client and end-user. While in 6.3 these features could be found in the preliminary section of the report, the ones listed in 6.4 were extracted from the technical parts of the report which is the Requirements section. These features highlighted the website's potentials; if created according to the specifications the PD team had proposed. This is somewhat interesting as the more technical sections of the report are both informing and persuading at the same time. In addition, Table 6.4 also illustrates use of verb phrases that evaluate the features of the portal, perhaps in field-specific ways. For example, in the sentence 'the layout makes the segmentation of information clearer hence able 'improve' usability of accessing the content and services offered by MCP …' the benefit in terms of improving usability is clear for the user. Even though the object (user) is not mentioned in the sentence, the presence of the agent MCP suggests that the particular feature has been designed to assist users (whoever that might be) in getting to the information easier as offered by the client's portal. In many ways descriptions of these features made the URS report for the MCP project to sound less objective than what it was intended to be.

This situation could perhaps be understood by going back to KAS' comments during the editing stage of the writing process. His revision reflected his interests in making the text more meaningful by specific lexical changes. Indeed, most of the revisions were in fact on word choice that made the text more descriptive. Previous data shows that these changes in word choice seemed minor but made an impact on the meaning of the sentence. For example, the sentence 'make the text more interesting' was changed to ' will make the portal more informative and useful'. Likewise, 'high resolution imagery' was changed to 'high resolution images and graphics', to quote a few examples (see section 5.3.4).

The findings of the present study are consistent with the study done by McNair & Paretti (2010, p. 325) who argued that effective communication involving use of technology requires practices for using language and technology in effective ways to build "relational space". In networked collaboration examined in their study, for instance, language use in business and technical environments involves "clear transmission of complex information" as well as "social and affective language practices that build relationships, foster engagement and trust" (p. 325). In the present study, evidence of language use to that effect could be seen in the clauses and phrases consisting of words ascribing qualities to the portal in question, as discussed above.

With respect to Company A's aim to provide solutions of value to the client, it can be gathered at this point that the writer needed to use terms that the audience (client) could relate to especially when it comes to choosing a suitable vendor to work on the project. The "relational space" created was required to deliver an URS report that is clear and concise but also user oriented. However, use of 'social and affective' language, as highlighted by McNair and Paretti (2010), might be designed to build relationships or

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foster engagement but more so to place the company as a credible company of choice for IT needs.

Thus, one can see use of words that are not highly technical but are prevalent in the URS report for the MCP project as well as in previous reports. Analyses of reports for past projects (Projects A, B and C) show similar discursive features across all three reports, although in varying ways. Further investigation is required on the use of lexis within discipline-specific discourse. For example, it is interesting to see use of noun phrases illustrating the specific website's potential observed in the technical requirements section of previous URS reports at the company. To provide some examples, noun phrases such as *immediate access, information-rich reports, centralized database system, database to database integration and restricted user access* provide positive description of the specific website's features but are IT related. There may be a fairly good basis to investigate this particular use of language further given institutionally-specific nature of some of these terms, as is suggested by KAS' feedback below:

> There are the terms that is standard for us, for example my page is the private page so I re-write it to make it a personal page it's not private...because if private it gives different term or meaning from the user perspective. The words dynamic itself will be interpreted differently for different industries. For us dynamic like, for example, like when you kick in something, the search engine will push you the solution already. That's what we meant by dynamic. Through your experience you all can understand. Probably the public they may not understand that much. ICT Main as a client and also the agency involved in this project (are) from the IT department. So, they already know what they want.

<div align="right">(KAS, personal communication, July 18, 2013)</div>

It is also possible to link the findings of the present study to Mason and Mason's (2012) study in relation to the use of adjectival phrases. The present study has found that some adjectival phrases were used in relation to certain IT processes of website development. For instance, processes in creating user interface see use of adjectives such as high-resolution images and growing trend (in web design). Where clauses containing verbs are used, such as in the sentence "*The layout makes the segmentation of information clearer (clause 1) hence able to improve usability of accessing the content and services offered by MCP (clause2)*, 'actional" verb (Mason & Mason, 2012) such as *improve* was used together with the field-specific noun *usability*. Mason & Mason (2012) study on corporate environmental report found that linguistic features used in the report correlated with processes according to type of environmental sector laid out in the different sub moves of the report. Based on this observation, it can be said the analysis of language features in the present study hold some promise , although a lot needs to be refined.

6.5   Social Significance of the Text

Considering the use of positive adjectives in the URS text, it is possible to explain why throughout the text there exist specific kinds of adjectives/words. For instance, 'usability', 'centralized', 'functionality', 'growing trend', 'high resolution' and 'user-centric' among others, are very likely field-specific terms often used to refer to features of websites or computer systems in general. In the case of the MCP project, they described the benefits of the system, but not in the way that they were compared to classes of product or services other than IT. They show use of language features that are oriented towards usability and users thus were significant to the client in terms of addressing the requirements of a portal website that can meet the current, relevant and modern-day IT needs of the public users.

An important factor about the MCP project was the need to attend to the information needs of the public by the creation of a 'one-stop centre for all required information'. According to SHAS, a business analyst on the PD team, 'if you have the capabilities…to be part of a team, if you can contribute to society, why not help them?' The Project Manager stated that it was important to 'provide solutions that have value for the client'. KAS, the team leader and writer said that the client 'has changed' in that 'the content is more like what citizens want to find when they go to the website. It is not all about them (the client)'. Further in support of these views is the point made by the sub Project Manager that the "current online services do not attend to the needs of the public". These social objectives of the project needed to be considered by the PD team in creating the solutions for the client. The URS report was one of the means with which their proposed enhancement features of the portal were identified and relayed to the audience. The client had their own interest as well with respect to their target audience – the end-users of the portal/system that is those who can benefit from using the portal. As stated in the MCP project proposal:

> *The idea is to let the system support the needs of the users and reduce time*
> *spent by target audience in finding the information they need.*
>
> *(Proposal, MCP Project 2011).*

6.6 Relating Text to Context of Production

In Chapter 5, several themes emerged from an analysis of the interview transcripts, the documents, and especially the processes of URS construction. Organizational goals such as establishing the company as vendor of choice, abiding by the company's philosophy and work ethics, professionalism in terms of adherence to the industry guidelines, and provision of value-added solutions, and most importantly commitment to client needs

were important considerations for the PD team members. With all these the use of language seemed prominent. It can be said from analyses of the structure and language features that some aspects of the context can be seen through the arrangement of information and language use. In terms of arrangement, stages 1 and 2 of the URS construction determined the kinds of URS report that was required, and the level of content emphasized based on the feedback and discussions with the client. The RQ study seemed particularly prominent in that various exchanges between the PD team as vendor and the client led to the production of materials useful for the writing of the report. In fact, the discussion sessions and sharing of ideas during the study were important enough to be summarized and included in the URS report. It is worth mentioning again at this point in the thesis that the section on Methodology was not prescribed in the industry's template or the customized template. As the processes (discussions and sharing of ideas) behind the production of materials for the URS were important to the team, the addition of the Methodology section can be understood in that regard.

Language wise, the need to reach out to the different stakeholders required language use that would be accessible to the lay audiences. What came across very prominently across many of the participants interviewed is the thinking surrounding clarity of meaning – of making *'things clear'* to the client; so as to avoid *'ambiguity'*, use of 'simple language' as opposed to 'flowery language' and to *'clearly tell them about the requirements*, within the scope of the project albeit in a 'straightforward way', as vague as these may sound. From looking at the format of the report, clarity of meaning was achieved by following the prescribed format so all that was required for IT project had been covered. The various headings and subheadings help readers to follow the text and pick out what was relevant to their needs (such as programmers who would use the

requirements section for coding). This is supported by a study by Converse (2012) in that the use of bullets and point form format clearly will produce "just the facts" required of the report (Converse, 2012 p. 464).

However, findings on language use can be said to be rather mixed. On the one hand, the simplicity in the use of language can be seen from use of adjectives and simple sentence construction focused on giving the features of the system (that they let users do various things and benefit from the portal in many ways). The technical aspects of the portal were also stated in terms that were familiar to the audience – easy on the eye, high resolution etc. So, it can be said that 'simple' as expressed by the participants is realized through the descriptions of the features in familiar ways. In other words, the URS text can be said to be meaningful for the particular audience.

On the other hand, however, these short narratives and adjectives at various places in the report, even in the requirements section, introduced an element of subjectivity which conflicted with the idea or concern for using 'straightforward no flowery language'. If this is what is meant by a 'non-technical document, then the nature of report genres, especially as they are used in the IT field would have to be reexamined. Obviously, there is a great deal of intertextual practices taking place, like taking a large part of the sections from the proposal to be included in the Introduction. However, one can see some of these parts appearing in the requirements section – the actual important part of the specification. Whether this was acceptable to the client cannot be determined as it is outside the scope of the thesis, but feedback during some of the meetings and discussions and interviews with top administration did indicate that there was a need to produce 'better' document rather than just reproducing parts from other documents. The matter of interest here is not

the prototypical aspect of all the reports, including the current MCP report, but in the way they varied from each other and how they varied from the prescribed template.

In terms of Content, there is somewhat a difference in levels of details given in the current MCP report. The template appears to expect much more. In addition, one can see that the template is more technical in a sense that the technical part appears longer, and the details expected would require one to go deeper into the technicalities of the system. The URS analyzed seems much simplified. In its written documentation, the company has always tried to make it simple based on the need of the audience. The question is how simple should it get?

An additional feature of the URS report for the MCP project which needs to be mentioned is the widespread use of bullet and numbered list and extensive use of table format to provide details on the more 'technical' aspects of the portal, that is the different requirements of the system. The writer and contributors to the text saw use of tables as well as screenshots of the websites as means to achieve clarity important for providing the readers better access to the required information. These alternatives to the written word (in prose) seem to be the preferred approach in all the URS examined. For the PD team, this format is important because of the work involved in developing the required system behind the proposed portal by the technical team of systems analyst and programmers.

Thus, the details on the requirements not only need to be accurate but are presented clearly and concisely. According to Bhatia, tables and bullet lists are "easification" devices (Bhatia, 2004), and in the case of this study by translating written descriptions

into a wireframe diagram helped maintain the clarity needed for URS reports, past and present. These alternatives to the written word (in prose) seem to be the preferred approach undertaken by all writers of the six URS looked at. The descriptions within were consistently in bullet point form. According to KAS, the requirements sections were of interest to different teams involved in the delivery of the project. The use of table format to place various details regarding client requirements was necessary because accurate information was needed, for example, for coding purposes. Therefore, writers of the URS reports found it very important to be accurate, clear and concise when writing requirements sections given the various interests they served. The URS reports examined show widespread use of bullet and numbered lists and extensive use of table format to provide details on the 'technical' aspects of the portal.

There appears to be flexibility in the discursive choices observed across all project URS as well. While previous URS reports show use of tables to list all solutions for each requirement, there were one or two reports (between the duration of time specified in the study) which substituted the written 'version' of the requirement by using visuals in total. This strategy illustrated the move towards multimodality in writing. In the MCP URS report, there was a big section on the designs where screen captures of the website design were included. In later drafts, these screenshots were accompanied by captions that rationalized the designs. The clients preferred them better over the more 'narrative' version of the requirements.

The concise nature of the URS is exhibited through not just the placement of details in a table form but visual representations of features of the proposed portal. This discursive strategy is regarded to be a good way to assist the relevant teams working on the project

and provided the client with an exact view of the portal, its look and feel and more importantly its usability. This feature can be seen in past URS reports. The fact that a few of the reports with considerable use of visual and screenshots were written between 2009 and 2010 played an important part in illustrating the increasing prevalence of visual representations and how they fit within the whole structure of a document. Although the industry template did not specify exclusive use of visuals in the URS report, many of the URS exhibited use of them in an extensive way.

It is beyond the scope of the study to examine the use of visuals, but the visuals can be likened to what is described as "the relation between strata or realization' (Martin and Rose, 2003 p. 5), but rather than a sequence of texts realized as sequence of clauses, the use of visuals "re-codes" the idea behind the design concepts relating to the look and feel and usability of the portal and websites to the images users will see on screen. As the images are sequenced in succession one after another within the user interface requirement section of the report, the whole section can be taken as a discourse which symbolizes and encodes the social activity relating to user experience. Making information search effective and efficient for the end-user is one element of the portal but finding information useful to them is another socially motivated goal in delivering the project/portal to the client based on the current usability needs of portals. The fact that the writer used screenshots in responding to the clients' immediate need to visualize and understand what the portal would look like including the various functionalities suggest that words (the verbal aspect of documents) are one but not all the resources for meaning making.

6.7 Conclusion

This chapter has described the texts of the URS report in terms of structure and language. The macrostructure of the report consists of the Introduction section that provide the Preliminaries relating to the objective of the document, the project and requirements. The middle section provides space for methodology that justifies the requirements and sets the ground for the formulation of the various solutions. The structure can be said to correspond the processes of URS construction in terms of both format and layout, the content and representation of the content. The language used in the URS report was also analyzed. Based on a Discourse Analysis of two linguistic features found in the text, findings show that the URS reports are focused on describing what the portal should be able to do through the use of verb forms, or "actional" verbs found to be prevalent across the collection of URS text. Also evident is the use of lexis and grammatical constructions that construct or illustrate positive aspects of the portal suggesting that the writing of the URS is not just focused on achieving clarity in writing but to illustrate or showcase capabilities of the portal. As the focus was on the portal redesign, thus the look and feel of the portal, visual representations of content were also important, although this particular element of the URS lies outside the scope of the study.

CHAPTER 7: CONCLUSION

7.0   Introduction

This study was intended to investigate the discursive practices in the construction of an IT report, namely the User Requirement Specifications (URS) Report. It specifically looked at the writing processes and forms of communicative exchange involved in the construction of the report in the shaping of the intended document. The study set out to address the following research questions:

1. What are the writing processes involved in the construction of the URS report at the identified local organization?
2. What forms of communicative exchange occurred among the key players involved in the construction process?
3. What are the main discursive features of the URS report?

This chapter will conclude the study by firstly providing a summary of the findings according to research questions. It will then attempt to bring together the findings to highlight the main points in relation to what can be said or conclude about the discursive practices in the construction of the URS report at the participating organization. Lastly the chapter will discuss some implications and end with recommendation for further research.

7.1   The Writing Processes Involved in the Construction of the URS Report

The writing processes involved in the construction of the URS report were based on three main thrusts relating to the client's needs and demands, stipulated requirements and

allowed format of the report, and interest in the outcome of the project for the client and end-user. A key finding is that various enquiries and activities revolving around these three elements, and the sharing of information and ideas at meetings and discussions at various intervals during the process helped establish common ground among the stakeholders in terms of the need for the portal. As a result, both vendor and client were able to agree to the various requirements and solutions as means to improve the website's potential for better information needs for the end-user. The production of written and visual outputs that were produced along the five stages of the URS construction led to the writing of the URS report in systematic ways.

A significant finding of the study relates to the overall aim of writing the URS report. While it is true that the URS report has been said to be a formal document, it is also written to guide the development of the project in question. Therefore, in the context of IT project and project documentation, the writing processes may differ in many respects. In the case of the My Current Portal project (MCP project), the construction of the report was directed toward the need to build and present content strategy for a successful outcome, that is successful development of a portal for the information needs of the public user. As such, the writing processes were devoted to the generation of ideas and the formulation of those ideas into usable text output that went towards developing the project and the writing of the URS report. If one were to ask the question regarding the value of looking at processes of text construction, it can be said that examining the processes of construction enable one to obtain insights into the rhetorical decisions made by writers throughout the writing process thus making writing practices more visible.

The framework of RGS adopted in the study holds promise in studying writing and writing practices in the local context. Investigating the context of text production can uncover many facets of writing which might not have been visible if studies continue to focus on text alone or on skills. For one, writing has been seen in the study as coordinative - as bringing together a network of information and of persons into getting work done and accomplishing specific goal, be it organizational or professional. It was evident in the study that the various outputs produced throughout the writing process were utilizable for project use and foundational to the URS report. It can be said that investigating the processes of writing within the larger context of project documentation has revealed that the intended text is not the only purpose for or product of writing.

7.2   Forms of Communicative Exchange Among Key Players

The study has revealed that within the context of IT development project, the writing processes involve the collective involvement of different key players/teams actively working together, making use of various material and genre resources as means to construct the URS report. Communication among the different team members and between key players (the company as vendor and the client) is integral to the process of construction. Meetings, discussions, negotiations, peer review, proof cycle and other forms of communicative exchange have been seen in this study as helping to bring together material resources necessary in the shaping of the URS report. For one, the peer review practices conducted throughout the writing of the report depended on the expertise of each member in terms of contributing important input to fill in the different sections of the URS report.

While the spoken event/discourse is important in the writing process, in modern society it is also complementary to the writing, which is an important point in the context of this study. It has been seen that written texts and visual could also be one form of communicative exchange as findings show that these were used very often to communicate ideas and concept among key players. One good example is the information architecture diagram used to communicate ideas on content structure with visual clarity. The PD team also made use of screenshots of web design to show the client what the website would look like. More importantly, these designs were used by the client and other expert key players to assess the proposed website for usability and functionality.

7.3 Main Discursive Features of the URS Report

The main question in the study has been in relation to how the various processes (thus the discursive practices) helped in the shaping of the URS report? Based on the findings of this study, it can be said that the overall structure of the URS report seemed to be determined by the different stages of its construction covering both the business and technical aspects of portal websites. It can be said also that the different roles and tasks played by the different teams were instrumental towards producing the content of the intended URS text. In terms of specific parts of the report, the text is shaped by the modes of inquiry characteristic of IT development project. For instance, the requirements section is a standard section that reflected the requirement-gathering (RQ) study activity often conducted in IT projects. However, one could question further if the overall structure could even change in major ways since there is already a pre-defined format identified by the organization. The study recognized that there is flexibility for modification within the formalized structure but to what extent. This requires further investigation, perhaps

through an analysis of similar URS document across different workplace contexts over a specified period.

The language used in the URS pointed to the need for 'clear description' of the requirements to avoid ambiguity. Clarity is achieved through the use of non-technical terms, and in the design of the documents. Use of table format and bullet-point form were some of the devices used to achieve clarity and accessibility for the intended audiences. A key finding is the prevalent use of diagrams and visuals as representation of the content. The multimodal construction of the text is a key feature which probably differentiates the URS report from other technical texts. It is very likely that the rhetorical situation around portal development has a bearing on the structure of the text as well as language. In this regard, the subjective aspects of the requirements and solution with respect to the outcome of the intended portal for the public end-user seem to have translated into use of linguistic resources aimed at demonstrating the website's potential. Thus, the prevalence of lexical changes, use of positive adjectives and grammar construction demonstrating the website's potential are perhaps evidence of this discursive strategy.

7.4   The Discursive Practices of the URS Report

The construction of the URS report is a systematic network of different 'communicative chains' (Gunnarsson, 2009 p. 163). The research stages, production of workshop reports, and communicative exchanges between the project team and the client have been seen to shape the URS report in many ways. The practice of presenting the requirements in visual format such as the wireframe and IA diagrams and the actual designs, as they would appear on screen are some examples. These screenshots of the

design are accompanied by rationale and brief explanation, useful for the different stakeholders.

Looking at the template for URS, the rationale accompanying the design screenshots were not a prescribed element of the report, nor was the requirement methodology section. These were added features deemed to be necessary and useful by the team in order to provide clear and more descriptive documents for the client and other stakeholders to use for various purposes. They reflect a clear modification of the URS report. There is an overall structure, as based on industry standards, but modified to achieve more social ends. The writer(s) kept to the standardized structures but embed within parts, either narrative or visuals, in the way that would best achieve the intention of not only addressing the requirements stated by the client, but to propose other value-added aspects of the portal redesign.

The discursive practices could very likely be different in other contexts, differing nature of business, knowledge work and others, but in the present study, the discursive practices are seen to be in response to new exigencies surrounding portal projects. The writing processes reflect this situation. Socially shared goals of improving the outcome of the project/portal can be witnessed through participation at the workshop and collective contribution to the proposed URS report.

7.5   Implications

Before proceeding to the implications of the present study, it is necessary to reiterate some of its limitations. As mentioned, the analyses of the language features were limited to a small sample of texts. The texts/URS reports obtained for analysis were dependent

on the availability of these texts at the company. This cannot be avoided. Additional to the issue of access to texts, there was also the nature of the text/report examined. While the writer and contributors to the text had some leeway in modifying certain parts of the text due to client and project circumstances, they were also keeping to the official URS format and to the text structure. Although this is very interesting and showed texts as they were used in real life context, the analysis of these texts proved to be quite challenging using the existing framework. What does this imply?

The challenge in investigating an 'elusive' or occluded genre such as the URS report, from the perspective of text as social action, lies in finding a strong methodology for analyzing both the text (in its authentic form) and its context of production - between the contextual aspect and analytical aspect of texts; linguistics vs. discourse; narrative vs. multimodal. Most studies have often focused on only one aspect of the text but given current business environments there is a need to consider a more robust methodology that can achieve a balance between the two ends. Studying the processes of text construction might be one of the ways to do justice to the text, which the present study has attempted, although with some challenges.

The implications for research in doing a study on such texts or documents would be to conduct a text analytical study of a corpus of similar text in order to establish the structural arrangement and find pattern in language use/use of linguistic features to explain the conventional and unconventional features in this text (Kamberelis & De la Luna, 2004 p.266). The present study managed to analyze the text mainly qualitatively but would benefit from a more analytic focus. It would also be useful to trace the text's history in terms of how such a document has evolved to understand why it is designed the way it is.

Further research is needed to examine the use of visuals in terms of their meaning-making potentials and especially their relationships with the technical document and genre in general (Bateman, 2008 p. 8). This study could examine the arrangements of visuals in a text or how they are mapped out within the text or report genre in relation to the social context of document production. The present study acknowledged that a multimodal discourse analysis approach could be a viable approach in examining a hybrid text like the URS report, but is certainly beyond the scope of the study.

The study was carried out with the main objective of studying the discursive practices involved in the construction of the URS report. However, due to project circumstances, it was not possible to follow the report through with the main client at all stages of the writing process, thus lacking in data relating to the dissemination or distribution aspect of discursive practices. Nonetheless, much could still be gauged from the meeting notes and other documentary evidence as well as interview feedback from the PD team members. It is recommended that future studies examined not just the production but also distribution of texts/genre.

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