A SOCIO-TECHNICAL PERSPECTIVE OF THE PROJECT MANAGEMENT PRACTICE ON CONSTRUCTION PROJECTS IN GHANA.

By

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DECLARATION

"I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material that has previously been published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma at Kwa me Nkrumah University of Science and Technology, Kumasi, or any other educational institution, except where due acknowledgement is made in the thesis"

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ABSTRACT

Project management is a practice that has gone through a varied number of changes over the years owing to the advancement of technology and technological services. The field of project management practice in Ghana has its own peculiar challenges and advantages. Most of these practices adopted into the system were developed by Western countries with different social and political settings than those that exist in most African countries as these countries are seen as collectivist and are attached to their cultural values. Most extant literature also, focuses on either the social aspect or the technical aspect of project management forgetting the need for a holistic approach towards understanding the practice. Researchers point to the fact that it is imperative that an understanding of the practices needs to be looked at from the perspective of both the social and technical aspects of project management. Adopting a socio-technical transition approach and guided by social practice theory, the study used a qualitative exploratory design and assessed a sample of 13 project managers, some of whom were engaged through snowballing, who are well experienced and are knowledgeable in the field. Thematic analysis helped in coding the information and generating themes which brought out certain social and political influences on the practice. The major themes that came up during the entire collection of data include the drivers for employment, population dynamics and employment, area differences and stakeholder engagement. Drivers for employment included experience, capacity, competence, whereas other project managers explained that they leaned more towards employing family members. Some of the project managers explained that, looking at the population dynamics, they try to accommodate more youth in junior roles and internships. Architecture, engineering as well as the construction industries could use these outcomes to better the project management practice in order to achieve overall

success in the industry. Efficacious implementation will lead to a holistic change in the approach towards practice and eventually lead to increased performance.

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LIST OF ABBREVIATIONS

CCE …………………………………….………...Continuing and Career Education

CSR …………………………………………….... Corporate Social Responsibility

FME …………………………………………….............. Free Management Ebooks

MSG…………………………………………............ Management Study Guide

PMBOK ……………………………………….. Project Management Body of Knowledge

PM ……………………………………………….......................... Project Management

PMI ……………………………………………......... Project Management Institute

PRINCE ……………………………………….. Projects in a Controlled Environment

STS ……………………………………………................. Socio-technical Systems

STSD ……………………………………………….. Socio-technical Systems Design

PAP ……………………………………………................ Project Affected Persons

IFD ……………………………………………........ Interaction Design Foundation

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Thank you.

DEDICATION

Dedicated to my parents and siblings: Mr. and Mrs. Emmanuel Hanson and Yolanda and Dennis Hanson.

CHAPTER ONE
INTRODUCTION

1.1   Background

According to Haughey (2010), even though some form of project management was seen since early civilization, it is in 1950 that the modern sense of project management was borne. Project management can be seen to be a challenging endeavor which is often characterized by cost overruns, dissatisfied stakeholders, late delivery, just to mention a few (White and Fortune, 2002).

Projects are made up of numerous tasks that are in one way or the other related and this makes it a bit difficult to manage projects some of the time. Aside the numerous interrelated tasks that project managers and participants need to perform, the ever-changing environment as well as the practices involved do not make the practice easy. The dynamisms of technology over the years has also played a role in making the endeavor a bit more challenging.

According to Turner (2006), project management is still a developing discipline and not well established like finance, marketing, etc. and in order for that to happen it is expedient that the current state of project management be thoroughly assessed. Murithi and Crawford (2002) further explain that project management is coded and based on standards and practices that are based mainly on the premise that humans are economically rational beings. This premise of economic rationality is however developed by the western world and same cannot be said for African countries (Murithi and Crawford, 2002). It is therefore imperative that certain alterations or extensions be made to such existing practices in order to avoid political, social and organizational obstacles in carrying out such practices as such western cultures may be wholly or partially unrelated and unsuitable in other cultures.

Murithi and Crawford (2002) go further on to explain that the project management practice is made up mainly of five processes – initiating, planning, executing, controlling and closing. All these processes can be seen to include participants as well as a technological aspect towards achieving a particular goal.

According to the PMBOK guide (2017), project management is composed of ten knowledge areas. Murithi and Crawford (2002) explain that project management, according to older versions of the PMBOK guide, is composed of mainly 9 functions which include cost management, risk management, scope, quality, human resource, communication, procurement, schedule management, and the integration of all these processes leads to the ninth project management function. All these functions can be seen to come with user involvement as well as technical processes geared towards the achievement of set goals.

Alojairi (2010) states that many researchers have come to the conclusion that project management comes with three main drawbacks. Two of which this research would throw light on. First and foremost, researchers have come to the realization that the existing literature on project management focusses narrowly on a particular aspect neglecting other considerations of the practice. Alojairi (2010) further explains that most quantitative studies focus primarily on the technological or technical aspects of the practice forgetting there is a social aspect of the practice. Looking at the practice from a particular point of view and not at a holistic level results in the oversimplification of the process and in research related cases, accurate results are not established (Alojairi, 2010).

Another drawback that the project management practice comes with is the large quantity of "inward-looking" opinions when it comes to the analysis of the various characteristics of project management (Packendorff, 1995). Shenhar and Dvir (2007)

explain that most researchers often build their work on what has been done by their predecessors and ignore contributions that are of vast importance from other disciplines. This goes without saying that most researchers generally describe the trends and paradigms and constantly keep restructuring existing knowledge about the subject matter. Shenhar and Dvir (2007) also explain that project management involves other aspects of life and hence such disciplines must also be considered and included in analysing the practice.

The society keeps changing as well as the environment in which we live in. When certain project management practices are carried out across culture without respect for the differing cultural practices around the world, it could lead to failure of the project (Murithi, 2004). Murithi (2004) further explains that it may not be the techniques and practices that are faulty or wrong but the postulations that come with them concerning people. He further explains these assumptions to include but are not limited to the value individuals place on work, the values and virtues people treasure the most, what drives them, just to mention a few.

According to Geels (2004), the need to pay close attention to both innovation and users is a concept that most scholars are promoting. Geels (2004) further explains that in order to incorporate the user there is a need to widen the focus as exiting technological systems mostly cover the production and use of the systems. The Adoption of these systems is not passive, it requires various adaptations in relation to users. These adaptations come with both social and political challenges as well as various transformations.

According to Appelbaum (1997), in designing a socio-technical system, emphasis is placed on the fact that a work unit can be seen as a combination of both social and technical aspects and these are open to the environment in which they operate.

Appelbaum (1997) further explains that the idea is to achieve joint optimization which is a situation where both aspects produce positive outcomes. In applying a socio-technical system approach, it is imperative to explore an organizations environment as well as how the behavioral patterns and attitudes of workers are affected by their immediate environment. According to Hackman (1980) an integrated system – social and technical – requires that one aspect is supportive of the other. Cummings (1994) explains that the social system aims at being responsive to the psychological needs of the employees whereas the technical system includes equipment and methods used in carrying out the various processes. A Socio-technical system can be described as one that considers hardware, software, people as well as the society (IFD, 2013). The Interaction Design Foundation (2013) goes further to explain that where as many sociologists concern themselves with just the social level and technologists, the technological aspect of processes, not considering the society, the socio-technical perspective looks at how both the social and technological aspects of a project can be satisfied. The socio-technical system explores the merging of people and technology to form a unit (IFD, 2013). It is now quite obvious that the best way to understand project management practices is by looking at the practice from a socio-technical perspective as most researchers would agree to.

According to Pasmore and Sherwood (1978) as cited in Alojairi (2010), the socio technical perspective scrutinizes the relations and connections between technologies, people and tasks performed concurrently. Alojairi (2010) is of the view that the socio-technical approach towards the study of project management is of prime essence yet most researchers have failed to look at the practice from this perspective. He is of the view that the underdeveloped nature of the various concepts relating to a socio-technical approach has caused researchers to veer towards other approaches of

analyzing the practice (Alojairi, 2010). It is quite obvious that the future of the project management practice involves projects that are on the increase that would require the services and co-operation of diverse cultural and geographical teams. It is important that these social aspects are given as much attention as the technical aspect. There is therefore a need to approach the project management practice from a holistic perspective which is, a socio-technical perspective as it combines all aspects of the practice in order to gain an in-depth understanding of the practice as well as the various factors that interconnect to shape the practice.

1.2 Statement of problem

Various researchers (Alojairi, 2010, Ruppel, 2010) have come to the realisation that for the project management practice to continue to succeed, it is imperative that the practice is approached form a socio-technical transition perspective. Project management according to Turner (1993) can be defined as a process by which a project is completed successfully. The PMBOK Guide (2017) further defines it as "the application of knowledge, skills, tools and techniques geared mainly at satisfying stakeholder needs". Project management can be seen to be a dynamic management process as it has changed over the years as technology advances with time. Even though these practices change, 'management' still deals with the management of people as well as satisfaction of people's requirements or needs. This goes without saying that the advancement of project management practices through the use of advanced technological systems cannot be focused on to the detriment of the individuals involved in these practices and the individuals who these practices are being carried out for.

The growing incidence of the phenomenon of approaching project management practices from a more often than not technical perspective neglecting the social aspect

goes a long way to create political, organizational and cultural obstacles. It is true that technological advancements come with changes in elements which include but are not limited to user practices, regulations, etc. However, an uneven focus of either of the approaches and not the linkage of both approaches poses certain issues that lead to other problems arising. The PMBOK guide (2017) explains 'tailoring' as the selection of the suitable processes, inputs, tools, techniques, outputs and life cycle phases in order to manage a particular project. The guide further explains that in carrying out their task, project managers adopt certain methodologies – practices, procedures, rules – and these methodologies are applied based on the type of project and the uniform application to projects regardless of the scope should be avoided (PMBOK guide, 2017). Tailoring is very essential owing to the unique nature of every project, not every tool or technique or rule that applies to a particular project will work for another project (PMBOK guide, 2017). Project management comes with different constraints which include but are not limited to risk, cost, scope, resources, etc. and in order to manage these appreciably the project manager must tailor them based on the environment in which the project is taking place, the culture of the organization, the needs of the stakeholders, amongst others (PMBOK guide, 2017). The PMBOK guide (2017) further explains that project managers should also take into consideration the differing levels of governance within which the project will function.

Even though most Ghanaian project managers follow the practices in the PMBOK guide, tailoring in the Ghanaian context is more often than not overlooked and has not been explored to the full capacity. Various studies (Geels, 2004, Alojairi, 2010, Shenhar and Dvir, 2007) have corroborated this fact and Ghanaian project managers can be seen to be more focused on completing the task on time and within budget with available tools and technology and more often than not, neglect the social aspect of

the project. Alojairi (2010) explains that existing studies have not carried out in-depth studies on all areas in the practice but rather focus on particular aspects of the practice at the expense of the other aspects. Most studies focus on the technical aspects of the practice overlooking the fact that social aspects are also involved (Alojairi, 2010).

A socio-technical transition perspective fuses the social aspect with the technical aspect in order to ensure thorough success by satisfying both the changing needs of the society as well as the dynamisms of technology. It is therefore expedient to focus project management practices from a socio-technical transition perspective which demonstrates the co-evolution of technology and society. In this study we conceptualized the practice of a project management as technical activity. The study seeks to investigate the dynamics of the changes in the co-evolution of the society and technological relationships that shape the project management practice.

Also, till date, Alojairi (2010) explains that very few researches have examined the project management practice from a qualitative perspective and this research seeks to explore the socio-technical transition perspective of project management with the help of a qualitative methodology.

1.3   Research questions

There is a profound need to have an understanding of the relationship between practice-based and socio-technical transitions which tend to shape the direction of project management practices.

With regards to project management practices, varied schools of thought mainly approach it from a technical point of view or a social point of view. There is a need to further explore project management practices from a socio-technical transition perspective in order to determine those practices that are environmentally responsive.

The following are a few questions that helped the researcher familiarize and better understand the existing trends and changes in the co evolution of societal and technological relationships relating to the project management practice:

1. How do social conditions influence the technical practice of project management?

2. How do political conditions influence the technical practice of project management?

1.4   Research aim

The research aims at exploring the practice of project management through a socio-technical transition perspective in construction projects.

1.5   Research objectives

In order to help in achieving the said research aim the following objectives served as a guide:

1. To identify the influence of social conditions on the technical practice of project management in construction projects.

2. To identify the influence of political conditions on the technical practice of project management in construction projects.

1.6   Justification

Projects are carried out within the society. They are neither standalone nor exist in space. Project management practices are followed in order for projects to come to life. These practices are geared towards the achievement of said requirements and the long-term satisfaction of clients or stakeholders. The society plays a very important role in shaping practices carried out in and around the environment in which they exist. Projects completed within budget and following appropriate project management

practices should not be considered as successful if members are not satisfied or if uncalled for societal changes have occurred.

According to Murithi and Crawford (2003), current project management practices can be seen to be rationality and efficiency driven as they are mostly based on the principle that man is a 'rational being'. This however cannot be seen to be the case in most African countries and as such the implementation of such rationality driven practices tends to encounter certain cultural, political and organizational challenges. Every country comes with a its own heritage and set of customs that differ across board and so must be approached with respect to that particular nation. Technological advancements take place all over the world with participants in project management being trained to be able to adopt these new technologies and use them adequately. Geels (2004) further explains that even with technology, there is a need for technological adaptation with regards to users as these lead to alterations.

Absence of adequate literature on the need to approach project management practices considering the co-evolution of technology and society forms the basis for this study. The inability to satisfy both the societal and technological dynamics of the society has lifelong consequences on the society and may slow down economic and social development. This study is justified by the fact that it takes a look at a ubiquitous problem within the project management field which needs critical attention.

The research also provides a source of pertinent literature for further studies relating to the subject matter by adding to the existing body of knowledge and also help keep posterity in check. The architecture, engineering and construction industries as well will benefit from this study as it provides information as to the need for the project management practice to be approached from a socio-technical perspective owing to

the rapid nature in which the economy is developing and changing in order to help solve the trending issue of project failure.

1.7 Scope

The setting for the research was Ghana and took place in randomly sampled construction sites with project managers who have a minimum of 5 years experience and can be seen to handle projects with a minimum cost of $600, 000 as well as projects that impact a minimum of 500 people. The research seeks to define the socio-technical systems approach and explore the various project management practices from a socio-technical transition perspective. An exploration of both practice-based and technical transitions that help shape the project management practice was also considered. Project management is more often than not conceptualized as a technical activity but this research seeks to explore the practice from a socio-technical transition which investigates the dynamics of society and technological advancements.

1.8 Research Methodology

The study adopted an interpretivist epistemology which helped the research focus on how the real-life situations are shaped by the way people think or the perceptions about a particular phenomenon. The study is mostly an exploratory one with the main research method being the qualitative method in order to gain an in depth understanding of the subject matter as well as ascertain answers to questions posed. Hence the research is primarily a qualitative approach grounded on interpretivist epistemology.

A purposive sampling technique was used as it is more appropriate for this type of study. This led to snowballing and further simple random sampling. Both primary and secondary data formed part of the research.

1.9   Organization of study

This research paper is captured within five (5) chapters. Chapter One generally provides an introduction to the topic of study, discusses the problem area for which the research is being carried out, the objectives and the setting of the research. Chapter Two, the literature review, comprises studies on relevant literature. Issues considered include definition of key concepts, theories concerning sociotechnical systems, just to mention a few. Chapter Three embodies the research methodology. It includes data collection and analysis with sampling procedures. Chapter Four concentrates on the information received during the collection of data and uses thematic analysis to break the information received down for better interpretation. Chapter Five provides a conclusion and discusses a few recommendations.

CHAPTER 2
LITERATURE REVIEW

2.1 Project management practice

Project management can be seen to have been in existence for a very long time. According to Haughey (2014), the practice dates back all the way to before civilization even though in the modern sense, project management was actually seen around the 1950's. Project management cannot be talked about without understanding what a project is.

Watt (2012) questions, "could the Great Wall of China, the Stonehenge or even the pyramids have been constructed without project management? It is therefore obvious that project management as a concept can be seen to have existed since history begun (Watt, 2012). Furthermore, during the 19th century, it was as a result of projects springing up, leading to the need for certain important decisions to be taken, that led to the development of the practice (Watt, 2012). Watt (2012) further explains that projects were undertaken long ago when human activity was organised and even the hunting activities of our ancestors were projects, as they were temporary and had a particular objective. According to Watt (2012) projects however have distinct features that tell it part form ongoing business operations. Projects are temporary, they do not form part of a daily routine, they come with definite start and finish dates (Watt, 2012). Projects exist so as to develop a particular service or product that has not existed before, hence unique (Watt, 2012).

According to FME, before bothering about what project management and processes are, there is a need to understand what a project is and why there is a need for it to be manage differently form the everyday organisational tasks. There are quite a number of ways by which institutes and individuals have defined projects and this includes:

Project management Institute – "An endeavor which is temporary, and geared towards the creation of a unique service or product", FME (2013).

PRINCE2 – "An organization that is temporary in nature and set up purposely for the development of a particular product as agreed on in the business case", FME (2013).

Association of Project Management (APM) – A particular endeavor which employs the services of human, material as well as financial resources in an innovative manner to deliver a unique and agreed on scope usually with cost and time constraints", FME (2013).

Kerzner (2009) defines project management as "the planning, organization, direction and control of the resources the company owes for a temporary period of time, in order to satisfy a particular set objective that helps in the completion of specific organisational goals". Kerzner (2009) further states that project management makes use of the systems approach by having personnel that are functional ('vertical hierarchy') assigned to particular projects ('horizontal hierarchy').

According to Tran (2017) a project can be seen to form part of a larger environment and this is why most projects are challenging. Tran (2017) further explains that a project cannot exist in a vacuum but always has other factors that exist in both the internal and external environment that it depends on in order for the project to come to a successful completion. The social, political as well as economic factors must also be considered by project managers as they also affect the project outcome in varied ways (Tran, 20217). Understanding these external factors can help managers better make decisions in order to steer the project in the appropriate direction.

According to MSG (2014), a project can be described as a collaboration among various team members and departments towards the attainment of a particular goal. Furthermore, a project is not an activity that organisations undertake on a daily basis

but rather it is goal specific (MSG, 2014). The MSG (2014) goes further to explain that a typical project comes with the following characteristics – timelines, tools, resources and a team.

The MSG (2014) states that the practice is made up of activities and these activities are grouped into three main categories – planning, scheduling and controlling (MSG, 2014). MSG (2014) further states that project management employs several techniques in managing projects and some of these techniques are mostly used for scheduling and these include Gantt charts – used to show the relationship between activities and time allocated to them as well as monitor progress –, Network planning techniques – used to represent the relationship that exist between project activities, the critical path, duration, constraints, activities that are not critical as well as utilization of resources –, etc.

According to the MSG (2014), organizations over the years are trying to move away from mechanistic approaches to environments influenced more by people. The earlier decades of the 20th century approached the practice in a mechanistic manner but later decades came saw the acceptance of the fact that organizations are interdependent and complex as well as full of complexity. Even though certain mangers are trying to move away from the rational approach, according to Baecker (2006) some managers continue to follow the rational approach towards the practice leaving little or no room for flexibility and adaptability to the dynamics of the society. MSG (2014) further explains that the ambiguity and complexity that comes with approaching the practice from not only a technological perspective but also a "people perspective" is why most managers move towards the rationality approach as it is more appealing and less complicated.

According to Turner (1993) a project can be described as a particular venture where by the human, financial and material resources are combined in an innovative manner in order to handle the predefined and unique scope, within cost and schedule constraints aimed at satisfying a specified need. Project management on the other hand according to Turner (1993) is the ability to complete a project successfully.

Upadhyay (2016) states that whenever there is a need for something unique or new to be created, it leads to the development of a project. As a result of this, it is evident according to Upadhyay (2016) that project management has been in existence for a longtime. Even though the practice has been in existence for a longtime, partial or complete failure cannot be to seen to be absent from the practice. Practitioners and scholars have been trying to find out why projects fail and what can be done about that to prevent it Upadhyay (2016).

The PMBOK (2017) defines a project as an endeavor, that is temporary in nature and is mainly undertaken to produce a unique service or result. Project management is also defined by the PMBOK (2017) as "the application of knowledge, skills, tools and techniques geared mainly at satisfying stakeholder needs

Murithi and Crawford (2002) state that project management is a discipline that encourages a prescriptive approach towards the management of projects. Murithi and Crawford (2002) go further on to explain that the practice involves the use of codes, techniques and tools that are more or less based on theories and practices developed in Western countries and extensively rely on the theory that "man is a rational being". According to Winter and Szczepanek (2008) project management has been adopted to help in the completion of projects in various industries around the world. Too and Weaver (2014) further explain that it is extremely rare to find a project functioning in isolation from an organization as they exist to fulfil strategic goals.

According to the Knowledgehut (2019), a project can be described as any activity that is bound by time and involves putting together a team in order to come out with a product or service. It is very necessary that every team member is aware of the set goals, resources, timelines as well as the processes (Knowledgehut, 2019). Project management on the other hand deals with the combination of knowledge, methods, skills, resources, techniques as well as processes in order to achieve specified goals and objectives for a particular project within a specific period (Knowledgehut, 2019). According to the Knowledgehut (2019), during the 20th century, project management can be seen to have gained a unique identity and a guide developed – PMBOK by the Project Management Institute. Project management stands out from other management systems as a result of its streamlined procedure from conception of the project through to the delivery and handing over of the project – project life cycle (Knowledgehut, 2019).

Alojairi (2010) explains that the project management practice is a challenging venture and according to Shenhar and Dvir (2007) this challenging practice has seen many projects leaving clients dissatisfied, projects lasting longer than stipulated periods as well as some projects spending more than what was initially planned. Alojairi (2010) further states that owing to the varied number of tasks and processes that form part of the project management practice, this endeavor is becoming multifaceted and demanding to handle. Alojairi (2010) is of the opinion that in order to better understand the project management practice and activities involved it is imperative that its interactions be analysed form a socio-technical standpoint.

Page (1989) explains that project management is a combination of procedures that involve logical reasoning and help with project implementation as well as planning

and Turner (1993) describes the practice as a "body of knowledge of methods and tools".

Ika (2012) states that project management is faced with four main traps which are: - "the one-size-fits- all technical trap, the accountability-for-results rap, the lack-of-project-management capacity trap and the cultural trap". In order for the practice to succeed, Ika (2012) explains that project management would have to overcome these traps. Project management according to Ika (2012) is sometimes dominated by a 'one-size-fits-all' perspective that all kinds of projects share the same features. Hulme (1995) states that managers and professionals are required to act realistically and reasonably overpowering the idiosyncratic aspects of the practice. An example according to Ika (2012) is the World Bank that had standard processes and procedures that managers must follow in managing projects no matter the size and content. Ika and Hodgson (2010) also explain that this model overemphasizes the technical and financial aspects neglecting the existence of social cultural, environmental as well as political viability. In relation to "accountability-for-results, Ika (2012) explains that instead of managing so as to produce good results, focus is on "accountability-for-results". Furthermore, despite the existence of results-based management, focus has been on the provision of feedback to external stakeholders with little regard for implementing data regarding functionality in taking steps towards implementation so as to achieve better results (Ika, 2012). Former World Bank official, Albert Waterson, according to Ika (2012) in explaining the absence of capacity when it comes to managing projects (the "lack-of -project management-capacity trap", Ika, 2012) asserts that, finances and the society, among others are not a major limitation when it comes to management but rather administrative capacity owing to the limited number of skilled personnel available at a given time.

According to Haughey (2014) with the rapid rate of globalisation, projects are getting larger and more complex and managing projects is getting more difficult as the days go by. Haughey (2014) further explains that teams are more and more diverse and are all around the world with the crisis in the economy pushing most of the jobs to low cost countries which come with its own issues. The world is constantly changing and as such the practice also needs to change along with it to meet the dynamisms in the world.

Williams (2008) defines project management as all the things needed in order to come to a successful end in managing projects on schedule and within financial constraints agreed on without the quality being sacrificed and complete satisfaction of the scope. Williams (2008) further states that project management is composed of four main aspects – time, budget, scope and quality (Williams, 2008) which are interrelated and an adjustment to one affects the other.

According to Kwak and Anbari (2009), to help manage business objectives, organisations are increasingly employing the project management discipline and this is leading to business becoming highly projectized (Hobday, 2000) and this has helped to integrate the functions of an organisation in order to motivate individuals to improve upon performance as well as productivity (Morris, 1997). Demonstrating a solid value of PM in organisations however can be seen to be illusive as there is little or no proof to show that mastering the PM 'body of knowledge' results in performance being improved significantly (Morris and Janieson, 2006). Despite the development of many tools and techniques to help with the practice from genesis to completion, the PM practice remains a problematic venture, according to White and Fortune (2002). A survey carried out in 2008 for instance, by the Standish Group International, according to Standish Group International (2008), revealed that projects surveyed that made use

of various software had 32% succeeding (delivered on time and within budget, with required features), 44% being challenged (late delivery, over budget, features and functions not fully satisfied) and 24% failing (cancelled prior to delivery dates or completed and abandoned).

2.1.1 Conceptual relationships

In dealing with project management practices, managers can neither turn a deaf ear nor blind eye to the cultural aspects. Projects take place in the society and each and every society has a particular way of life and existing rules and regulations the township was built on and helps sustain the area. Projects do not exist in a vacuum and do not exist for the purposes of the project but have an impact on individuals in and around where they exist.

According to Murithi and Crawford (2002), cultures differ across countries and even within a particular country. This variation in culture across countries implies that there will also exist variations in values at work as well as in the social setting (Murithi and Crawford, 2002). It is presumed that such cross-cultural variations can be measured or at the very least some form of representation can be made (Murithi and Crawford, 2002).

Hofstede (1998) explains that various concepts come with a cultural aspect including but not limited to, the quality of life as well as general working conditions. Furthermore, in dealing with people, certain existing theories like Maslow's, McClelland's, just to mention a few, are not acceptable across culture owing to the fact that when it comes to motivation for instance, different values dominate and team composition and location determine which values individuals focus on more.

(Murithi and Crawford, 2002) suggest that in order for an appropriate approach towards the project management practice to be developed, there is the need for such

management concepts and practices to be put through the filter of valuable cultural practices and then a comparison be made to the African environment.

Murithi and Crawford (2002) suggest the below conceptual relationship for project management as shown in Figure 2.1 below.
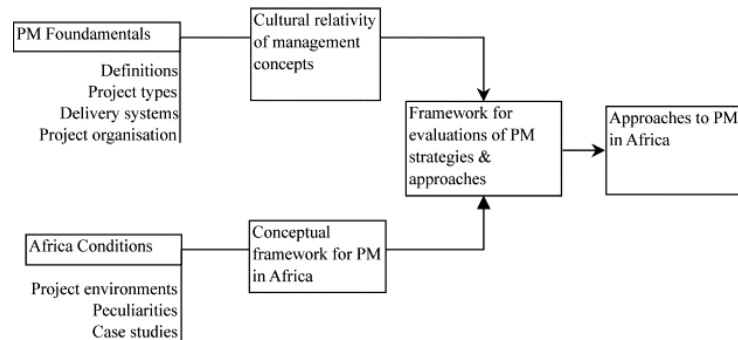
Figure 2.1 Conceptual Relationship (Source: Murithi and Crawford, 2002)

Too and Weaver (2014) further explain that, in dealing with project management practices, it is important that the organizations strategy also be considered. It is very necessary for the deliverables and the goals of the organization to be taken into account in order to achieve the values the organisations strategy defines (Too and Weaver, 2014). Marnewick and Labuschagne (2008) state that most projects are far behind time and budget most of the time and hence the organisations' expectations are not met and this is largely due to the fact that projects are incoherent and not aligned and managed as one system made up of different aspects but have focus rather on particular aspects. According to Alojairi (2010), many schools of thought view the project management practice as an autonomous system that operates in a vacuum instead of viewing it as a large system made up of sub systems. The organizational view of project management is of great importance and in this context, organisations are seen as complicated systems that are made up of many other subsystems that are interconnected (Alojairi, 2010). Leavitt (1965) is of the view that organizations are comprised of at least four variables that are dependent and work hand in hand: task, people structure and

technology (Leavitt, 1965). Leavitt (1965) further explains that the organization is also a subset of a bigger system – its environment – which it relies on for ultimate survival. Leavitt's (1965) (2010) model according to Alojairi is summarized in Figure 2.2 below:
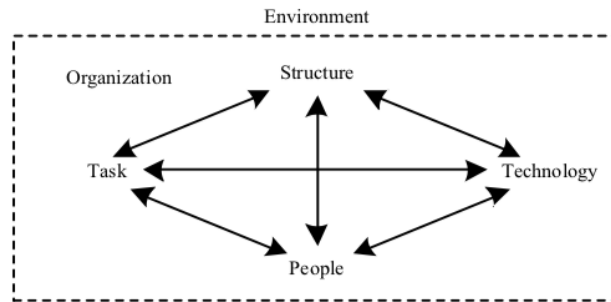
Figure 2.2 The Leavitt Model (Source: Alojairi, 2010)

Alojairi (2010) explains that the 'people aspect' deals with the individuals who contribute to the organisation, the task, the various activities performed to deliver a particular service or result, the structure being the means of communication as well as workflow and the technology, the machines and mechanisms. Furthermore, if all these aspects are not taken into consideration, Alojairi (2010) explains that it could lead to the entire practice being misinterpreted and overlooked. He further explains that all the variables in Leavitt's (1965) model are interrelated and as such must work hand in hand, such that any change in one particular variable could lead to an unpredicted and unintended change in other variables (Alojairi, 2010). Leavitt (1965) further discloses three important aspects of his model relating to the organisations concept of project management: projects are introduced to organisations that are dynamic and perform routine tasks, systems involved in the project management practice directly influence and are affected by the organisations and there is no way the practice can be understood in isolation form its environment (Leavitt, 1965)

According to Alojairi (2010), many researchers have pointed to the fact that looking at the project management practice with a narrow-minded focus on the social system or the technical system and not concurrently comes with major limitations. According to Alojairi (2010) there is a need to understand the interrelation and interaction between the social and technical variables. Bostrom and Heinen (1977), Griffith and Dougherty (2002) and Pasmore and Sherwood (1978) according to Alojairi (2010) are convinced that the socio-technical perspective of the project management practice is a promising approach owing to the fact that it considers the technological as well as the "people" variables involved.

According to Shebib (2000), the organisational goals and strategy in relation to projects undertaken is a concept that should be understood. According to Shebib (2000) it is important to pay attention to relationships, history, corporate culture, in dealing with both internal and external clients or customers. Shebib (2000) states that corporate culture can be seen to be the attitudes as well as values that all members of an organisation share and these are consistent. Culture in the organisation sets a particular organisation apart from others and determines how individuals' part of that organisation will relate and interact with you (Shebib, 2000). It is important to understand the organisations culture in order to understand how its strategic goals relate to that of the project (Shebib, 2000).

2.1.2   Life cycle models

According to the Knowledgehut (2019) project management is comprised of 5 main stages, be it in the software development arena or the building and construction industry. These five stages are – initiation, planning, execution, project tracking and project delivery. The life cycle of project management starts with understanding the client's requests and goals, designing in a manner that shapes all aspects of the project,

starting the project itself, monitoring for progress and completion, up until the project is delivered and handed over to the client (Knowledgehut,2019). Murithi and Crawford (2002) are in agreement with the Knowledgehut (2019) when it comes to the life cycle of project management. Project initiation, planning of the project, executing the protect plans, controlling the project and lastly closing the project are the five stages (life cycle) of a project according to Murithi and Crawford (2002). Murithi and Crawford (2002) go further to explain that various versions exist when it comes to the life cycle of a project. However, the common themes seen in literature according to Murithi and Crawford (2002), describe the process under four (4) distinct headings: initiation and conceptualization, design and development, implementation and commissioning and hand-over (Murithi and Crawford, 2002). Murithi and Crawford (2002) further explain that during the initial stage of the project, that is the initiation stage, concepts are developed. After conceptualization, the solutions are then tested in order for the most efficient and appropriate one to be chosen (Murithi and Crawford, 2002). The best solution to the problem is then implemented until successful completion where it is then commissioned and handed over to the appropriate quarters (Murithi and Crawford, 2002).

According to MSG (2014) usually, a project can be seen to be divided into phases and each phase has a distinct influence on project success and is important in the cycle. Projects are divided into five main stages as follows (MSG, 2014):

- The initiation phase where managers receive feedback from clients, which is analysed and further brainstorming is done to improve on the existing product in order to meet demand (MSG, 2014).

- Definition of the project – at this stage, the team works towards the development of a solution to the problem being faced (MSG, 2014).

- Studies on feasibility – this phase is where all plans are made concerning the project, milestones are set (MSG, 2014).

- Execution of project – at this phase, all plans as well as milestones, including but not limited to activities that must be performed are implemented, this phase is where most of the resources are employed (MSG, 2014).

- Conclusion – as the name suggests, at this stage, the service or product produced is handed over to the client to be used for its intended use (MSG, 2014).

FME (2013) explains that with the life cycle of a project, many organisations have differing ways by which they describe them as well as templates for them. This organisational variation is very comprehensible owing to the diversity that comes with projects in terms of size and complexity (FME, 2013). Notwithstanding this, FME (2013) states that the cycle that projects got through can be grouped under four (4) main headings:

- Starting the project (FME, 2014)

- Preparation and organisation (FME, 2014)

- Execution of project activities (FME, 2014)

- Project Closing (FME, 2014)

FME (2013) further explains that each of the above-mentioned stages comes with discrete activities which come with their own guidelines, and the number of activities involved is dependent on the scope of work agreed on for the project (FME, 2014). FME (2013) further mentions that according to the PMBOK Guide, the project life cycle describes "a collection of chronological phases of a project whose names are determined by the needs of the organisation in control.

According to Watt (2012) every project has a start date and a finish date, that is a beginning, the middle stage where the project is approaching completion, and an end. Typically, a project covers four main stages according to Watt (2012): initiation, planning, implementation and closure (Watt, 2012). These phases come together to form the life cycle of projects (Watt, 2012).

According to Williams (2008) the project life cycle starts with initiating, where the project starts and then moves on to the stage where the project is actually done, and this is done through planning, executing and controlling activities, up until the project comes to an end and a check is handed over to the project manager – closing. The life cycle is summarized in Figure 2.3 below:
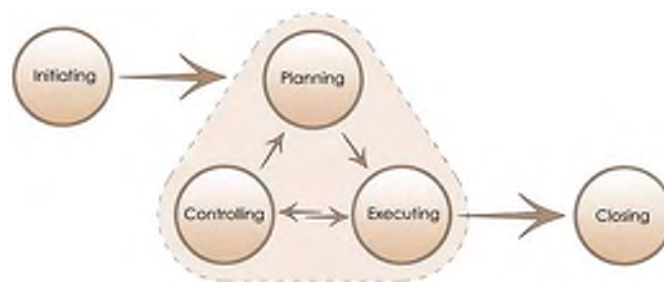
Figure 2.3 Project Life Cycle (Source: Williams, 2008)

(UCDavis, 2013) developed PM approaches based on the life cycle of projects and also defined project lifecycle under three main categories: the traditional – composed of the linear and incremental –, the agile, which includes the iterative and the adaptive and lastly the extreme lifecycle. Figure 2.4 below represents project life cycle according to UCDavis (2013):
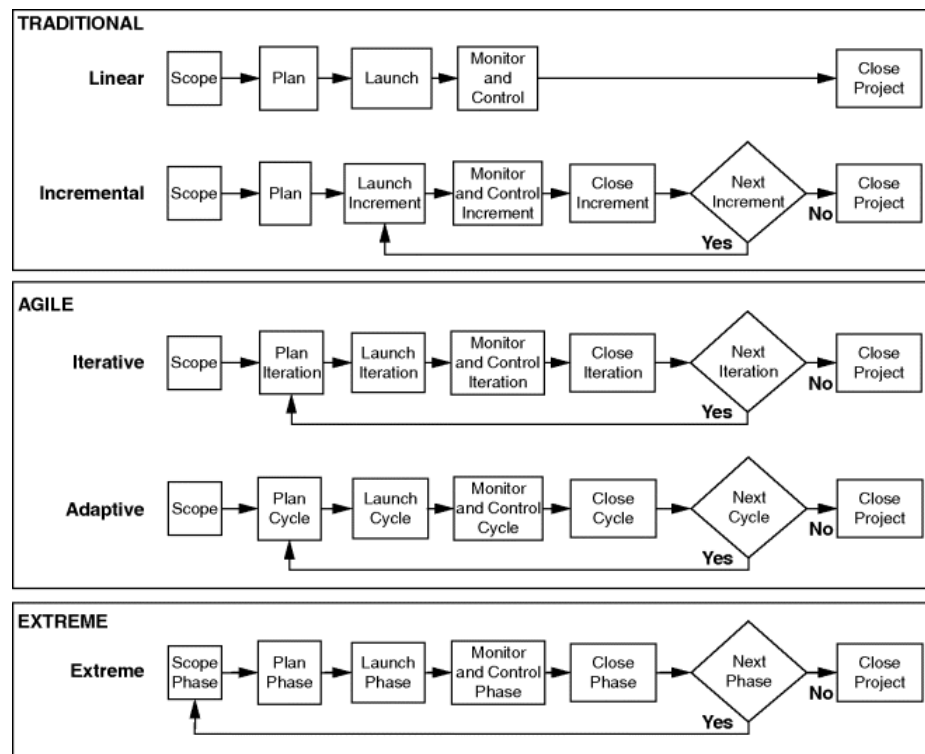
Figure 2.4 the Five PM Lifecycle (Source: UCDavis, 2013)

2.2 Understanding culture and its impact

2.2.1 Cross culture management concepts

Jaeger and Kanungo (1990) note that western methodologies and theories are transferred across culture without critical consideration and this has led to inefficiencies in the organization in the developing countries. Murithi and Crawford (2002) further explain that contrary to what some researchers (Weber (1958), Lewis (1955), McClelland and Winter (1969)) propose, traditional value systems in developing countries do not obstruct or harm the country's economic development.

Jaeger and Kanungo (1990) as well as other organizational theorizers are convinced that socio-cultural factors can be seen to be significantly involved in shaping the beliefs, values and attitudes concerning organisations and work among managers as well as workers. Murithi and Crawford (2002) assert that it is very evident that what works in one context many not necessarily be suitable in another and goes on to

question how one can clearly define values at the work place or the differences in culture that underpin these values.

Hofstede (1998) has categorized concepts for understanding the variations in culture across the country into four: "collectivism or individualism, uncertainty, masculinity/femininity and power distance", Hofstede (1998). The high level of power distance according to Murithi and Crawford (2002) implies that there exists a group with less power who view the uneven power distribution as normal and in organizations, those who find themselves at the middle and lower levels are not willing to take a step without approval from their superiors (Murithi and Crawford, 2002). This unwillingness to take decisions without approval from superiors as well as the acceptance of the uneven power distribution as normal shows that the less powerful group are ever-ready to follow principles or rules imposed by the more powerful in the society (Murithi and Crawford, 2002). Blunt (1992), Kiggundu (1989), amongst many other researchers according to Murithi and Crawford (2002) are convinced that African cultures score pretty high scores when it comes to power distance.

Wideman (2009) states that management must make available a learned and supportive cultural environment that suits project work so as to ensure that workers are able to perform their task to the best of their abilities. Wideman (2009) further states that efficient and effective performance from the team highly depends on the cultural environment. The cultural environment encompasses both internal and external relations and values that form part of the project (Wideman, 2009). Wideman (2009) further states that internally, management style must suit the type of project and externally, the environment must be free from obstacles and must be supportive.

Saidoun (2015) introduces the concept of intercultural competence. According to Hall (1990), further explained in Saidoun (2015) intercultural competence refers to the

processes and dynamisms that occur when individuals from different worlds co-exist, the way they relate with each other and interact. Intercultural groups come into existence during the initiation of projects and this happen within limited time (Saidoun, 2015). Bolten (2007) explains that these groups are created in 'world 1', which is neither 'world 2' or 'world 3' and that these differing worlds can never be explained in abstract but rather through the individuals in these worlds acting in unison. Saidoun (2015) further states that culture deals with the way by which individuals of a particular society view reality and behavioural patterns.

2.3   Project management in Africa

According to Ika (2012) most Western practices fail to succeed in African countries because they cannot be adopted into the African system. Ika (2012) further explains that from experience, it can be seen that the implementation of such western practices into the African culture encounters organizational, cultural as well as political obstacles. The most daunting of all these obstacles is the one that deals with culture and is very challenging to manage especially during the life of a project (Ika, 2012). Developing countries are characterized by a varied number of cultural heritages as well as customs and must be approached in differing ways (Ika, 2012). Project management in Africa must therefore be tailored in every possible way to do away with these hurdles. Ika (2012) goes on to say that despite the establishment of the fact that western practices do not suit management in Africa, not much insight has been made available on how to effectively adopt project management tools and techniques in Africa. Ika (2012) cites that according to Murithi and Crawford (2004), Africans can be seen to have a high level of power distance, are collectivist, moderately score when it comes to uncertainty avoidance and masculinity and this has repercussions on project management in Africa. Ika (2012) states that following what various

researchers (Murithi and Crawford, 2004, Hekala, 2012, Collier, 2007, etc.) have postulated, it is essential to develop an African approach towards project management that is tailored to suit the African culture and the value systems as well as the society. According to Kissi and Ansah (2013), certain practices that constantly affect the PM practice in African countries include the following – high levels of bureaucracy, political and economic constraints, leadership, organisation culture, not properly understanding PM concepts, just to mention a few (Kissi and Ansah, 2013). Kissi and Ansah (2013) further state that project management has become a topic that is talked about worldwide and according to Barriere (2003) the practice is now a universal tool that ensures increased performance levels and as such much attention should be given to the discipline and all aspects adequately understood.

Abbasi et al (2000) explains that project management in African countries is at an early phase and is now being developed. According to Kissi and Ansah (2013), Sukhoo (2004) believes that the inadequacy of skilled labour, difficulties with the economy, social disparities, weak nature of the political institutions as well as cultural and religious beliefs that individuals are deeply rooted in form part of the reasons why the practice has not been adequately developed. Birkhead et al (2000) further states that there has been a critical need for the practice to be efficiently developed in African countries owing to the dynamic nature as well as the rise of differing technologies together with trade regulations being relaxed, causing markets to be very competitive (Birkhead et al, 2000).

2.3.1   The African culture

Idang (2015) explains that culture is often described as the totality of the peculiarities shared by a group of individuals. When talking about the African culture, Idang (2015) explains that it does not imply that all African countries share the same language,

dressing, events, and the like. The focus is rather on the existence of certain similarities shared which when placed side by side with others, reveals some form of contrast or gap.

Idang (2015) further explains that every individual who grows up within a particular society starts to practice the culture of that area, consciously or unconsciously. To conclude that a particular society exists without a culture will mean that society has stayed in existence without social institutions, organisations, etc, and this is untrue (Idang, 2015).

Whether or not individuals are aware, Idang (2015) explains that the society has ways of pushing individuals to accept the existing values concerning what is right.

According to Peel and Peel (2019), per the African culture, the "self" cannot be taken as different from the world, they are integrated with both the social and natural society. Peel and Peel (2019) further explain that it is after an individual starts to interact with his or her surroundings that he or she turns into a person with certain preferences and whose decisions and choices may have an impact on others. A Xhosa proverb – "Umuntu ngumuntu ngabantu,", which means "a person is a person through persons" can be seen to be very common to the African culture.

2.3.1.1 Social values

Idang (2015) explains that social values are generally those values and practices that are peculiar to a particular area. The society most of the time if not all the time, dictates the various practices that are performed either habitually or on special occasions (Idang, 2015). More often than not, a clear distinction does not exist between certain social values, moral, religious and political values.

2.3.1.2 Moral values

According to Idang (2015), African culture can be seen to be entrenched in moral considerations that are held strongly. The culture is filled with various belief systems that individuals must adhere to in order to avoid any form of curse (Idang, 2015).

2.3.1.3 Political values

Political institutions exist within the African society with leaders who are respected (Idang, 2015). The most prominent thing about political institutions within the African culture according to Idang (2015) is that it begins with the family. There is a family head in every family and in every village there is a village head (Idang, 2015). Idang (2015) further explains that, after these heads, there exist the head of every clan and then a paramount ruler.

2.3.2 Social conditions

Family ties according to Murithi and Crawford (2002) are an important factor when it comes to social conditions in African countries. Africans have a culture and possess an awe-inspiring allegiance to their ethnicity, family as well as their clan Murithi and Crawford (2002). Murithi and Crawford (2002) further explain that according to Leonard (1987), in the organisational set up, the conjecture of rationality which should more or less lead to allegiance to the organisations goals cannot really be seen. It is only when the primary commitment individuals have is acknowledged that individuals show allegiance to the organization. Murithi and Crawford (2002) state that Africa is a moralist society. Individuals do not only feel they have attained success by looking at their wealth only but when they accomplish their moral obligations to their families, clans or ethnic groups (Murithi and Crawford, 2002). This is clearly different from the view from the Western world that "man is a rational human being" (Murithi and Crawford, 2002).

According to Jaeger and Kanungo (1990) a study carried out proved that by the year 2010 the population would have reached a billion. The population can be seen to be a youthful one as can be seen by almost 60% of the populace being below the age 30 (Murihti and Crawford, 2002). African countries can also be seen to have principally rural lifestyles with the urban areas growing at rapid rates and characterized mostly by overcrowding (Murihti and Crawford, 2002).

2.3.2.1   Area differences

According to Shrivastava (2012) individual differences come in different forms. They range from physical to mental to intelligence to attitudinal differences, differences when it comes to level of achievement, differences when it comes to character and disposition, social and emotional differences (Shrivastava, 2012). The research focusses more on social differences, attitudinal differences as well as differences in intelligence. For attitudinal differences, every individual has a distinctive attitude towards other people, employees, institutions, etc. and attitudes can be seen to be developed in an individual's environment (Shrivastava, 2012), just to mention a few. Social differences on the other hand according to Shrivastava (2012) range from co-operation to leadership, among other social functions. With the difference in intelligence, people are described as geniuses, gifted, average, excellent, imbecile, idiots, and the like. The subject of area differences comprises the above-mentioned types of differences that are peculiar to various areas across the country. Farooq (2012) also explains that individuals come with a variety of dissimilarities. Some are natural and cannot be altered, however, others can be changed or altered by the individuals within the society as well as individuals they engage with throughout their lives (Farooq, 2012). Farooq (2012) further explains that when it comes to area differences, it deals with the manner in which individuals are able to adjust to the changing needs

of the society in which they find themselves. With adjustment in the society, as individuals put in effort to adjust socially to the roles they play in the society, overtime, their personality and social life get better (Farooq, 2012).

2.3.3   Political conditions

Murihti and Crawford (2002) state that after 40 years, the African nation paid no regard to any territorial claims of any sort. Political institutions are however unstable and very weak and are concentrated amongst the elite in the society who make up the minority (Murihti and Crawford, 2002). According to Murihti and Crawford (2002), political systems are mostly characterized as requiring patronage and the negligence of the customary allegiance of the populace makes commitment to such political systems superficial. According to Cockcroft (1990) it goes without saying that it is this patronage attitude towards political systems that has led both leaders and managers to keep behaving as if they are ruling chiefdoms and kingdoms.

Ika and Hodgson (2010) state that the intrinsically political side of projects cannot be ignored or disregarded. Hulme (1995) and Ika and Hodgson (2010) further state that hybrid models which consider the traditional as well as the political aspects in which projects can be seen to be technocratic, as well as political arenas where conflicts may arise, where technologies as well as skills and power are used to influence the agenda, are worth considering.

2.4   Socio technical transition

2.4.1   Socio-technical systems theory

According to Upadhyay (2016), the socio-technical systems theory was developed by Eric Trist who was an investigator along with a previous miner, Ken Bamforth, while carrying out a study on the coal mining industry in Britain between 1949 and 1950. Upadhyay (2016) states that Trist and Bamforth observed during their studies that the

systems behavior was impacted by the joint collaboration of technical and social factors, and thus proposed the socio-technical system.

According Upadhyay (2016), Eric Trist explains that the methodology used in the design of the socio-technical system can be described at three levels:

- The primary work system level development (Upadhyay, 2016)

- The entire organization systems development (Upadhyay, 2016)

- The macrosocial level development (Upadhyay, 2016)

Upadhyay (2016) further explains that it is very important to identify the major technological variables that affect social systems. Upadhyay (2016) further states that from social systems, other powerful influences arise and these influences could cause different groups of tasks to satisfy the supposed requirements of a social system.

Upadhyay (2016) also states that in building on Emery's socio-technical system mode, Albert Cherns proposed a subsystem principle for socio-technical systems. According to Upadhyay (2016), Albert Cherns explained that for any socio-technical system to survive, it is expedient that it functions as per Parsons' model. These functions according to Upadhyay (2016) are:

- Attainment of the organisations goals (Upadhyay, 2016)

- Adaptation to the environment (Upadhyay, 2016)

- Integration of the activities in the organization that individuals perform (Upadhyay, 2016)

- Continuity of recruitment and socialization (Upadhyay, 2016)

Alojairi (2010) further explains that the socio-technical approach towards the practice was first coined by Trist and Bamforth (1951) from a study carried out on methods used in coal-mining. According to Alojairi (2010) the study had as its primary objective to show that the technical systems involved in management cannot be

understood in segregation, the social variable is essential and should be included. Traditionally, mining was done in groups, these groups worked closely and were managed internally (Alojairi, 2010). This social setting was however disturbed when mechanical cutters and equipment were introduced into the industry (Alojairi, 2010). This led to standardization and caused employees to become routine beings and isolated (Alojairi, 2010). Alojairi (2010) also states that this in turn led to low levels of productivity and most individuals being absent from work. Alojairi (2010) states that in studying the coal-mining methods, the conclusion drawn was that in order for any technical system to run effectively and efficiently it is important that the social system is appropriately dealt with and integrated into the process.

Scott (1987) explains that even though it is important to concurrently manage the social and technical aspects in project management, the two systems are complex owing to the fact that they are both individually different. Whereas the technical system tends to necessitate control as well as efficacy, the social system leans towards flexibility and multiplicity (Mumford, 2000). Mumford (2000) further explains that despite the diversity the two systems come with, there is the need to manage both systems equally as the inputs are as important as the output and this cannot be achieved if either of these systems are working independently.

According to Trist, Higgin, Murray and Pollack (1963), cited in Appelbaum (2014), a socio-technical system is based on the principle that organisations are composed of technical and social parts that work hand in hand in the environment. Appelbaum (2014) further explains that owing to the fact that both the social and technical systems work concurrently to achieve goals, outputs are both physical outcomes as well as social products. It is therefore important to perform tasks in such a way that both systems produce positive results – joint optimization (Appelbaum, 2014).

Cummings (1994) explains that the social system aims at providing a structure that appeals to the psychological needs of individuals and is experienced through culture, norms, roles as well as communication (Harvey and Brown, 1992). The technical system on the other hand relates to technology and includes mainly processes and equipment to change raw materials into finished products (Cummings, 1994). Furthermore, these socio-technical systems exist in an environment which can affect the system and attainment of goals and should not be neglected (Cummings, 1994). Emery and Trist (1965) according to Appelbaum (2014) emphasizes that management should be approached as an open socio-technical system. Cummings (1994) explains that when enhancements are made to technical systems, it does not guarantee increased levels of productivity if the social aspect does not support these improvements and is unable to cope.

Geels (2004) states that there is a need to pay close attention to not just innovation but also how it is used and how the system functions. A wide range of scholars can be seen to emphasize this need as the environments in which we live in keep changing and many new things are introduced as the years go by (Geels, 2004). Geels (2004) states that in trying to understand socio-technical systems, he describes them as connections between elements needed to assist in achieving social functions. Technology is a vital component in society nowadays in order to achieve certain functions and as such the necessary components can be categorised as resources (Geels, 2004). Geels (2004) states that socio-technical systems therefore consist of knowledge, labour, capital, culture, etc. and is summarized in the figure 2.5 below
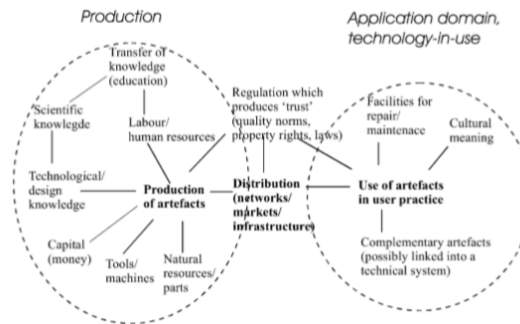
Figure 2.5 Elements of a socio-technical system (Source: Geels, 2004)

Regarding technical aspects and social aspects, Geels (2004) explains that as new technologies are introduced, users have to integrate them into their routine and this involves training and adjustments. These technologies have to be 'tamed' in order to be adopted into routine work (Geels, 2004). This is referred to as 'domestication' and this leads to studies being carried out on "adoption" which is not a passive activity, but requires certain adaptations by the user (Geels, 2004). Geels (2004) explains that looking at the socio-technical system is advantageous as it makes the co-evolution of the society as well as technology the prime focus. According to Geels (2004) the socio-technical system comes with different dynamics and these dynamisms come with adaptations between technology as well as the user and the environment, not forgetting feedback from these systems. Figure 2.6 below shows the co-evolution of technology and the user environment.
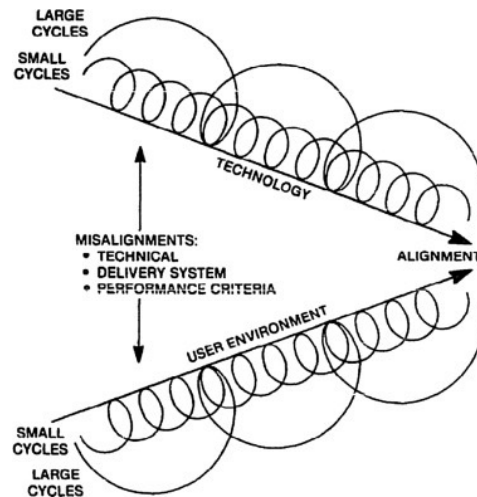
Figure 2.6 Co-evolution of technology and user environment (Source: Geels, 2004)

According to Eason (2008), the socio-technical system provides concepts that assist in understanding how organizations work and suggests procedures for the design and application of new systems. Eason (2008) states that below are some of the ways by which individuals have described the socio-technical system theory:

- A theory about manufacturing jobs that existed 50 years ago and owing to the fact that these kinds of jobs are no more in existence it is irrelevant (Eason, 2008).

- It deals with independent work groups, enriching the job as well as democracy in the workplace and knowledge about this has been acquired now (Eason, 2008).

Socio-technical systems describe any system which allows people to communicate with the help of ITC and allows individuals better understand social networking (Eason, 2008).

Eason (2008) further explains that socio-technical systems are important to him mainly because it helps understand the complex ways by which people interact and apply various technologies to accomplish tasks assigned collectively. Eason (2008) also states that a system is described as successful when it is able to withstand any

turmoil from the external environment and it is the individuals who partake in the adaptation. A question that is of essence is whether or not these systems have the ability to support this adaptation because if these technologies are rigid, it may pose an obstacle to adaptation by man (Eason, 2008). Eason (2008) further explains that the relevance of socio-technical systems lies in those aspects that highlight the reality of the processes involved in management and the various dependencies generated among people as well as between technical artefacts and the society. After socio-technical systems were introduced, they have gone through a varied number of changes overtime (Eason, 2008). It played a very pivotal role in the struggle to integrate the social and technical aspects of every process (Eason, 2008).

According to Jasanoff and Sang-Hyun Kim (2015), sociotechnical imaginaries as part of the socio-technical system are visions of a desired future that show an understanding of social life that can be achieved through and supports advancement in technology. Simmet (2018) explains that the concept of sociotechnical imaginaries allows individuals to better understand the co-evolution of technology and the society, According to Simmet (2018) sociotechnical imaginaries show two competing variables – the society and technology. Simmet (2018) further explains that with the society aspect, it covers history, culture, politics and is a less visible approach and more often than not overlooked in attempts to implement a technical trajectory introduced from the Western world. Jasanoff and Sang-Hyun Kim (2015), explain that for a sociotechnical imaginary to succeed there is the need for stability and collective support and the public must be willing to perform.

According to Sawyer (2013) and Hoffman (2002) socio-technical systems comprise a complex collaboration between social and technological subsystems, as can be affirmed by many other researchers. Hoffman (2002) further explains that the socio-

technical system aims at enhancing outcomes from these collaborations by the design of systems that can acclimatize to the changing needs of man as well as the dynamic social environment instead of humans adapting to these systems. Ngowi and Mvungi (2018) further explain that people-oriented systems instead of computer-oriented people are necessary.

Ngowi and Mvungi (2018) state that these socio-technical concepts were developed by the Tavistock Institute of Human Relations in order to bring democracy into the work environment so as to improve satisfaction, augment work practices as well as add humanistic ideas to the processes in the work environment. Ngowi and Mvungi (2018) further state that it is an established fact that the quality of a technical system on its own cannot function appropriately without adapting to the requirements of the organization. There is therefore a need for information systems to be evaluated and revised in order to respond to its usage among other factors that influence how it functions (Ngowi and Mvungi, 2018). According to Morris (2009) the parts that make up socio-technical systems must be interdependent and comprise of distinct social and technical parts that adapt to the dynamisms in the environment and are receptive to joint optimization. Maio (2014) states that socio-technical systems are systems that adapt to the needs of man as well as the dynamisms of the environment and not the other way around.

Baxter and Sommerville (2010) explain that the premise of socio-technical systems is that in designing a system, a certain process must be followed and this process must take into consideration both the technical and social factors that could influence how functional the system is as well as how it will be used. Most systems satisfy the technical demands but fail support the actual work done in the organsiation owing to the negligence of the social factors (Baxter and Sommerville, 2010).

According to Badham et al (2000) the term socio-technical systems refers to a complex system that is comprised of five main characteristics:

- Systems that have parts that are codependent (Badham et al, 2000)

- Systems that adapt and achieve goals in the external surroundings (Badham et al, 2000)

- Systems have internal environments that are made up of distinct but interdependent social and technical subsystems (Badham et al, 2000)

- Systems whose goals can be achieved in more than a single method (Badham et al, 2000)

- Joint optimization is key to the adequate performance of the system (Badham et al, 2000).

2.4.1.1 Leavitt's model

Upadhyay (2016) talks about Leavitt's model for socio-technical systems which is one that originated from open systems theory and is described as one that consists of four components that interact – task, structure, actor and technology. Figure 2.7 below represents Leavitt's model for socio-technical systems.
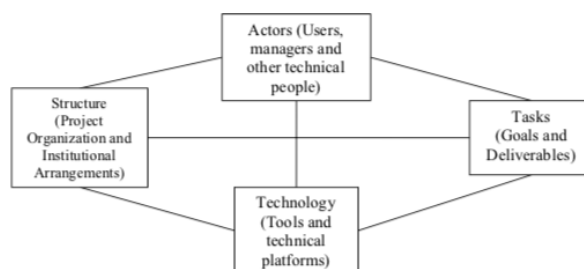

Figure 2.7 Leavitt's socio-technical model (Source: (Upadhyay, 2016)

2.4.2 Socio-technical transition approaches

According to Griffith and Dougherty (2002) and Majchrzak and Borys (2001) "socio-technical" has become a catchphrase and is trending worldwide without a precise

definition as to what exactly it encompasses. Herrmann, Hoffmann, Kunau, and Loser (2004) are of the opinion that whenever the social and technical variables are put into play simultaneously, socio-technical interactions occur. Palvia, Sharma and Conrath (2001), also explain that the technical system deals with requirements when it comes to tasks as well as processes and procedures that the technologies implemented need in order to meet set goals and achieve results. The social aspect on the other hand, according to Palvia, Sharma and Conrath (2001), are those variables that are task dependent and necessitate synchronization which could also lead to the development of societal norms geared towards task performance.

The socio-technical approach according to Appelbaum (2014) contradicts with the traditional design of project management where the technical aspect is provided for and the individuals are made to adapt to the system. The traditional method leads to below standard performance most often than not at high social costs (Appelbaum, 2014).

Hackman and Oldham (1980) and Cherns (1967) according to Appelbaum (2014) explain that when the human and technical systems are coordinated and integrated, that is the only way positive outcomes can be achieved as one system supports the other. Also, they agree with other scholars on the fact that when one subsystem experiences a change, it influences another system owing to the interdependency (Hackman and Oldham, 1980 and Cherns, 1967 according to Appelbaum, 2014).

Boamah and Rothfuß (2018) state that in adapting to the technological systems, transformations within the society also take place and vice versa. Boamah and Rothfuß (2018) further explain that socio-technical transitions summarize the re-configuration and modifications between technology, the industry, policies as well as cultural practices. Also, in order for these new technologies to be sustainable and widespread,

consideration must be given not only to the technical aspects but also an alignment with social and cultural practices should also be considered (Boamah and Rothfuß, 2018).

Land (2000) further explains that socio-technical systems have not caught on as fast as they should as people have not properly understood the dimensions involved in order to apply it appropriately to the practice.

Baxter and Sommerville (2010) explain that adopting a socio-technical systems (STS) approach to development of systems results in having systems that are suitable for the users as well as systems that meet the requirements of key stakeholders. However, most individuals do not adopt such approaches and practices (Baxter, 2010).

Baxter and Sommerville (2010) state that the STSD approach is one that considers the human, social as well as the factors in the organsiation, not forgetting the technical factors that exist as well. This joint collaboration of the various factors helps in better understanding how the organizational, social and human factors have an effect on the manner in which work is done as well as the technical systems applied. Socio-technical approaches are adopted mainly because of the fear of increasing the risk of these systems not meeting the organisations goals (Baxter and Sommerville, 2010).

Baxter and Sommerville (2010) further explain that socio-technical approaches can be seen to be applied in varying ways worldwide. These varying applications are a reflection of the diverse cultures and approaches to work in various organisations (Baxter and Sommerville, 2010). Baxter and Sommerville (2010) state that the socio-technical approaches are applied based on the culture and market in a particular area and the absence of standardized approaches can be seen to be as a result of this.

The following includes socio-technical systems design approaches according to Baxter and Sommerville (2010).

- Cherns' (1976) and Cherns (1987) principles (Baxter and Sommerville, 2010).

- Clegg's (2000) principles, (Baxter and Sommerville, 2010).

- Scandinavian approaches (Bjerknes and Bratteteig, 1995) (Baxter and Sommerville, 2010).

- ETHICS (Mumford, 1983,1995) (Baxter and Sommerville, 2010).

- Cognitive Work Analysis (Rasmussen et al, 1994a; Vincente, 1999)

- Socio-technical method for designing work systems (Waterson et al, 2002).

- Ethnographical Workplace Analysis (Hughes, et al, 1992)

2.4.3   Socio-technical systems approach to project management

Bostrom and Heinen (1977), Griffith and Dougherty (2002), Pasmore and Sherwood (1978) and Shani et al. (1992) explain that the socio-technical approach assists with the scrutiny of the dynamic relationship that exists between tasks, people and technology as well as helps in addressing the various set up in organisations where people are required to perform their duties, aimed at achieving set targets.

Alojairi (2010) explains that the socio-technical approach towards project management looks at the social aspect as well as the technical aspect simultaneously. That is, it considers people, tasks and technologies concurrently (Pasmore and Sherwood, 1978, Shani, Grant, Krishnan, and Thompson, 1992).

Shove (2010) explains that viewing management from a socio-technical transition perspective provides opportunities for theorisng changes that occur within the society by throwing more light on practices that occur within the society rather than characterizing technologies as what drives the social practices

According to Knutson (1996) project management comprises a delicate balance between social and technical variables. These two factors are very necessary in the practice (Knutson, 1996). Knutson (1996) explains that years ago, project

management was viewed as overseeing schedules, cost as well as resource allocation, this till date is true. This category of data according to Knutson (1996) forms the "technical" aspect of the Socio-technical model of project management. Handling the dynamics of the individuals or teams involved in the project on the other hand describes the "socio" aspect (Knutson, 1996).

Knutson (1996) further explains that the socio-technical model comprises six sub systems: resources, personalities and competencies, policies and procedures, management and rewards, automation as well as performance and metrics (Knutson, 1996). With respect to policies and procedures, Knutson (1996) explains that every environment comes with certain rules and regulations by which individuals are guided by. The environment is either set up to have rigid rules or structure with no room for misinterpretation or rules will be expressed as flexible which provide room for varied interpretations. In the social regard, when such policies and procedures are being developed, it is important that those individuals these policies are drawn up for are a part of the process so as to ensure that they are interested in adhering to them (Knutson, 1996). Culture should also be backing the adherence to such policies and procedures in order for them to succeed (Knutson, 1996). Knutson (1996) explains that breaking the practice into the six subsystems helps in analyzing the practice better as both the technical and social aspects of each subset affect project organization and success. Knutson (1996) further states that it is necessary to note that there is a need for a balance and interdependency between the social and technical variables of the practice.

2.5 Social practice theory

Social practice to begin with can be seen to be the means by which focus is placed on interactions between human beings as well as discourse in the society (Helguera,

2012). Helguera (2012) further explains that social practice as a discipline places more value on the process of work rather than the end product. Social practices mainly are those activities that are carried out habitually and are important to people as part of their everyday lifestyle or process (Holtz, 2012).

According to Dougherty, (2004), the social practice theory deals with how man as a social being, with varying motives and intentions alters or changes the environment in which they live. Ortner (2006) further explains that the practice theory sets out to understand and throw more light on the relations that exist between the human beings on one end and the 'system' on the other hand. William (2015) explained that the social-practice theory is carried out in order to better understand actions carried out in the social context, in order to modify the unit of analysis from individualistic behavior, and move away from structural formula and how practices in the society change over the years. Social practice seeks to determine the connection between practice and context within a society (Audiopedia, 2017). Social practice mainly occurs in two ways: activities and enquiry. Activity theory stems from this with deals with participants performing activities to bring some form of change to the society (Audiopedia, 2017). Social practice is an activity in itself, enquiry looks at how social activities take place and notes its causes as well as consequences (Audiopedia, 2017). Bourdieu, the most famous social theorist, in trying to explain the social life as part of the theory called his method "genetic structuralism" (Geels, 2008). Gale (2008) explained that, in an attempt to explain the practice, not only should the 'objectivist grand' theories be left behind but also the subjectivism of 'externalism'. Bourdieu (1972) according to Gale (2008) believed that no form of instrument or apparatus could do the social practice of daily life justice. Bourdieu's theory of practice consists of three main categories – field, capital and habitus – as well as ideas of struggle and

strategy which suggest intentionality from individuals, families as well as groups within the society (Gale, 2008). Habitus, mainly deals with the structures within the society that act on a person, the field, deals with interactions within the society, conflicts as well as competition among individuals (Gale, 2008). Gale (2008) further explains that according to Bourdieu (1972), fields are determined by the power relations that exist between various positions in the field. With capital however, Geels (2008) explains that this deals with the ways and manner by which individuals manifest their class and positions and not the economical definition of capital. Capital is a good that is placed in high value by the society (Bourdieu, 1972). Capital organizes everyday living around how people judge taste, hierarchical orders as well as methods by which judgment (Bourdieu, 1972)

CHAPTER 3
METHODOLOGY

3.1 Introduction

Methodology can be described as a systematic way of solving a particular problem. According to Rajasekar (2013), methodology can be seen as a science that studies the manner in which various researchers carry out their work explaining and forecasting various theories. This section of the entire research paper focusses on the methods used in acquiring the necessary data needed for the research. This includes but is not limited to the methodology, sample size as well as the tools used to collect data.

3.2 Research approach

According to Creswell (2003) no particular research method can be seen to be applicable to all problems in research because all research approaches come with their own weaknesses and strengths. Research approaches are basically categorized into two – qualitative research methods and quantitative research methods (Kothari, 2003). Creswell (2003) further explains that the two main methods can be combined to form the third approach which is the mixed method approach.

The study adopted the qualitative research method. According to Denzin, Lincoln and Giardina (2005), qualitative research involves looking at the world form a realistic perspective. They further explain that the qualitative research approach further deals with real life situations being explained and understood from the opinions of individuals (Denzin, Lincoln and Giardina, 2005). Creswell (2003) defines the qualitative research approach as one where the research relies mainly on the opinions of the research participants, questions are asked in a general and broad manner, analyses is done based on themes and the inquiry carried out in a subjective manner.

3.3 Research design and strategy

According to Datt (2016), the research strategy simply describes the manner in which the researcher plans to answer the research questions highlighted in the study. Datt (2016) further explains that the research design can be described under seven categories – experiments, ethnography, case studies, surveys, archival research, action research and grounded theory. Datt (2016) further explains that action research, ethnography as well as archival research can be seen to be inductive research approaches whereas experiments and surveys fall under deductive research approaches. Research strategies that are based on both inductive approaches, that is, a mixed approach, include grounded theory as well as case studies.

According to the WritePass Journal (2017), defining your research strategy involves determining whether it is a primary study or a secondary one. The WritePass Journal (2017) also affirms to the fact that the research strategy deals with defining how the researcher intends to answer research questions adopted. Case studies, surveys, interviews, action research, ethnomethodology and grounded theory are the various research strategies according to the WritePass Journal (2017).

MacKenzie (2014) explains that the research strategy is a step-by-step process that provides a guide for the researchers' line of thought that enables him stay focused in order to achieve set goals. With respect to research strategies, Creswell and Clark (2011) explain that they include the following: - ethnography, grounded theory, phenomenology, cases study design and surveys. The research design on the other hand refers to the processes used in the collection and analysis of the variables that the statement of the problem in the research emphasizes Creswell (2014). Creswell (2014) further explains that the research design explains into detail the type of study as well

as the sub-type. The study type includes descriptive designs, correlational, semi-experimental and experimental designs.

According to Mohammad (2013) the research design consists of an organization of various conditions. He further explains that the research design includes descriptive research designs (naturalistic observation, survey, case study), correlational research design (case-control study, observational study), experimental and non-experimental (Mohammad (2013). McCombes (2019) also explains that the research design mainly is a structure that helps in planning the research and helps the researcher determine the type of data needed, the location, the participants needed as well as hypotheses if need be. De Vaus (2001) states that the research design refers to the components that form part of the researcher's study that ensures that at the end of the study the problems will be efficiently dealt with. Major types of research design include exploratory, descriptive, correlation and experimental research designs (Blakstad, 2008). Datt (2016) further states that the research strategy is very important as it helps the researcher answer questions as well as shapes the structure of the research. Saunders et al (2009) explains that the choice of strategy highly depends on the research objectives and questions as well as the time available to the researcher and existing literature on the topic in question.

This study adopted an interpretivist epistemology which can better be explained as a phenomenological approach towards the research. According to Saunders et al, (2006) the phenomenological approach is based on the manner in which people experience phenomena. It focusses primarily on the various interpretations research participants attach to things happening, it is an attempt made by the researcher to gain an understanding of what is happening and why it is happening (Saunders, Lewis and Thornhill, 2006). The study also adopted an exploratory design which according to

Robson (1993) is one that tries to probe to discover valuable ways of questioning, what is happening, seeks new insights as well as assess a particular phenomenon in a new light. The Survey research strategy was adopted and helped in interviewing research participants in order to answer research questions to bring to light what the issue is and help suggest solutions to the problem.

3.4 Research setting

According to Bhattacharya (2008) the research setting could either describe the geographical area where participants being studied can be located or the actual group being studied. The research setting was Ghana as project managers interacted with undertook projects across the country. The choice of this area was as a result of many projects and construction industries located in those areas. These areas are covered with varied types of facilities from residential to commercial to civic, etcetera, and are filled with people from varying walks of life and various livelihoods. Interviews carried out targeted project managers in high positions within the industry who have the authority to make most of the decisions relating to the practice. These individuals were chosen owing to the nature of the research problem, as these professionals are most knowledgeable in this discipline resulting from their experience levels. Project managers were interviewed on site as well as in their respective offices and some interviews took place over the phone.

3.5 Population

3.5.1 Unit of Analysis (Population of study)

According to the Glossary of Statistical terms by Wiley and Sons (2012), the population describes a group of events that are comparable and form part of the elements needed for an experiment or to answer a particular question. A population can simply be described as a collection of individuals with precise features from which

sample deductions are made. A population can be seen to be a complex thing during research hence the need to make an inference of the population with the help of a sample. Babbie (2007) explains that a key factor that helps in determining the study population is the size. The targeted population was mainly project managers who fall within the following selection criteria developed:

- Experience – a minimum of five (5) years

- Capacity – projects that impact an average of 500 people

- Project type – projects that are capital intensive and cover an average cost of $600 000

The need for individuals knowledgeable in the subject matter and within the practice informed the choice of this population. This choice was also as a result of the desire to interview participants who have adequate amount of authority to make certain decisions and also individuals who have worked in the field for a while and know what is actually happening, in order to gain comprehensive information. Owing to the phenomenological nature of the research, very few participants can be seen to be appropriate to provide the information required.

3.5.2   Sample and Sample size

According to Amer (2010) sampling describes the process of selecting a representative portion of the population aimed at representing the entire population. Amer (2010) further explains that in selecting a sample it is very important to take into consideration the following: - the desired estimates, the type of analysis as well as the number of variables that will be analysed. Wood and Haber (1998) states that sampling procedures help with solving the problem.

According to Robinson (2014), the selected sample for a qualitative research method should be adequate to support generalisation. Robinson (2014) and Trafimow (2014)

explain that purposeful sampling allows researcher to collect data from sources that possess direct experience concerning the phenomenon in question.

According to Marshall et al (2013) qualitative sample sizes are usually not justified even though sample size is a top concern for researchers (Dworkin, 2012). A study revealed that sample sizes in multiples of 10 were common and acceptable (Mason, 2010) further explains that no well-established guidelines that have been published to help estimate a sample size a priori for methodologies that are qualitative. Qualitative studies are not focused on magnitude and generalisation but rather on the understanding of patterns (Marshall et al, 2013)

The study targeted project managers who have a minimum of 5 years experience. The sample was enlisted from randomly selected architectural, real estate and construction firms and the sample size was 15. However, due to certain limitations listed as part of the limitations of the study, 13 out of the 15 project managers were available for the interviews.

3.5.3 Sampling techniques

The sampling technique refers generally to the various processes adopted in order to select research participants for the study. Various researchers have made us aware that sampling techniques are either probability sampling techniques or non-probability techniques. For the purpose of this study, the research adopted both the probability and non-probability sampling techniques as the main focus of the research can be achieved adequately using those techniques. Specifically, the research adopted the purposive and snowballing sampling techniques (non-probability) and the random sampling probability sampling technique.

- Purposive sampling technique

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According to Leiber (2009), the purposive sampling technique is a technique researchers use in selecting participants they believe will provide them with useful information in the course of their research.

Bernard (2002) further explains a purposive sampling technique as one that chooses particular research participants due to certain qualities the participants possess as well as they being knowledgeable in particular areas the research is concerned with.

This sampling technique was purposely chosen in order to help determine the project managers in the construction industry in the population who met the criteria set as discussed earlier to gather data from for the study. The reason for this is that certain project managers can be seen to have been working in the field longer than others and can therefore provide more information relating to the study better than others. It is therefore ideal to carry out the research seeking their perspective on the issue.

- Snowballing sampling technique

This technique is also referred to as the chain referral sampling technique. As the name suggests, it deals with a particular respondent or participant who the researcher has come into contact with, referring the researcher to other individuals they believe can be helpful in providing information related to the study.

According to Bricki and Green (2007), this sampling technique involves identifying one or two research participants and then asking them to suggest other participants who can provide information necessary for the study. This technique was chosen owing to the fact that projects are not all year running, hence there are certain project managers whose whereabouts may not be known at the time of the research as a result of them not handling projects at the time.

3.6   Data collection

The study employed a qualitative research methodology and data for the research was gotten from a few sources. Bryman (2004) explains that for research, data can be gotten from either a temporary source or primary source.

3.6.1   Primary data

For primary data, the study adopted a semi structured interview format to interview sampled research participants. Interview questions were explained as and when required to ensure adequate understanding in order to achieve credible results. Voice recording on the mobile phone as well as recording of notes in notepad include the tools that helped with the interview.

3.7   Data analysis

Marshall and Rossman (1999) explain that data analysis describes the process by which researchers bring structure and meaning to the data collected during their survey. Data analyses can be seen to be time consuming and complicated (Marshall and Rossman, 1999) but also a creative process. Best and Khan (2006) also explain that data analysis involves the application of deductive and inductive reasoning and the deductive approach depends on what it feels like to be a research participant which forms part of the qualitative research methodology.

Dudovskiy (2016) explains that for a qualitative research methodology that uses interview, experiments, focus groups, etc., analysis involves recognizing the common patterns from respondents and doing your analyses critically to attain the aims and objectives of the research.

Data analysis when adopting a qualitative approach is iterative as the data received is updated as and when new information is received.

According to Maguire and Delahunt (2017), data analysis is very critical when it comes to qualitative analysis. Thematic analysis can be seen as one of the major means by which qualitative data is analysed and this deals with identification of various patterns or themes that exist within the qualitative data collected (Maguire and Delahunt (2017). Thematic analysis differs from other qualitative analysis methodologies as it is not directly linked to one particular theory. Vaismoradi, Turunen and Bondas (2013) also explain thematic data analysis as the process of identifying themes that that spread across a set of interviews carried out by the researcher.

Interviews that took place were transcribed and typed out with the help of Microsoft Word, and in order to ensure credibility and avoid any form of errors, as well as maintain high levels of accuracy and quality, recordings were listened to again and compared to the transcribed document. Thematic analysis was suitable and helped in identifying the various themes that emerged from data received from the participants. The use of thematic data analysis helped in the generalisation of the data received form the interviews.

3.8   Ethical considerations

In carrying out any form of research, it is important that ethics is considered. The two main ethical considerations adopted include confidentiality and consent.

- Confidentiality

According to Bryman (2004) it is very important to keep the identity of research participants under wraps in order to protect them from any risks that may arise due to their participation in the research. Research participants were made to understand that any information given to the researcher would be kept as confidential and anonymity will be highly respected. Names of participants are therefore absent from this research.

- Consent

It is of prime importance that consent be sought form research participants before the research is conducted. It is with this in mind that the researcher drew up a consent form to be signed by all participants informing them of the implications of taking part in the research. Participants were also informed of their freedom to withdraw from the study as and when they chose to. According to Degu and Yigzaw (2006), a formally written consent form sometimes may frighten respondents or participants and hence a verbal consent is accepted.

3.9 Chapter summary

Chapter three (3) concentrates on the various methods and approaches that assist in achieving the set aim and objectives for the research. Furthermore, data collection methods and analysis are discussed and the population and area of study is described. Ethics that should be considered in carrying out research such as this one concluded the chapter. The Figure below presents a summary of the research methodology.

Approach	**QUALITATIVE**
Research Design	EXPLORATORY
Unit of Analysis	PROJECT BUILDING
Sampling	PURPOSIVE and
Data Collection	PRIMARY
Data collection tactics	INTERVIEWS
Data Analysis	THEMATIC ANALYSIS
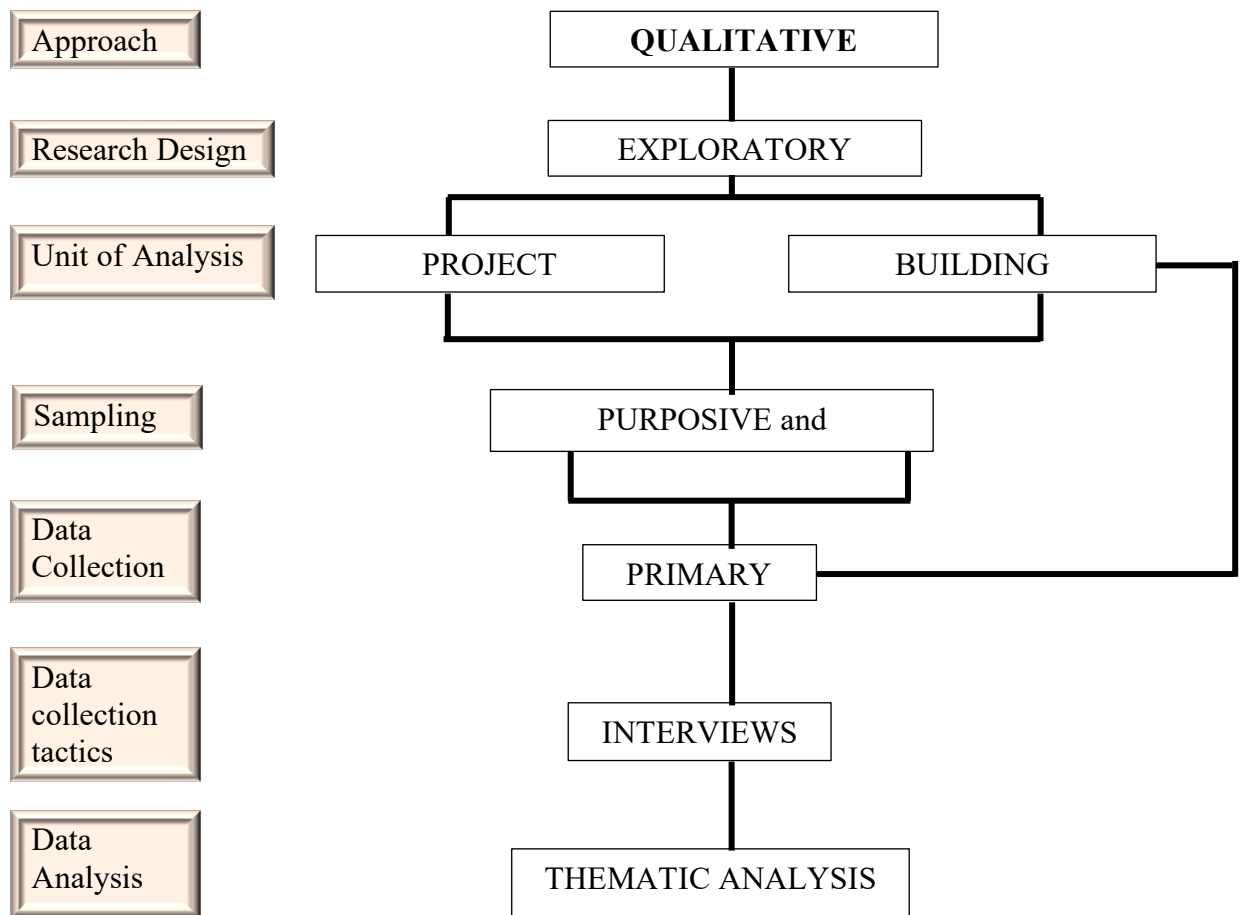
Figure 3.1 Structure of Research Methodology (Source: Author, 2019)

CHAPTER 4
FINDINGS AND DISCUSSIONS

4.1   Introduction

The findings and discussions chapter presents the information received during the data

collection process as well as discusses the results received. To facilitate understanding,

themes were developed based on information received from participants and graphical

representations included as and when necessary. What certain responses implied are

further discussed for indebt understanding. This chapter takes off with the

demographic data of respondents, information received from the interviews carried

out and ends with discussions on information received.

4.2   Background of respondents

4.2.1   Demographic data

Demographic data is collected in order to provide a contextual background to base

findings on. Adinyira and Anokye (2013) explained that it is important to know to

some extent the background of persons involved in the research so as to place

responses in context. This also to an extent shows how reliable and valid results are.

A population of 13 project managers were engaged to carry out interviews and a

particular criterion was developed that aided in choosing the project managers. The

criteria are as follows:

- Experience – a minimum of five (5) years

- Capacity – projects that cut across as wide variety of people

- Project type – capital intensive projects

- Project managers who were willing to be part of the study

Projects carried out can be seen to have had an average cost between a minimum of

GHC 200, 000 and $600, 000, for project managers that had between five (5) and eight

(8) years of experience, whereas those with more experience had handled projects

ranging between $12 000 000 and $180 000 000. Table 4.1 below gives a breakdown of interviews administered:

Table 4.1 Demographic data of Project managers

No	Name of Organisation	Code	Position Held	Years of experience	Gender	Mode of interview
1	GNPC	GN	Project manager	10	Male	Face-to face
2	Stately Corban	SC	Architect/ Project manager	10	Female	Phone call
3	Nowak Development Limited	ND	Project manager	13	Male	Phone call
4	Department of Feeder roads	FR	Project manager	17	Male	Phone call
5	Trasacco Estates Development Company	TE	Project manager	5	Male	Face-to face
6	Clifton homes	CH	Project manager	10	Male	Phone call
7	SQOL Consult	SQ	Project manager	6	Male	Phone call
8	Archxenus	AA	Architect/ Project manager	8	Female	Phone call
9	Zella Architects	ZA	Architect/ Project manager	5	Female	Face-to face
10	Jowak	JW	Architect/Project manager	20	Male	Face-toface
11	S - Consult	SSC	Project manager	8	Male	Phone call
12	Euroget Group	EG	Project manager	10	Male	Phone call
13	Ghana Highway Authority	GHA	Project manager	14	Male	Phone call

Source: Fieldwork by Author (2019)

4.3   Qualitative data

4.3.1   Findings from semi-structured interviews with project managers

Interviews were carried out in order to allow participants to report the social and political challenges that occur during the management of projects. The focus was mainly on the social and political issues as literature had adequately dealt with the

theories surrounding socio-technical analysis and the project management practice itself can be seen in itself to be technical. Geels (2004) explains that more often than not, the social and political aspects of the practice are blurred out and this is usually in an attempt to inculcate the foreign practices into the system. This forms part of the reasons why the interviews carried out sought to bring out the political and social issues surrounding the practice. After having the chance to speak with the various participants, information received from a purposively sampled number of project managers helped in the development of certain themes where it seemed appropriate. These themes stemmed from the frequency of particular responses throughout the interviewing period with the various respondents which encapsulate the major line of thought and ideas of the various interviewees. These responses provided information on the various social and political influences on the practice. Interviews lasted between 40 minutes and an hour for each participant and were audio recorded and then transcribed.

Before the main interviews were carried out, interviewees were asked to briefly describe how they undertake project planning.

4.3.2   Project planning process

In trying to find out how the interviewees go about their project planning, they were asked to briefly describe the processes they go through. The following were the major processes that can be seen to have run through all thirteen interviews:

- Put your cost element and timeline together

- Plan for human resources

- After planning for resources required, determine the baseline

- Plan your schedule based on the timeline

- Plan your procurement

- Plan for execution – procurement for human resource and materials

- Execute project

With the exception of three (3) of the interviewees, the others failed to mention the aspects that involved monitoring and controlling the progress of the project, checking for any variations, as well as handing over and the closure of accounts. One interviewee also brought to light the need to identify those areas where bottlenecks may exist and add more resources to those areas or identify areas not on the critical path in order to gain float to add up for those activities.

4.3.3   Themes developed from the findings

An inductive content analysis was carried out to come up with the following themes shown in table 4.2 below:

Table 4.2 Themes developed from data collected

Theme	Sub theme	Code
Drivers for employment	Experience	Adequate years of practice Knowledgeable in the area
	Competence	Ability to get things done efficiently Proficiency
	Family ties	Unskilled labour required Family business
	Commitment	Dedication to the task at hand Trust and loyalty
Population dynamics impacting employment	Youth employment	Learn from supervisors Interest in improving
	No impact	Attitude Provide opportunity for all Willingness to learn
Area differences	Diversity	No limiting of ideas
	Communication	Explanations on expectations Acknowledging differences
	Standardization	Homogenous practices

		Following set instrcutions
Project influence on society	Pull factors	Increase in employment Increased traffic volume
	Inspiration	Visually striking and inviting
	Character development	Characterization of locality Changes in systems in the locality Adoption of culture
	Negative	Personal gains
Stakeholder engagement	In debt engagement	Location of project Type of project
	Little or no engagement	Project type Nature of project
Morality and PM practices	Moral guidance	Transparency Integrity
	Successful completion	Assurance of quality Completion on time Completion within budget
	Rules of engagement	Company rules
	Humanity vs. morality	Humanity vs. morality Saving face
	Rewards	Rewards
Political influence on the practice	Negative	Determinant of individual employed Affects decision making Delays
	Positive	Development of certain areas Negative outweighs positive
Project environment attracting politics	Nature of project	Governmental projects Privat projects
	Pull factors	Money involved Benefits gained
	Publicity	Reaching the masses
	Existence of barriers	Existence of artificial barriers Rules and regulations
	Business structure	Family business
Regulations and the prohibition of activities	Policies	Shape the project Adhering to rules

	Certification	Satisfaction to the barest minimum
	Change results	Relocation of facility
	Risk and contingencies	Increased risk
Collaborative projects	Communication management	Effective communication among parties Drawing common lines
	No idea	No experience with collaborative projects
	Acceptance	Accept things that can't be altered
	Consensus building	Coming to an agreement with both parties Dialect

Source: Field Survey, 2019

4.3.4 Social Influences

4.3.4.1 Drivers for employment

Regarding the data collected from the interviewees relating to drivers for employment, experience and competence can be seen to be two of the major sub themes that came up. Waterman (1980) for instance explains that culture can be seen to create strong bonds and helps provide a sense of purpose and tends to guide behaviour. Interviewees explained that rather than looking at a particular culture, people who are knowledgeable in the area required, people who are proficient and have adequate years of experience determine who they provide with employment. These individuals form part of the business and adopt the cultural values and practices of the business environment. Culture can be seen to be the way of life of a particular group of individuals and every business comes with one which employees are expected to live and abide by. An interviewee also explained that when it comes to the need for unskilled labour, family relations are considered before anyone else and in cases where family members are competent enough to fit the technical roles, they are considered for employment before others are.

"Due to the technical nature of the job (construction), employment leans more towards specialty and I employ based on performance, not simply because they are family members" (GN).

"Family ties absolutely doesn't influence me when it comes to employment. Employment is based on commitment and dedication as well as knowledge of your job. Family members are however given the opportunity to prove themselves as and when that opportunity presents itself" (SC)

"I do not compromise when it comes to employment. I take into consideration capability
When you are looking at it from a skilled and unskilled perspective, family members or relations come into play with regards to the unskilled aspect" (ND).

"Competence supersedes everything else" (FR, TE, AA).

"*Qualification determines who gets employed. Culture does create bonds that are strong and gives a sense of purpose hence the existence of such 'culture' in every organizational setup which employees adopt and live by. Family ties influencing choice of individual for employment comes into play but one must be mindful of conflicts of interest" (CH).*

"If the person is competent, that is good and he or she will be chosen. So yes, sometimes it influences choice of who to employ. But if you surround yourself with family members who are not competent and cannot get the job done, all in the name of 'family business' or 'family ties', it gets difficult. You must work with individuals who are going to help you move forward" (HA).

4.3.4.2   Population dynamics impacting employment

Population according to The Gale Group Inc (2002) a group of people who share common characteristics and can be located in a particular area at a particular time. The Gale Group (2002) further explain that population density, the rate at which people give birth as well as the death rate are some of the parameters that characterize the density of a population and this can be seen to change over the years. These inconsistent changes are what population dynamics describes (The Gale Group, 2002). Ghana's population can be seen to be a very youthful one as inferred from figure 4.1 below.

Ghana Population Pyramid 2019

400,000 300,000 200,000 100,000	100,000 200,000 300,000 400,000
Ghana Male Population	Ghana Female Population
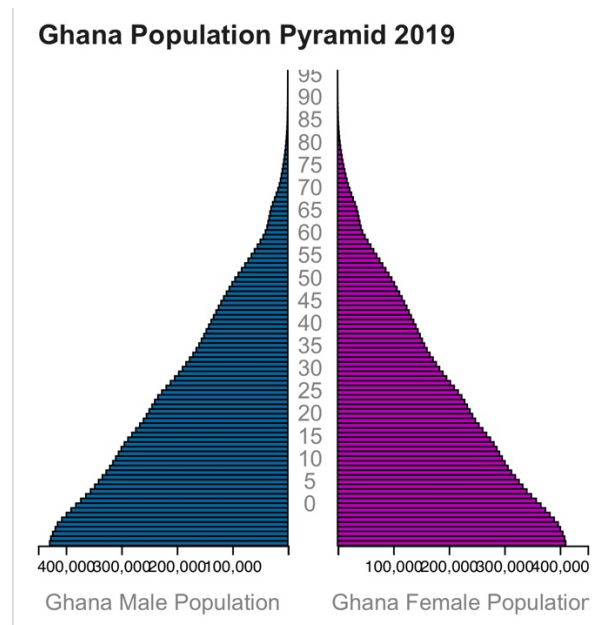
Figure 4.1 Population Pyramid (Source: World Population Review, 2019)

Six out of thirteen of the interviewees explained that experience and competence come to the forefront in determining the criteria for the selection of a particular population for employment and that the current youthful dynamics of the population does not influence it much. They went further to explain that, having trust that these individuals can perform whatever task assigned them with little or no supervision causes them to lean towards experienced individuals more than youth employment. They further

explained that provision is made to accommodate interns as well as junior roles in their company to help train some youth but not much responsibility is given to them regarding management of projects. Two out of the thirteen individuals interviewed explained that youth employment is preferred as these people are exuberant and ready to learn and so they are given a chance to prove themselves. Other interviewees explained that rather than looking at skills and capacity, they look at attitude and willingness to learn and accept correction.

"Experience is the main driving force for employment" (GN, FR, CH, SC)

"I lean towards experience and capacity. Qualification outweighs most things, but in looking at qualification, consideration must be given to availability and staff strength. On large projects, stick to experience and capacity, however, on smaller projects, where there is no risk, new people can be given the chance to prove themselves "(ND).

"Youth employment is preferred more than anything else. The idea is to help them build up to your level. More youth in the society than any other population group" (TE, SQ).

"I look at your attitude. Skills can be taught but attitude cannot" (AA).

"I do not look at experience. You need to work to get the experience so if everyone is looking for someone with experience how do you get the people with experience when they have not been given a chance to work. Sometimes some people with experience are not competent enough. People who are prepared to learn and ready to improve themselves could do better than someone who has been on the job for years. I give people a chance to prove yourself" (ZA).

"Looking at Ghana's population dynamics, it becomes a huge problem.. This is because it makes employment difficult as so many youth graduate without skills and aren't employed because of the technicalities of the practice. You cannot possibly take someone who just completed school to manage a huge project. If the person is youthful and has had some experience over the years, that is fine. I would say I lean towards more of people with experience for employment than people who form part of the youthful population" (GHA).

4.3.4.3 Area differences

As explained in literature, Shrivastava (2012) states that individual differences come in different forms. They range from physical to mental to intelligence to attitudinal differences, differences when it comes to level of achievement, differences when it comes to character and disposition, social and emotional differences (Shrivastava, 2012). The research focusses more on social differences, attitudinal differences as well as differences in intelligence. The subject of area differences comprises the above-mentioned types of differences that are peculiar to various areas across the country. Farooq (2012) also explains that individuals come with a variety of dissimilarities. Farooq (2012) further explains that when it comes to area differences, it deals with the manner in which individuals are able to adjust to the changing needs of the society in which they find themselves. In trying to uncover the manner in which area differences influence the management of projects the main subthemes that came up include communication, diversity and standardization. This led to the question of how mangers deal with priorities in various areas when it comes to the construction of certain facilities in different parts of the country. Interviewees explained that with area differences, more often than not, companies have their own standards and particular ways by which they get things done. Some interviewees also explained that the varying

dynamics in the various societies does not necessarily impact or change how they manage their projects. Other interviewees had the following to say:

"It is a case by case basis. Every case is unique. You are usually briefed or given a high-level document to inform you who you are working with and what Is expected of them, you know that this person's culture is different form mine and this is done in a different way. Sometimes you meet people with a gender issue, he or she doesn't usually take instructions from a woman, etc. so you give them time to adjust. You do not have to force anything on anyone. You need to understand and acknowledge the differences. We you try to meet at a common point. Effective communication is paramount" (ZA).

"*We have our own standards but that does not mean we will limit the ideas of others. They are open to other ways by which people carry out certain tasks, things are changing and technology is also changing so they are open to adapting to change*" (ND).

"Every project is dynamic and engages different people who do things in different ways. So, with time there is adoption of new ways of doing things which go along with the existing practices" (SSC).

"Provision of indebt explanations on what exactly you want and how you want it. PM runs the show" (SQ).

"When you go to a new area or community you reach out to the stakeholders. Through this engagement you try to find out some do's and don'ts in the society. For instance, in some areas noise is not allowed after 5 so you know all machinery should go off by

then and structure your work to fit all these 'rules'. You are the one moving into their area so it is important to understand their culture and adapt to it)" (EG).

4.3.4.4   Project influence on the society

Projects are undertaken all over the country and they bring about various changes to the society. These changes tend to impact or have an effect on the society or the individuals within the society. Interviewees were asked what sort of impact they can see construction projects bringing to the society and whether or not projects can be seen to change various aspects of the society. In trying to understand these impacts or influences of projects, the emerging sub themes included pull factors, inspiration, character development as well as negative impacts. In trying to understand these themes, codes were derived. For pull factors for instance, interviewees talked about an increase in employment, an increase in traffic volume, springing up of businesses as well as changes in the economic value of the society. For inspiration an interviewee explained:

"" *Brighten the corner where you live", Project work changes the society to a large extent. We did a building in an ugly part of Dzorwulu and the client says it was too nice for the area it was placed. We were of the view that when you put something nice there everyone else will want to match up. In two and a half years, project is almost over, an ugly building right opposite has now been painted and changes have been made, shops have been opened on the bottom floor, roads have been constructed. It's happened with several projects and this has caused projects around to match up or beat our buildings. The streets have transformed and taken shape. It pushes others to do better.*

With regards to negative impacts rather than positive ones that change certain aspects of the society, SC, one of the interviewed participants explained that:

"Some projects are run for personal gains and hence do not have any positive impact on the society" (SC).

With regards to character development, interviewees talked about project work leading to the characterization of a locality, also projects leading to changes in various systems in the society as well as some new cultures or way of doing things being adopted. The interviewees had the following to say:

"It brings about employment, changes waste management systems, could lead to a CSR being carried out for the community – community centre, roads, etc" (TE).

"It shapes the environment, gives it a particular character. Development of infrastructure provides employment. The dynamics of the area changes – population, economy, etc." (SQ).

"It does to a large extent. It brings about employment, it could change the people's lifestyle. It shapes the environment better, it brings a whole lot of change to the particular area" (JW).

4.3.4.5   Stakeholder engagement

According to APM (2019), stakeholder engagement can be described as the custom of engaging and impacting stakeholders of a project for the total advantage of the project as well as the projects supporters. Who then are stakeholders? The whole idea of a 'stakeholder' according to APM (2019) is not clearly defined and as such the specifics of the term is still challenged. Generally, however, a stakeholder can be seen to be any individual or group of persons who have a vested concern in the project mostly because they may be impacted by the project or are directly involved with the various activities that form part of the project (APM, 2019). According to APM (2019), the APM Bok (2013) describes stakeholder engagement as the process of influencing

stakeholders mainly through communication, consultation as well as developing relationships with them.

According to the PMBOK Guide (2017), in order to ensure efficient and effective engagement, stakeholders must be communicated with constantly in order for their needs and expectations to be clearly comprehended and also allow room for dealing with issues as and when they arise. The PMBOK Guide (2017) further explains that this process is an iterative process and not a one-time process.

Interviewees and the researcher refreshed their minds as to who a stakeholder is and what stakeholder engagement entailed but the main focus was who they engage with and the level of engagement. In trying to understand the level of engagement interviewees had with the various stakeholders found in the areas in which their projects were carried out, interviewees were first asked to identify who these stakeholders are. The following can be seen to have run through for most individuals interviewed:

- MP's
- Chiefs
- Clan heads
- Municipalities
- Consultants
- Employers
- Senior management
- Clients
- Statutory and regulatory bodies
- District Chief Executive's
- Regional coordinators

The major sub themes that came out of this particular interaction include in-debt interaction and little or no interaction with stakeholders and these were coded as 'depending on the type of project and the location of the project'. The interviewed participants had the following to say concerning stakeholder engagement:

"Not every area requires engagement but those areas that do, engagement is in debt, understanding their needs is of prime interest as well as making them aware of potential noise levels and other issues. Those who have to be relocated are compensated based on the assessment of what they do. Others are resettled" (GN).

"The interest of key stakeholders is paramount so there is a need to develop a relationship with these stakeholders and involve them in every aspect of project planning. Encroachers as well as neighbours around are also important to projects being undertaken in that particular area and are engaged to inform them of what is happening in their area. It is just nice you inform the neighbours about it instead of just surprising them" (SC).

"If the project is from above (government), that is the topmost authority, there is no stakeholder engagement. These projects are usually because politicians have made promises in areas and hence must be carried out. Project is just carried out" (FR).

"You have detailed discussions with the key stakeholders. Run through all the processes for confirmation and sign off. This is usually done with the sponsor or the client.

For Pap's, engage them, let them know what the project is, any disruptions likely to occur, at what point these disruptions will occur, access routes being used as well as mitigation measures" (SQ).

"Before the implementation of any project you would need to go to that community and organize a town meeting. This is to inform the people of what you intend to do as well as any inconveniences that may come up due to the various activities that will be carried out. More often than not it is the ordinary stakeholders who have more interest in the project as they can see they would benefit from the project and hence all these individuals must be up to speed regarding what is going on" (GHA).

4.3.4.6   Morality and project management practices

Jones (2003) defines morality as the ability to try to describe exactly what defines right and wrong behaviour. Furthermore, morality according to Jones (2003) is an effort to determine what exactly is wrong or correct with regards to our engagements as well as what we think about.

According to the Merriam Webster Collegiate Dictionary (2011), morality can be described as

Compliance to concepts of behavior that are presumed as right or appropriate.

In trying to understand how project managers juggle morality and their practices, the sub themes that were derived from this main theme include successful completion, which an interviewee expatiated on as:

"Some people are influenced by kickbacks but what I believe in is the project must be done and must be successful – should be executed to the specification, that is, quality assured, budget met and on schedule. That supersedes any other influences or rewards. They will follow however but after successful completion. These things are not put ahead of the work because they prevent you from carrying out the work as from carrying out the work as you should" (FR).

Other sub themes included rules of engagement, humanity vs. morality as well as rewards and these were coded to include company ethics, saving face, transparency

and integrity. Other interviewed participants had the following to say when questioned regrading morality and project management practices:

"Rules of engagement as well as rules and regulations to guide behavior are set up by the organisation by which they go by. No one must go against these. We try to educate on a daily basis on what should be done and what shouldn't be done. Measures are put in place to regulate what people do along with the sanctions for going against them" (CH)

"You are only as good as your words". If you are not transparent and straight your reputation suffers and people think this girl can be bent or given a gift or money and she will favour us. This industry doesn't have many people so you might meet someone later and how you portrayed yourself will come up so you must be straight. Some contractors on a job with us keep asking for dinner but we know it is not just dinner, but to take you for dinner so when they are messing up, you won't be hard on them,. But I tell them let us finish with the project and when we are all happy we can have all the dinners" (AA).

"In situations where certain things may cause you embarrassment or tarnish your image, you lie to save face" (ND).

"I think this is a matter of integrity. Whatever you put your signature to you must do. A project doesn't deal with just one human being, there are other people on the contract you signed and there are sanctions that come when you don't perform, so as a project manager you must always have integrity at the back of the mind and ensure that whatever you agreed to do you do it" (ZA).

4.3.5   Political influences

The research also sought to bring out some political influences on projects in the construction industry. Interviews carried out brought certain issues to the forefront which led to the development of themes and subthemes which also led to coding of these themes to bring out a better understanding of issues raised. The themes raised are discussed below.

4.3.5.1   Political influence on projects

It was imperative to discover the various political influences that exist in the country and how they impact projects as well as the manner in which project managers handle these influences. Politics can be seen to exist in every aspect of the society so there was a need to try to understand these issues. Interviewees were asked whether they felt politics could have a positive influence on projects which in turn affects the practice.

A few project managers explained that there exist some positive influences:

"For positive influences, it could be existing policies that affect the project positively" (ZA).

"Waivers on certain features of buildings. Constructed a lift in a building and tax was waived" (SSC).

"As long as there is political will and source of funding is available, projects are undertaken and come to successful completion" (GHA).

"*Positive, maybe in the sense that a project might not be in the budget but the project is being done so the community that is benefitting from it will see it to be positive, it depends on where you're sitting. The economy might also suffer from this same project as the contractors are not being paid sine no budget was made for the project*" (FR).

The majority however, explained that politics brings about so much negativity and even if there exist some positive influences, the negative ones outweigh the positive ones and hence they cannot be seen.

"The negative outweighs the positive, cannot think of any now. It negatively impacts the practice" (GN).

"Cannot seem to see any positive influence. Politics determines who gets what job, it is more negative than positive" (SC).

"As for politics and projects, you can never run away from it. We do not take on government projects so we do not experience it. We have had just one and it was just full of delays, there is always interference from politicians. They give projects to individuals based on their party association whether or not they are competent so when people are doing wrong things, they cannot call them out because they will give you a lot of kickbacks, quality is not even considered, so many things go wrong with such projects, all because it was politicized. More negative than positive" (ND).

"Not really, not in Ghana. I visited Denmark a couple of years ago and they have this thing where as long as the project is a public facility, a competition is run for the architects in that particular area. Ghana does not do this, so no matter where you are placed, you never get the opportunity to input your thoughts and design, all you know is you are there and someone is coming to perform sword cutting. Government is not conscious of empowering their own people. In Ghana, the idea is if it is big, let us get someone from outside. Government doesn't open projects to people from all caliber put they rather lower the rules to suit particular individuals" (AA).

"Politics brings about delays and corrupt practices, I can't seem to place a finger on any positive impact because more often than not, it is negatively impacting the projects" (JW).

4.3.5.2   Project environment attracting politics

Looking at the manner in which political interferences can be seen to be very rampant on construction sites, there was a need to inquire as to what exactly attracts politics to these areas. Interviewees were asked to spell out the various factors that make the project environment a productive area for politics. The following are some responses that came up:

"The nature of the project as well as the benefits to the nation or client. This usually negatively impacts the project as political parties tend to personalize the project for their selfish benefits" (GN).

"Once it is a government project, politics will be productive 100%. For private projects, the zone or location in which it is being undertaking determines if politics will thrive. For instance, I am a private contractor who has got a project and I am not a fan of the party in power. The project is located in a particular political zone so they ask for kickbacks to avoid interfering with your project so they will frustrate you till you give in. Sometimes, the traditional leaders in the area also frustrate you. These are stakeholders so they play key roles. They sell the land to you and you want to start to build, they frustrate you and try to get so much from you, huge sums of money" (ND).

"Money can be found there, procurement is involved. Procurement takes about 65-70% of the GDP. When it comes to procurement of works or goods or consultancy, politicians are always there. Party in power and their "special interest"" (FR).

"Structure of the company. Businesses that have most if not all positions occupied by family members" (TE).

"Politics is all about numbers, money is involved here and projects reach out to a lot of people" (SQ)

"Government projects are in the bosom of government, so those are exclusive so you would expect government to follow the laid down procedures to procure projects. For private projects, only interference is with land issues and permitting issues because you have to interact with land title registry as well as EPA and municipal authorities. The artificial barriers within the process make the project delay and makes it frustrating" (AA).

"Ghana as a country can be seen to have limited resources. Every community also wants a "share of the national cake". All communities also have political leaders and these leaders want to show off and do things to gain trust from their community. Politicians come and make promises and this causes them to gain votes during elections.. Simply put, politicians gain a lot form this and that is why it thrives so much" (GHA).

4.3.5.3 Regulations and the prohibition of activities

Interviewees were asked about how they deal with the various regulations and legislations that come with developing facilities in the country. The major themes that sprung up in relation to the regulations that prohibit certain activities include certification, polices, which were coded to include 'changing results' and 'bringing about risk' and 'calling for contingencies'.   Most of the interviewees explained that, in order to reduce to the barest minimum any interference or project frustration, one

has to follow all rules and regulations to the letter and avoid those activities that are prohibited.

"Try as much as possible to satisfy and follow laid down rules and regulations, tweak ours to fit the larger authority so as to avoid issues" (SC).

"Make sure all documents are gotten and rules are followed to the letter. We try as much as possible to follow all the regulations. In situations where it is difficult, that is during the execution stage we dialogue. There was a time where we were given a permit for a design but when construction begun the design was changed. When the authorities came they realised the construction was different from what the permit was given for so the construction was stopped and design had to be redone and a new permit sought" (CH).

"Regulations are followed to the letter to avoid any unnecessary interference that will hinder project success" (JW).

Another interviewee also explained that these regulations and legislation sometimes tend to cause risk and even lead to the relocation of projects at extra cost.

"I can give you an example. Sometimes, especially with the Ghana Water Agency, when we want to construct a road and their pipelines are in the roadway it affects a lot of our activities and delays the projects. So once the project is awarded we try and liaise with them to get provisional sums for relocation of pipes. We try to do the relocation before construction begins so as not to delay the scheduled time for the project. Sometimes you pay them and they don't even do and do the relocation. Sometimes you have to change it and align the road to another part because sometimes they bring very unrealistic estimates" (FR).

One interviewee explained that she doesn't even believe these regulations and legislations that prohibit certain activities are enforced. She cited an example

"The existing ones are not strictly adhered to. For instance, so many individuals are setting up fuel stations within residential areas and there is EPA, so I do not see these regulations working or how they are enforcing it. People are not enforcing these rules and everyone is doing what they like" (ZA).

Two out of 13 believe that regulations are very good and help to shape the project

"Regulations and legislation shape the project. Do not negotiate when it comes to that" (TE).

"Regulations tend to help shape my projects. I haven't experienced any that prohibit any activity I intend to carry out" (SSC)

4.3.5.4   Collaborative projects

According to Robins (2018) collaboration can be described as a situation where different individuals or a number of people work towards the achievement of a particular shared goal.

Robins (2018) further states that some individuals describe project collaboration as the division of the various aspects of a project into smaller parts that can be carried out by various team members.

Collaborative project management is a practice that gives room for every individual to contribute to make the work better and each individual has access to all aspects of the project (Robins, 2018). Boundaries are nonexistent here (Robins, 2018). All concepts and recommendations are listened to and respected, however, not every recommendation is acknowledged but adequate time is spent to consider what benefits it has (Robins, 2018).

In order to derive the main theme of collaborative projects, interviewees were questioned as to whether or not they had undertaken any of such projects. Interviewees were asked how they deal with policies and regulations and the fusion of policies form both 'worlds' when it comes to collaborative projects. Major sub themes derived from this include communication management, acceptance and consensus building. The following is what interviewees explained.

"Most construction projects come with certain international standards that you must follow, usually the terms are negotiated between the parties involved" (GN).

"When two people come with two different interests, it is kind of difficult but you try to come to a consensus. For instance, the financier and end user, the financier is looking at minimizing cost whereas the end user wants quality. Ideas keep conflicting as one wants quality more and the other is thinking of minimizing cost. Communication is very important to avoid conflicting ideas "(ND).

"It all comes down to communication management. From the beginning, both parties should have spelt out their policies and regulations and things that cannot be merged you draw a common line somewhere" (ZA).

"Joint projects come with expectations from both parties. There is always a schedule of work and every company performs their various activities in different ways. So usually every entity has a particular task they perform so they are allowed to perform it per their standards and then collaboration comes with reporting and documentation. Consensus building also takes place when it comes to the need to meet particular standards such as quality, equipment choice, etc. Effective communication is key here" (SSC).

"Accept things that cannot be changed" (FR)

Two out of the thirteen project managers interviewed explained that they had never undertaken any form of collaborative projects.

"Haven't done any collaboration with anyone" (CH, TE)

Basically, for collaborative projects and the fusion of the policies of both parties and the management of the two, the main codes that were inductively derived include

- Effective communication

- Drawing common lines

- Accepting things as they are

- Dialect

- Coming to an agreement with all parties involved

4.4   Discussions

The views of project managers in the thirteen (13) different companies were solicited through interviews. The project managers the researcher interacted with were from both governmental and private institutions. This gave the researcher a blend of both worlds and the issues discussed were understood from both sides and not a myopic governmental view or privatized view.

All project managers sampled had a minimum of 5 years experience and an average cost of projects run between as low as GHC 200, 000 to as high as $180 000 000.

Most of the participants interviewed can be seen to have been males yet this cannot be seen to have caused any form of bias as participants, even though purposively sampled and some acquired through snowballing, were sampled using a random process in selecting the companies in which these individuals are attached to.

According to Adjei, (2018), the number of studies relating to family business and firm performance is on the increase. Adjei (2018) further explained that trust is very

essential when it comes to relationships within the family and can help to acquire useful knowledge and build better alliances. Detailed studies on the pertinent effect of family ties on performance however can be seen to be underdeveloped according to Jennings and James, (2014) with the exception of very few studies carried out not so long ago.

Bird (2014) for instance, explains that spousal and sibling relationships, tend to have positive and negative effects on the performance and growth within a firm. This clearly shows that the different family relations have different influences on the firm.

Adjei (2018) explains that relationships that are familiar and involve spouses or children are more useful when it comes to performance within the firm and tend to reduce the differences in competencies. Interviewees however explained that due to the technicalities of the practice, they lean towards more of experience, capacity and capability to handle the task at hand. Some also explained that if individuals in the society came to seek employment positions along with their family members, and their family members were competent, there was the likelihood family members will get employed. This can be seen to be as a result of the trust and loyalty that already exists between family members and the ability to already co-exist and live cordially with their family relations. Other interviewees also explained that when it comes to looking for people to get the job done, they do not compromise. Family members are not considered simply because they are 'family'. They need capable and qualified people. However, if unskilled labour are needed and unemployed family members are available, why not?

A few of the interviewees also explained family relations are a no-no for them. They stated that if you want your business to fail you could go that way.

The researcher to an extent agrees with the interviews but leans more towards the opinion of employing based on competence. The researcher agrees that family members have already established a sense of loyalty and trustworthiness and if really serious about their jobs would definitely lead the business to grow higher and increase firm performance. However, at certain periods, family members tend to take things for granted and fail to act like they are working in an establishment with well laid down rules. They take advantage of the 'family' they are entitled to and do what they like as and when they want to. An interviewee also pointed out the fact that family businesses tend to stifle the rest of the employees who are not family and all decisions are taken by them and individuals do not have a chance to grow with the firm more often than not. Competence and capability to do the work as well as the will to learn is the way to go.

The researcher notes the challenges that come with employing family members and understands the desire to lean towards people with competence and capability and individuals who are knowledgeable rather than simply employing individuals because they form part of your family.

Looking at Ghana's population dynamics, it can be seen to be increasing at an alarming rate and causing a large chunk of the population to be the youth. Those who are straight out of school and those who have been out of school for a couple of years. The researcher tried to understand how project managers employ individuals, looking at the youthful nature of the population. The idea was to determine if they still look at trustworthiness, competence and experience or lean more towards including the major population group in their activities.

Six (6) out of the thirteen (13) project managers interviewed out rightly stated that they look mostly at experience and qualification rather than anything else. The

technicalities involved in the practice doesn't allow for mistakes so there is no room to give out such responsibilities to individuals without experience. Two (2) out of the thirteen (13) employees also explained that youth employment is preferred more than anything else. The various responses provided by the different individuals interviewed made the researcher come to the realisation that the dynamics within the society does not to a large extent influence who gets assigned to do what task but rather the nature of the job. Others also brought to the researchers realization that, skills can be taught unlike attitude and attitude is a very important factor. Some people are not willing to take instructions or ready to learn and this makes the work unnecessarily difficult. It was also brought to the forefront that individuals with experience within the industry tend to want to have their way and do things the way they have done them over the years because they believe they know what the outcome is as they have done this overtime. However, from interactions with the project managers, it was noted that there are particular ways certain activities are carried out and every project manager has a specific way of doing things irrespective of the basic tools and procedures the practice comes with. It is therefore important for some interviewed Project managers to have people who are willing to learn and not individuals who believe they can do what they want simply because of 'experience'. The researcher tried to understand what the industry would be left with if everyone was leaning towards employing experienced persons, how then do other individuals get this experience if they are not given the chance and was in agreement with the interviews who engaged the youth in smaller roles to help them develop and be well equipped to handle more demanding roles.

Literature explained that, when it comes to area or community differences, individuals differ mentally, physically, intellectually as well as attitudinal differences

(Shrivastava, 2012, Farooq, 2012). Farooq (2012) explained that it is important to understand the varying differences in order to efficiently deal with individuals within a particular society.

 Majority of the interviewees explained that in carrying out their various activities, there exists standards. That is, there are already established ways by which certain activities are carried out. However, every individual is different and each and every society comes with varying culture. The interviewees explained that it is therefore important to give individuals in the new area a chance to understand the ways by which the various activities performed are carried out and adjust to these new methods. Interviewees also explained that efficient and effective communication as to the project managers expectations is also key. Farooq (2012) explains that when individuals are provided with the opportunity to adjust socially to their roles in the society it leads to an improvement and makes life better for everyone.

Other interviewees however were of the opinion that the project manager is in charge and runs the show, which is true, but went further to explain that if individuals cannot seem to adapt or follow instructions they are out. This however is not the way to go according to the researcher as literature has explained the need to understand humans and their differences and also provide room for adjustment and adaptation.

With priorities, interviewees explained that the end user should be prioritized above all else and hence there is the need to understand what the society needs and prioritize as such. It was also noted that when it comes to priorities, what one particular individual sees as a priority might not necessarily be viewed as a priority to another person or society. This comes back to understanding the various dynamics that different areas or communities come with as well as the cultural practices that exist. It can be also noted that these dynamisms in various areas can be seen to influence the

manner in which project managers deal with various areas and carry out their activities as one thing that works for a particular society may not necessarily work for the peopling of another and may not be seen as a priority as seen in another area. Area differences therefore influence the practice to a large extent.

According to Jessen (2010), a study carried out revealed that people were of the view that projects can be seen to change varying aspects of the society, however, the level of impact can be seen to vary. Jessen (2010) further explains that for certain areas, project work introduced different ways of thinking as well as new ways of carrying out certain tasks. Project work also brought about contradictions as the same project work that was bringing benefits to the society was also causing problems (Jessen, 2010). Some benefits various researchers revealed were brought as a result of project work include management of scarce resources financially (Bohern and Gjaerum, 1998), improving upon control (Morgan, 1989), as well as refine the competitiveness (Pucik, Tichy and Barrett, 1993).

All interviewed persons explained that projects to a large extent change several aspects of the society. A number of themes raised by literature as to some benefits that project work brings to the society were also mentioned by the interviewees. The themes that were developed ranged from inspiration to do better to the creation of employment, shaping the nation, improving upon the economic value of the area, just to mention a few. One notes that the practice of project management which involves seeing to it that projects come to a fruition to a large extent changes several aspects of the society which comes back to change how the society reacts to the springing up of other developments.

With regards to stakeholder engagement, the PMBOK Guide (2017) in discussing the issue of emerging trends and practices talks about tailoring considerations to include the following;

Stakeholder multiplicity – this mainly deals with numbers as well as the varying cultures these different stakeholders come with (PMBOK Guide, 2017).

Complex nature of relationships – this broadly deals with the network of stakeholders in a particular society (PMBOK Guide, 2017).

Means of communication: this focusses on the channels of communication that exist and are employed (PMBOK Guide, 2017).

Interviewees explained that stakeholders influence their projects to a large extent and hence indebt consultation with them from time to time is paramount in order to ensure successful completion of projects. Interviewees also explained that in carrying out projects they engage with clients, regulatory bodies as well as individuals within the area in which they are carrying out their projects. The PMBOK Guide (2017) makes us aware of the varying kinds of culture that these stakeholders possess as well as the complexities that come with trying to engage stakeholders, interviewees also had similar views relating to this. There could also be seen to be a significant difference when it came to government and privatized establishments when it comes to dealing with stakeholders. For government institutions, more often than not the projects are initiated by the government and as such must be carried out so there is little or no engagement. Private companies however have to have indebt discussions with their clients or sponsors as well as the project affected persons and other individuals who have an interest in the project. The researcher also realized that these key stakeholders to a large extent affect the practice as they determine when and how things should be

done and could cause delays and various interferences throughout the lifecycle of the project and as such consultation on a regular basis with these persons is imperative. Morality was also identified as an important social factor that could influence the practice owing to the nature of the job and the various factors that come together to ensure successful completion of the project. Morality was identified as the ability to determine what is right and live by it. Interviewees explained that their main focus was to get the job done and get it done successfully. Rewards and anything else could come after. They explained that integrity was important and 'you are as good as your words'. Other interviewees explained that they set up rules and regulations that individuals must live by and follow and no room is given for any unacceptable behaviour. It was also noted that certain interviewees believed that it was a balance between humanity and morality because there are certain situations where you would need to do certain things that are not right to save your reputation but those in the wrong are appropriately dealt with. The researcher concludes that morality to a large extent affects the practice as it could lead to branding and tags being place on certain individuals as individuals who can be manipulated in order to gain certain favours which in the long run causes problems for the society. It can also be seen to improve relationships between individuals at various levels and helps promote better decision making backed by the ethics that exists in the company. Morality can also be seen to increase project success when all rules are followed to the letter and tasks are performed as required with no artificial barriers or backdoors.

With the issue of politics, interviewees were interacted with to gain an understanding of the influence politics can be seen to have on projects and the practice as a whole. With this particular question, there could be seen to be a significant difference between private and public employee perceptions on the impact of politics on projects and the

practice as a whole. Government employees looked at it from a positive aspect where certain projects that were not in the budget or planned for are constructed anyway due to certain promises that politicians make. They however did not shy away from the fact that once the project is a government one, politics exists in that environment 100%. Private companies however, saw politics to have way more negative influences than positive influences and hence the negative outweighs the positive so much so that the positive ones could not be seen. Among the influences on the practice include politics causing delays, politics causing the job to be given to the wrong person and at the wrong time, politicians not empowering their own consultants and professionals, among many others. It was noted that politics generally causes problems when it comes to projects which also leads to delays in the entire project management process. Interviewees also explained that with government projects, all the politicians are interested in is getting the project done. Interest is not in achieving quality or how the processes come together, neither is it in stakeholder engagement or risk management. The idea is to get the project done. The researcher is of the opinion that with the manner in which politics influences the practice, it cannot be seen to bring any positive impacts on the practice. Quality is sacrificed more often than not as most projects are undertaken as a result of the promise and personal gains made by politicians and this can to a large extent tarnish the reputation of project managers if the buildings and construction springing up are not up to standard. Jessen (2010) further explained that project work can be seen to run more successfully at the planning stage rather than the execution stage and this according to the researcher is very true in this case as political interferences usually come in at the execution phase and must be checked in order to reduce if not avoid such interferences. The high level of power distance that exist in most African countries according to Murithi and Crawford (2002) as discovered

through the review of literature can be seen to be very true and existent in Ghana as most politicians (who are those in power) can be seen to do what they want when they want.

Owing to the establishment of the fact that politics can be seen to exist when it comes to management of projects, there was the need to understand exactly what causes this. Interviewees were engaged in order to understand the specifics as to what exactly makes such project grounds productive areas for politics to thrive. The main themes that came up include the involvement of money when it comes to projects, the idea of reaching the masses which is what politicians strive for, as well as the issue of procurement involved in the carrying out of project management practices. It is almost every Ghanaian's wish to have a stake in the nation's wealth apparently. Projects more often than not present such an opportunity. Looking at the average costs raised by interviewees as to the money involved in carrying out projects across the country ($180 000 000), the researcher is convinced that a lot of money goes into projects and everyone in the society is chasing money. These political interferences in the practice cause monies intended to be used for particular tasks to be channeled to the pockets of individuals, hence reducing the assigned amount for that particular task which in turn causes people to gain personally at the expense of quality among other desired project requirements. Private entities however explained that because private projects carried out for private individuals, politics does not thrive much except when it comes to acquiring certain documents from registries and government bodies. All these interferences from politics in the long run leads to delays and sacrificing of requirements that need to be met per project management ethics and code of conduct. Collaboration as explained deals with a group of individuals working together to achieve a set target or objective. Ghanaian projects can be seen to involve a lot of

collaboration. More often than not projects are outsourced and some also engage consultants from different parts of the world to work hand in hand with Ghanaian consultants or professionals. Collaboration can also be seen where two individuals have the same idea of constructing a particular facility, one however, has the funding but the other does not and has probably the idea or the consultants to get it done. Collaboration comes in different forms. Per the interviews carried out and research discovered, it was noted that collaboration involves people and these people come along with their own culture and rules of engagement and the manner in which they manage projects. It is therefore imperative that appropriate communication be carried out and the rules of engagement be properly understood by parties involved as well as everyone's roles and expectations on the project be clearly defined to ensure that every individual who forms part of the project knows who he or she is reporting to, who can provide certain approvals and what the project is intended to do. Collaboration if not properly planned and executed could cause many problems throughout the management of projects ranging from delays to different outcomes than expected, conflicts, as well as failed projects. It is therefore important that effective communication be done throughout the process. It was also brought to the fore front that during collaborative projects, every party is allowed to perform their assigned tasks in the manner in which their firm goes about their activities knowing that the basic tools and practices run across every project management practice. However, when it comes to documentation, all parties involved come to an agreement on how that should be done. Simply put, on collaborative projects, owing to the fact that you cannot expect individuals to suddenly abandon their ways of achieving certain goals simply to pick up yours, there is a need to clearly spell out roles and responsibilities and come to a consensus in areas where conflicts may arise.

With every activity there exist certain rules and regulations that come with it that spell out the do's and don'ts. The construction industry and the project management practice can be seen to have such rules and regulations. The researcher sought to find out how such rules and regulations that prohibit certain activities or affect certain activities are handled throughout the practice of management. Interviewees explained that rules and regulations tend to shape the project and are there to provide guidance. However, certain rules cannot be seen to be enforced as people go about placing certain facilities in areas where they should not be located and you wonder for instance, placing fuel stations in residential areas, does EPA really exist?. Others explained that certain codes were not realistic and acknowledged the existence of a revised code and hoped that those unrealistic rules had been changed. Some interviewees explained that certain rules bring risk to the project and tend to cause relocation or changes to the entire project and in the end more often than not are for the good of the project. Others however, cause the projects to fail. All in all, rules and regulations that are appropriate and in the interest of the entire society and not set up for personal or selfish gains can be seen to make the practice move on smoothly and ensure successful completion of the projects.

4.5   Chapter Summary

Project management deals with managing a varied number of people, situations, areas, and many more. It comes with a combination of various practices from stakeholder engagement to risk management to procurement, among many others. The practice however can be seen to be more of a technical nature and employs technological practices in carrying out the various tasks. However, there can be seen to be other influences that gravely impact the project. some of which are political and social influences. In order to ensure successful completion of projects, which is what project

management is geared towards, there is a need to ensure that not only the incorporation of technology to get the job done is catered for but also the individuals who man these technologies and who form part of the process and are impacted or impact the entire process are also considered. Findings can be seen to corroborate literature and are in agreement with the information gotten through the review of literature.

CHAPTER FIVE
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMNEDATIONS

5.1 Introduction

This chapter provides a synopsis of the aim and objectives of the study as well as discussions and analysis made. It is grouped into three main categories: the first part provides a summary of key themes discovered during the research, the second part focusses on providing a conclusion on the major themes discussed and the last category deals with recommendations for further research. The study was intended to achieve the following aim: exploring the practice of project management through a socio-technical transition perspective in construction projects.

5.2 Summary of findings

5.2.1 Field survey

Project management has over the years proven to be very flexible and an effective management approach. The practice can be seen to be very beneficial especially to developing countries and hence various approaches that suit the environment must be properly explored.

Research has documented the various approaches that exist when it comes to project management, but what do we know about the fusion of the technical and social approach?

Why do managers or researchers approach the study from a myopic technical point of view or social point of view? The researcher does not believe there exist a clear-cut answer to these questions but certain researchers have explored the practice form both angles.

Projects do not exist in a vacuum. They are set up in various locations that have individuals who may impact or be impacted by the project. These Project Affected

Persons (PAP) have a particular way of life they are used to in their surroundings before projects are initiated in their society. This goes without saying that, it is important that these cultural and societal issues are understood extensively to ensure project success and satisfaction of all stakeholders involved. Aside the social and technical aspects, there also exist other factors that can be seen to also affect the practice. Some of these influences include social and political influences which the research sought to understand with the help of objectives set.

5.2.1.1 Research objective One: To identify the influence of social conditions on the technical practice of project management in construction projects.

One of the main things the research sought to inquire about was the influence of certain social conditions on the project management practice. To achieve this, literature as well as knowledge of some of the things that go on in the industry helped to come up with certain social characteristics that helped to understand be social issues better. Data collected from the interviewees was analyzed by breaking it down further with the help of codes and themes. Some major themes developed inductively include the drivers for employment, area differences, stakeholder engagement as well as morality and pm practices. This revealed mainly that whereas most project managers look at experience as their driving force for employment, others look at individuals being knowledgeable in the field which they are being employed and being ready to adapt and tailor their work towards what the project manager deems fit for the project. They also brought to the forefront the fact that technology can be seen to be changing rapidly and if people think a particular way is how they get things done and they do not want to adjust to the trends but rather stick to the manner in which they carry out certain practices from time immemorial, that is not possible. The changing dynamics of the society calls for adjustment in order to survive and produce effectively and efficiently.

Stakeholder engagement according to the interviewees is of prime interest and an indebt engagement must be made in order to understand the needs and desires of individuals as projects are usually done to satisfy the end users.

It was noted that some project managers for example, when considering what drives them to employ people, look out for individuals who are competent, which covers the technicalities of the practice but also fall on family ties and the younger ones (this is a social factor). Cross cultural teams, which includes collaborative teams as well as the management of projects with different people within different areas who have varied culture, can be seen to introduce varied sources of experience as well as spark innovative ways of carrying out various practices as well as enhance competitiveness, as revealed by interviewees. Cultural differences however can bring about conflicts and disagreements which interfere with the completion of the project and may cause technicalities to be handled wrongly and must be appropriately dealt with through the use of effective communication throughout the process as explained by researches.

These findings revealed that the social aspects of the practice do influence the technical aspect and there is a need for both aspects to be critically dealt with simultaneously to ensure success in projects.

5.2.1.2   Research Objective Two: To identify the influence of political conditions on the technical practice of project management in construction projects.

In relation to the second objective, which sought to bring to the forefront some political influences on the practice, interviewees were questioned concerning mainly the dynamics of politics when it comes to projects and if any positive influences can be seen to have taken place. Major themes that came out of the interaction include political influences on the practice, policies and regulations that prohibit activities as well as collaborative projects and how they are managed. 11 out if the 13 project

managers who were engaged were of the view that even if there may be positive political influences on the practice, the negative ones outweigh them and hence they cannot be seen. Politics tends to delay projects to a large extent and causes over budgeting and an elongation of agreed on deadlines. Almost all of the project managers were of the view that politics can be seen to thrive very well when it comes to projects and this is more often than not due to the fact that development comes with money and also tends to reach large numbers of people and this is what politics is mainly concerned with. The existence of a high level of power distance as postulated by Murithi and Crawford (2002) can be seen to be very existent in Ghana. Others also explained the existence of rules and regulations that guide or prohibit certain activity and explained that when appropriately adhered to, ensures the smooth running of the projects.

In relation to politics, it is important for project managers to understand its importance and how to make it enhance project success. The key issue when it comes to politics is gaining an understanding of the various processes involved in order to arrive at certain decisions, issues considered as politicized and ways to handle these interferences. When it comes to the planning of activities, scheduling, acquiring the team as well as other resources, project managers spend so many hours to get these technicalities at the appropriate levels only to be derailed by political processes and undue interferences. Politics can be seen to waste time and changes the predetermined project schedule as well as float and critical path pre-determined by project managers and also draws attention away from the task actually being performed. Project implementation in one way or the other can also be seen to have a political nature of some sort owing to the need to go through those in authority in order to be permitted

to carry out certain practices. There is therefore a need to develop adequate strategies to help project managers function efficiently.

Most of the tasks carried out by project managers involve efficiently managing not just the technical jurisdiction but also the aspect which deals with behavioural patterns which can be summarized as the social aspect hence the need to view the practice from a socio-technical transition perspective.

5.3   Conclusion

The project management practice can be seen to be catching on fast and even though the practice can be seen to have existed even before civilization, certain researchers believe that the practice in mostly African countries, is still at the early stages of development.

Project management has over the years proven to be very flexible and an effective management approach. The practice can be seen to be very beneficial especially to developing countries and hence various approaches that suit the environment must be properly explored.

Research has documented the various approaches that exist when it comes to project management. But what do we know about the fusion of the technical and social approach?

Why do managers or researchers approach the study from a myopic technical point of view or social point of view? The researcher does not believe there exist a clear-cut answer to these questions but there are certain researchers have explored the practice from both angles.

Projects do not exist in a vacuum. They are set up in various locations that have individuals who may impact or be impacted by the project. These stakeholders have a particular way of life they are used to in their surroundings before projects are initiated

in their society. This goes without saying that, it is important that these cultural and societal issues are understood extensively to ensure project success and satisfaction of all stakeholders involved.

Certain researchers consider these social aspects of the practice neglecting the technological and technical aspects of the practice and vice versa. Research has proven that it is expedient that the practice is approached from a socio-technical approach so as to deal efficiently with both aspects in order to ensure satisfaction on the whole with quality not sacrificed.

In carrying out the interviews to bring out some social and political influences on the practice, major themes developed inductively include the drivers for employment, area differences, stakeholder engagement, morality and pm practices, political influences on the practice as well as collaborative projects and how they are managed.

Interviewees explained that in employing people, family ties come into play, mostly with unskilled labour, unless of course individuals are competent enough to assume the technical roles. They also brought to the forefront the fact that technology can be seen to be changing rapidly and if people think a particular way is how they get things done and they do not want to adjust to the trends but rather stick to the manner in which they have carried out certain practices since time immemorial, that is not possible. The changing dynamics of the society calls for adjustment in order to survive and produce effectively and efficiently. Also, politics can be seen to thrive so much when it comes to managing projects owing to the existence of artificial barriers which come from those in power and also because politics involves a lot of money and tends to reach the masses. The high level of power distance that exist in most African countries according to Murithi & Crawford (2002) can be seen to be very

existent in Ghana and if not appropriately dealt with will cause a lot of issues when it comes to undertaking projects in the country. Stakeholder engagement carried out on every project which brings most of the issues to the forefront which borders on the social practice theory, which is, a means by which attention is placed on interactions, relations or connections between human beings as well as discourse in the society (Helguera, 2012), was also explained by the interviewees as a very important process and these engagements carried out over the years played a role in assisting them to provide answers to some questions asked.

Generally, interviews carried out revealed that the social aspect of the practice goes a long way to affect certain technicalities that the practice comes with and hence it is imperative that these issues be considered in order to prevent certain obstacles that cause projects to fail or be filled with many issues.

5.4   Limitations of study

For recounting purposes, project managers were the main participants sampled. The unavailability of adequate data on the number in the country made it difficult to gain access to a number of these consultants. The limited number of professional project managers in the country was also a limitation. Availability of project managers to carry out the interviews was also a huge challenge and delayed the entire data collection process. The intention was to have more face to face interviews but the unavailability of project managers pushed the researcher to have more of the interviews done over the phone.

5.5   Recommendations

Recommendations below were based on the information the study revealed and addresses mainly the challenges identified. These recommendations will help to approach the practice in a better way, in the long run.

- New construction should explore both the technical and social aspect of projects before diving into the project

- In order to improve performance, management should include the individuals in planning purposes.

- Policies should be structured in a manner that benefits the entire society and not particular individuals.

- Political interferences should be minimized if not entirely done away with to avoid delays and spending outside project budget

- Building codes and regulations should be done in a way that they are as realistic as possible to ensure that they are adequately adhered to.

- Introduction of clauses to ensure that irrespective of changes in government, projects once initiated are executed and closed.

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APPENDICES

APPENDIX A: SAMPLE INTERVIIEW GUIDE

STRUCTURED INTERVIEW FOR PROJECT MANAGERS

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OFCONSTRCUUTION TECHNOLOGY AND MANAGEMENT

TOPIC: A SOCIO-TECHNICAL PERSPECTIVE OF THE PROJECT MANAGEMENT PRACTICE.

Company –
Years of Experience –
Average cost of project –

You're leading a project that must be planned, executed, and closed in ten days. The work itself will take nine days to complete. How will you conduct your project planning?

SECTION A – SOCIAL
Are family ties a huge factor when it comes to employment? How does it influence your practice?
(culture creates strong bonds, provides a sense of purpose – 'strong culture is equivalent to excellence as culture guides behaviour (Waterman, 1980)).

Do you lean towards youth employment more or experience? How do the varying and expanding population dynamics influence your obligations?
(managers elsewhere hire based on qualification, here it is mostly loyalty and trustworthiness and ability to exist cordially with others)

How do you deal with area differences and people's priorities in managing your projects?

Are you of the view that project work changes several aspects of the society? How so?
(some say it has changed how others behave, others say its cause institutional and other individual problems – dealing with the paradox)

How do you deal with stakeholder engagement in the area in which you find yourself undertaking a project?

Morality and project management practices, how do you handle the two?
(taking care of all 'participants, etc.).

SECTION B - POLITICAL

Can politics have a positive influence on a project?

What makes the project environment a productive ground for politics? And how does politics influence the practice?

On collaborative projects, how do you deal with policies and regulations and the fusion of both 'worlds' in managing the project?

Regulations and legislation and how they affect and prohibit certain activities, how do you deal with that?
(brings risk – ability to change results)

Title: "Topic: A Socio-Technical Perspective of the Project Management Practice.

Principal investigator: Coretta Hanson

Qualification: Master of Architecture

Address: Department of Construction Technology and Management, Faculty of Art and Built Environment, Kwame Nkrumah University of Science and Technology.

General information about the research

This research is being conducted to collect data on the practice of project management in construction project in the country. The research seeks to understand the practice from a sociotechnical point of view and also explore the interactions between practice-based activities and socio-technical approaches. i

The study is purely an academic research which forms part of the researcher's work for the award of a Master's Degree in Project Management. The study has no room for any conflict of interest.

Possible risk and discomfort

There are no known risks linked with participating in this study. The procedures involved in this study are not invasive and will not cause any discomfort or harm to the participants.

Description of level of research burden

Study participants would have a semi structured interaction with the researcher.

The project managers familiarity with project management practices as well as the socio-technical transition can be suggested from his or her mannerisms as the interview goes on.. Vigilant observation of the type of project management practices on going on these construction sites, degree of compliance and reasons for non-compliance, training offered amongst others will be acknowledged.

Possible benefits

The information received during the study will add to the body of knowledge and also help project managers and other individuals in the industry to better understand the various factors that interconnect to better shape the project management practice.

Kindly note that you will not be paid for taking part in this research.

Confidentiality

Data security:

Data received during the study will be put under lock and key and field notes will be typed out.

Photographs taken, if any, on site will be password protected and only accessible by the researcher.

Plans for record keeping:

Names of the subjects that helped with the study by filing out questionnaires or signing consent forms will not be made known to the public but rather unique identification will be developed for them.

Voluntary participation.

Participation in the study is entirely voluntary

Contacts for additional information

Please call the person responsible for this study, Coretta Hanson on 0247584859 if you have questions about the study.

Volunteer agreement

The above document describing the benefits, risks and the procedures for the research entitled "The practice of project management in construction projects: a socio-technical transition perspective." has been read and explained to me. I have been given the opportunity to ask questions and all the questions that I have asked about the research have been answered to my satisfaction.

I agree to participate as a volunteer.

Date…………………………………………………………

Signature   or   thumbprint   of volunteer...

If volunteers cannot read the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual. All questions were answered and the volunteer has agreed to take part in the research.

....

Date Signature of witness

No	Compnay	Years of Experience
PM1	GNPC	10
PM2	Staetly Corban	10
PM3	Nowak Development Limited	13
PM4	Department of feeder roads	17
PM5	Trasacco estates development company	5
PM6	Clifton Homes	10
PM7	SQOL Consult	6
PM8	Archxenus	8
PM9	Zella Architects	6
PM10	JOWAK	20
PM11	S-Consult	7
PM12	Euroget Group	10
PM13	Ghana Highway Authority	14

You are leading a project that must be planned, executed and closed. How will you conduct your project planning?

PM1
Development of a business case – why the need for the project
Development of a scope
Send for approval
Send out a tender
Procure
Carry out project
Monitor and evaluate
Payment of bonds, insurance

PM2 – determine activities to be carried out
Apply resources and cost
Scheduling and sequencing
Assembling team
Executing project
Closing of project

PM3 – 6 key areas
Appropriate scheduling and determining timelines
Development of the scope of work
Costing to determine cost for every activity involved
Identification of known and unknown risks and putting measures in place for them
Quality assurance
Determining benefits to the society

PM4 – Develop work program
Schedule activities
Perform tasks
Draw chart to determine whether all activities in work programme are being carried out
Identify areas where bottlenecks may exist and add more resources to those areas or identify areas not on the critical path in order to gain float

PM5 – understand work to be done
Determine activities and attach time frame
Assemble team and resources
Execute project

PM6 – draw the plan, that involves scheduling
Budgetting

Assemble team
Execute work

PM7 – determine activities to be performed and the sequence
Determine which activities are critical
Determine activities that can run concurrently
Plan for resource acquisition as well as plant and equipment

PM8 – Assess scope of work and determine activities to be performed
Scheduling and sequencing
Budgeting
Assembling the team
Hold a meeting before work starts
Site possession and making sure all documents are submitted
Start execution of the project
Check for variations
Snagging and handing over and close accounts.

PM9 – meet with whoever represents the project and come back to determine scope of work and get it signed off
Sequence activities that need to be performed
Assemble team and determine resources and execute the job

PM10 – understand task at hand
Determine activities to be performed
Identify stakeholders and engage them
Determine resources needed and schedule
Fix budget for project
General meeting before project begins
Project kick off
Monitoring and evaluation throughout execution
Completion, handing over and closing of accounts

PM11 – engage stakeholders to determine project goal
Determine if time given is suitable and schedule
Look out for procurement processes
Determine funding and budget
Gain approvals
Assemble team
Execute task and complete

PM12 – it depends on the project but this is how I carry it out
Put your cost element and timeline together
Plan for human resources
After resources, determine the baseline
Plan your schedule based on the timeline
Plan your procurement
Plan for execution – procurement for human resource and materials
Execute project
Monitoring and controlling - you must have identified your potential risks at this time so you look at your risk and determine which to eliminate or mitigate.
Update your work programme, check to see if your programme is moving according to your schedule.
Continue and complete
Completion and commission – this is the closure level.

PM13 – determine what exactly the project is and what activities should be performed
Assign resources needed and schedule and budget
Execute the project
Monitor and control as you go on till completion.

SOCIAL
1. Are family ties a huge factor when it comes to employment? How does it influence your practice?

PM1 – Due to the technical nature of the job (construction), employment leans more towards specialty and he employs based on performance, not simply because they are family members.

PM2 – Employment is based on commitment and dedication as well as knowledge of your job.

PM3 – do not compromise on that. Take into consideration capability
When you are looking at it from a skilled and unskilled perspective, family members or relations come into play with regards to the unskilled aspect.

PM4 – if it was on a Likert scale I would have said somehow. sometimes, as long as they are competent.
Interviewer: So if two people came to be interviewed for a postion and they were both competent you would pick someone you are related to?
Interviewee – yes the tendency is there, I would pick a family member first.

PM5 – Competence supersedes everything else

PM6 – qualification determines who gets employed. Culture does create bonds that are strong and gives a sense of purpose hence the existence of such culture: in every organizational setup which employees adopt and live by. family ties influencing choice of individual for employment comes into play but one must be mindful of conflicts of interest

PM7 – individuals knowledgeable in the field and ready to follow instructions

PM8 – family ties does not necessarily influence it. Family members are not interested in the area. My partner however had her sister working with us for a while. It is mainly competence for me, whether you're family or not because the rules never change, cannot be bent or changed.

PM9 – knowledgeable people ready to learn on the job

PM10 – familiarity builds trust and I prefer to work with people that I am familiar with and therefore trust. These people may not be family per se but I would pick them due to the level of familiarity and owing to the fact that I am aware of what they can get done.

PM11 – once that family member has exposure to the nature of the job and familiar with the processes and can execute the work, he or she is preferred over anyone else.

PM12 – individuals who know the technicalities of the job are employed. There is a checklist for what exactly I am looking out for. So, if you do not meet these requirements, whether you are family or not, you are out! Family members tend to make the business fail, I do not entertain that.

PM13 – if the person is competent, that is good and he or she will be chosen. So yes, sometimes it influences choice of who to employ. But if you surround yourself with family members who are not competent and cannot get the job done, all in the name of 'family business' or 'family ties', it gets difficult. You must work with individuals who are going to help you move forward.

2. Do you lean towards youth employment more or experience? How do the varying and expanding population dynamics influence your obligations?

PM1 – Experience is the main driving force for employment

PM2 – depends on the role, someone with experience to a point is what matters. If internship or junior roles are available however, youth are considered.

PM3 – lean towards experience and capacity. Qualification outweighs most things, but in looking at qualification, consideration must be given to availability and staff strength. So I will give qualification

60%. On large projects, stick to experience and capacity, however, on smaller projects, where there is no risk, new people can be given the chance to prove themselves.

PM4 – experience and trustworthiness. For instance, in every department, you have the lead consultant, so you would want to employ the younger ones to learn from them but not take up great responsibility because it is not every on that is right out of school that would work to develop. So we pick them and train them as and when the need arises or space is available to accommodate them. This is advantageous because it relieves you as a manager and you know the job can be done when you are not there. Youth employment is considered as and when there is space available to accommodate interns

PM5 – youth employment more than anything else. More youth in the society than any other population group

PM6 – more of experience. Youth are trained through attachments but until they have more experience in the field, they cannot be employed. Because of the timelines and the speed needed we wouldn't want to engage people who are not qualified. Qualification doesn't really play a major role, it is about experience.

PM7 – youth employment is preferred but if individuals who are knowledgeable but not youth present themselves, they are taken.

PM8 – look at your attitude. Depends on the project as well. Some projects require senior managers on it where as others can use less experienced people so as not to follow the job all the time. But in whatever case it is still attitude, because skills can be taught but attitude cannot.

PM9 – do not look at experience. you need to work to get the experience so if everyone is looking for someone with experience how do you get the people with experience when they have not been given a chance to work. Sometimes some people with experience are not competent enough. People who are prepared to learn and ready to improve themselves could do better than someone who has been on the job for years. give people a chance to prove yourself

PM10 – I consider experience more than youth employment due to the risky nature of the business. However, internships or attachments are available for youth development.

PM11 – it depends on the type of project. if it is document control which can be learnt on the job, I deal with the youth, but larger project that nee intensive management I look out for experience. What do you mean by youth?
Between 25- 40
Well then I lean towards youth employment more than anything else.

PM12 – we always look forward to having a Corporate Social Responsibility (CSR). So as part of our CSR we employ individuals with not much skill and these are usually the youth fresh out of school. You wouldn't be given a PM role but you would be given a role that doesn't require so much skill until you have adopted and are familiar with the technicalities of the practice to be able to take on addition roles.

PM13 – Looking at Ghana's population dynamics, it becomes a huge problem.. This is because it makes employment difficult as so many youth graduate without skills and aren't employed because of the technicalities of the practice. You cannot possibly take someone who just completed school to manage a huge project. If the person is youthful and has had some experience over the years, that is fine. I would say I lean towards more of people with experience for employment than people who form part of the youthful population.

3.   How do you deal with area differences and people's priorities in managing your projects?

PM1 – It is either you go with instructions given or you are out, unless it is a specialist area. PM dictates how people work.

In dealing with priorities, we mostly look at budget allocated to particular area and not the wants of the inhabitants.
Sometimes what you are also getting from the society influences your decision as well as the location

PM2 –major consideration is given to the end user, but first you need to research on why you are even carrying out the project.

PM3 – NOWAK has their own standards but that does not mean we will limit the ideas of others. They are open to other ways by which people carry out certain tasks, things are changing and technology is also changing so they are open to adapting to change.

PM4 – location doesn't necessarily change how a project is managed. Well it depends on the type of the project. If it is a labour based project for instance, you employ all labour possible instead of using equipment. So in a mining area for instance you need to be careful of the type of labour you employ and the amount of money per day. They would rather want to be on their mining sites rather than your construction site so there is the need to understand this and put in place measured that will appropriately attract them to come to site to get the job done.

PM5 – Standardization. Standardizing practices and on-site training.

PM7 – provision of indebt explanations on what exactly you want and how you want it. PM runs the show

PM9 – It is a case by case basis. Every case is unique. You are usually briefed or given a high-level document to inform you who you are working and what Is expected of them, you know that this person's culture is different form mine and this is done in a different way. Sometimes you meet people with a gender issue, doesn't usually take instructions from a woman, etc. so you give them time to adjust. You do not have to force anything on anyone. You need to understand and acknowledge the differences. So you try to meet at a common point. Effective communication

PM10 – Every area has their unique culture, so to say, and relate to things differently and do things differently. The project manager is in charge and determines how the work must be done. The people within the area would be given time to adjust to the standards my firm has.

PM11 – Every project is dynamic and engages different people who do things in different ways. So, with time there is adoption of new ways of doing things which go along with the existing practices.

PM12 – when you go to a new area or community you reach out to the stakeholders. Through this engagement you try to find out some do's and don'ts in the society. For instance, some areas noise is not allowed after 5 so you know all machinery should go off. You are the one moving into their area so it is important to understand their culture and adapt to it.

PM13 – As a project manager this is one of the things you have to be able to deal with, you must have expertise in – dealing with individuals and their differences. During the lifecycle of projects, you come into contact with Indians, Europeans, the Dutch, even in Ghana, you have people coming from the north, south east and west who are all different. The key thing is that we all use basic tools to come out with certain factors in order to complete a task. There is the need to be dynamic enough in order to be able to accommodate and accept every individual and the varying methods they apply in order to come to the same successful completion. Most of the time you need to be understanding, because a particular thing that is the number one priority on your list is number six on theirs. So it is about having a thorough understanding of the project goal and also the people you are working with and clearly stating what the expectations are.

4.   Are you of the view that project work changes several aspects of the society? How so?
PM1 –

PM2 – Yes and No
No because, some projects are run for personal gains and hence do not have any positive impact on the society

Yes because, certain projects look at how inhabitants may be affected and consider various ways to solve this

PM3 – yes its changes the look of the area. It also brings about employment and various additions to the society.

PM4 – yes it changes the society to a large extent
After road construction, economic activities were booming, traffic volume increased, people had access roots to send their harvested crops to the market, people in the area were employed. Before the area was calm with no activities along the street. Before the construction, the area was a calm and quiet place with not much going on
Construction was being carried out in the north, people needed water for their animals. There was a particular box culvert that we constructed so in our engagement we knew they needed water to feed their livestock so they asked us to construct such the run-off water flows into a culvert acting as a dam and it was used to feed animals. Some even used this water to wash.

PM5 – brings about employment, changes waste management systems, could lead to a CSR being carried out for the community – community centre, roads, etc.

PM6 – yes and no. projects bring benefits to people in the area. Those that fail however cannot be seen to bring much change to the society, these are however few.

PM7 – it shapes the environment, gives it a particular character
Development of infrastructure provides employment
Dynamics of the area changes – population, economy

PM8 – "brighten the corner where you live", it does to a large extent. We did a building in an ugly part of Dzorwulu and the client says it was too nice for the area it was placed. We were of the view that when you put something nice there everyone else will want to match up. In two and a half years, project is almost over, an ugly building right opposite has now been painted and changes have been made, shops have been opened on the bottom floor, roads have been constructed. It's happened with several projects and this has cause projects around to match up or beat our buildings. The streets have transformed and taken shape. Transformation of the locality after your project. is developed. Pushes others to do better. The area rakes shape. It inspires and challenges people to aspire more.

PM9 – "the whole of life is a series of projects". E.g. Introducing a pedestrian footbridge changes the whole lifestyle of pedestrians. So if you were used to crossing the road and this has been done now, it changes your route. If the bridge has been introduced 10-30 meters away from your initial route, it changes your initial route, that is, makes your journey longer. You would also need to bring security personnel to supervise this as certain individuals may falter and cause problems and this sort of provides employment.

PM10 – it does to a large extent. It brings about employment, it could change the people's lifestyle. It shapes the environment better, it brings a whole lot of change to the particular area.

PM11 – in certain areas there exist language barriers. Spending time within a particular locality leads to both parties picking up a thing or two when it comes to language and this to an extent changes the society.

PM12 – Project work definitely changes the society. It helps provide employment for the people in the area you are undertaking the project. It also exposes the community to economic benefits. It brings civilization to the area as well.

PM13 – In a village, let's assume you haven't travelled before and you finally do. You are exposed to a varying number of cultures and the different ways people carry out certain activities, it is the same with projects. Projects bring about exposure. They change the manner in which people see things and do things. Projects also to an extent provide some form of education for the people living in the areas where new projects are constructed. Projects create employment opportunities, introduction of new culture, learning new things and new businesses also emerge.

5. How do you deal with stakeholder engagement in the area in which you find yourself undertaking a project?

PM1 – Not every area requires engagement but those areas that do, engagement is in debt, understanding their needs is of prime interest as well as making them aware of potential noise levels and other issues. Those who have to be relocated are compensated based on the assessment of what they do. Others are resettled.

PM2 – with government projects,

PM3 – the interest of key stakeholders in paramount so there is a need to develop a relationship with these stakeholders and involve them in every aspect of project planning. Encroachers as well as neighbours around are also important to projects being undertaken in that particular area and are engaged to inform them of what is happening in their area. It is just nice you inform the neighbours about it instead of just surprising them.

PM4 – make sure the stakeholders feel they are a part of the project – total engagement
Stakeholders – district assembly
MP's
Chiefs
Clan heads
Municipalities
If project is from above though, that is the topmost authority, no stakeholder engagement. These projects are usually because politicians have made promises in areas and hence must be carried out. Project is just carried out.

PM5 – consultants
Employers
Senior management

PM7 – client – detailed discussions – run through for confirmation – sign off
Pap's – engage, let them know what the project is, any disruptions likely to occur, at what point these disruptions will occur, access routes being used as well as mitigation measures

PM8 – It depends on the type of the project. For private projects, you deal with the client and his family initially. As the project starts you include the neighbours. For instance, the 10 storey structure my firm built, the foundation trench went down 6.5m and because of the nature of the soil a pile defense needed to be done at the periphery to protect neighbours. Before this, letters were sent out to the neighbours to inform that about the construction but we had to engage them again and inform them exactly what was happening.
In doing something in Elmina we had to talk to the DCE, chiefs, townsmen, Board and Directors because that was more public. We had to run it by UNESCO, and the Monument Board.

PM9 – you meet the client, the customer, the sponsor, the artisans, fellow consultants, statutory authority (EPA, district assembly, regional coordinators). For the level of engagement, it depend on the team you are on. If I am on the client team on the architect's team I would deal mostly with my team members and client, but if I am on the client's team, I could meet the sponsor as well.

PM10 – identify all stakeholders and develop a plan for the frequency of communication as well as the type of communication and medium preferred by each. Stakeholders are key and it is important to develop a relationship with them so we take prime interest in doing that.

PM11 – Come into contact with consultants, artisans, the finance team, clients. End users as well as statutory organisations.

PM12 – depends on the type of project. first you need to get a thorough understanding of the project. Let's take this example – market design for Kejetia in Ashanti region. You would engage with the paramount chief of Ashanti, the community where the market will be located, the assembly man, market women, police service, fire service, EPA. So you need to identify all the stakeholders you need to

interact with, those who would provide you with approval as well as those who will provide you with. Develop a relationship with them and consult them often as the project goes on.

PM13 – before the implementation of any project you would need to go to that community and organize a town meeting. This is to inform the people of what you intend to do as well as any inconveniences that may come up due to the various activities that will be carried out. You come into contact with the government (key stakeholder), every Ghanaian, DCE, the town people,, chiefs and other statutory organisations. More often than not it is the ordinary stakeholders who have more interest in the project as they can see they would benefit from the project and hence all these individuals must be up to speed regarding what is going on.

6. Morality and project management practices, how do you handle the two?
PM1 –
PM2 – kickbacks are accepted when they come but they in no way influence how work is carried out. It is however not encouraged.

PM3 – in situations where certain things may cause you embarrassment or tarnish your image, you lie to save face.

PM4 – some people are influenced by kickbacks but what I believe in is the project must be done and must be successful – should be executed to the specification, that is, quality assured, budget met and on schedule. That supersedes any other influences or rewards. They will follow however but after successful completion. These things are not put ahead of the work because they prevent you from carrying out the work as from carrying out the work as you should.

PM5 – there is always a juggle between morality and humanity

PM6 – rules of engagement as well as rules and regulations to guide behavior are set up by the organisation by which they go by. No one must go against these. We try to educate on a daily basis on what should be done and what shouldn't be done. Measures are put in place to regulate what people do along with the sanctions for going against them.

PM7 – they work hand in hand. Pm is governed by ethics, pm is based on the code of tactics, be fair and firm. Morality is a management kill, should not be overlooked.

PM8 – 'You are only as good as your words'. If you are not transparent and straight your reputation suffers and people think this girl can be bent or less give a gift or money and she will favour us. This industry doesn't have many people so you might meet someone late rand how you portrayed yourself will come up so you must be straight. Some contractors on a job with us keep asking for dinner but we know it is not just dinner, but to take you for dinner so when they are messing up, you won't be hard on them,. But I tell them let us finish with the project and when we are all happy we can have all the dinners.

PM9 – I think this be a matter of integrity. Whatever you put your signature to you must do. A project doesn't deal with just one human being, there are other people on the contract you signed and there are sanctions that come when you don't perform, so as a project manager you must always have integrity at the back of the mind and ensure that whatever you agreed to do you do it.

PM10 – to ensure your project is successful (on time and within budget), you need to be fair and firm and transparent. All immoral acts tend to cause delays and unsuccessful outcomes.

PM11 – the company has a set of work ethics and there also exist checks and balances to help ensure that everyone is son track. Roles and responsibilities of every individual are clearly outlined. You are on the job to get work done and there are expectations. So you get your job done and leave, no room for backdoors or kickbacks.

PM12 –
PM13 – Most of the people you deal with are adults so it becomes a bit difficult actually telling them what to do and we expect that they know what is right from wrong. Morality is an individual thing and

even though we do not stand for certain things it is pretty difficult to prevent people as individuals from engaging in certain practices.

7. Can politics have a positive influence on a project and are there any existing political structures in your organization

PM1 – The negative outweighs the positive, cannot think of any now. It negatively impacts the practice.

PM2 –cannot seem to see any positive influence. Politics determines who gets what job, it is more negative than positive.

PM3 – as for politics and projects, you can never run away from it. We do not take on government projects so we do not experience it. We have had just one and it was just full of delays, there is always interference from politicians. They give projects to individuals based on their party association whether or not they are competent so when people are doing wrong things, they cannot call them out because they will give you a lot of kickbacks, quality is not even considered, so many things go wrong with such projects, all because it was politicized. more negative than positive.

PM4 – As for politics, it is a lot. What happens is that the politicians have a lot of power. So whatever they say must be done. When they ask for a particular project, you cannot say that for instance, if it is coming for an MP, you can offer your profession al advice. When they want the project done, you cannot say I have done a cost and benefit analysis and that project is not viable so it should not be undertaken. Sometimes projects are advertised but they have been given out already to someone who is behind the scene so you have to make sure it goes to that person. Politics brings unprofessionalism,. More negative than positive influences can be seen

PM5 –politics affects decision making, it causes delays, has long term effects more negative influences. Positive ones cannot really be seen

PM6 – political stability and good policies set by politicians positively influences the practice. There was depreciation of the cedi in 2015 and so we lost a lot of clients because a lot of people who buy from us couldn't purchase so we had to halt construction for a while.

PM7 – cannot, most are negative. When things need to be done, they must be done at the right time and by the right person and at the right place. Politics changes this – things are done by the wrong person and at the wrong time.

PM8 – Not really, not in Ghana. I visited Denmark a couple of years ago and they have this thing where as long as the project is a public facility, a competition is run for the architects in that particular area. Ghana does not do this, so no matter where you are placed, you never get the opportunity to input your thoughts and design, all you know is you are there and someone is coming to perform sword cutting. Government is not conscious of empowering their own people. In Ghana, the idea is if it is big, let us get someone from outside. Government doesn't open projects to people from all caliber put they rather lower the rules to suit particular individuals.

Government projects are generally politicized and we have tried our best to stay away from government projects. It is just last year that government approached us for a project. I haven't enjoyed the process. Why?
This is because with all the engagement, all they are interested in is getting the project done and not necessarily checking that it is being done to get quality. You send something nice and challenging and they say why didn't you just do a mud house cause that area has mud houses. We run with them why they did what they are doing but all they want is thatch and the president will be visiting there at this time so it must be done now. That is not the way to go. Projects come with plans

PM9 – both positive and negative influences. For instance, if all workers decide that heir minimum wage is low and so they go in strike and you're currently undertaking a project. masons, labourers, etc. are not working so everything is stalled. For positive, it could be existing policies that affect the project positively.

PM10 – politics brings about delays and corrupt practices, I can't seem to place a finger on any positive impact because more often than not, it is negatively impacting the project.

PM11 – waivers on certain features of buildings. Constructed a lift in a building and tax wa waived.

PM12 – politics always causes unnecessary delays. For instance, a project started by the previous government, and you as a private contractor raises and invoice for payment and it is delayed. This will in effect lead to the project being halted. Also, previous government started constructing hostels and a new government is in power. The new government does not see hostels as a priority but instead schools. So, the hostel project is abandoned and a new project is undertaken. Politics also determines who gets employed to undertake what project and this can be seen to affect the practice as well

PM13 – looking at Ghana as a nation, people wake up and decide to go on demonstrations in order to get certain things done. As long as there is political will and source of funding is available, projects are undertaken and come to successful completion. So for politics to have positive impacts on projects, there is a need for strong political will.

8.   What makes the project environment a productive ground for politics? And how does politics influence the practice?

PM1 – The nature of the project as well as the benefits to the nation or client. This usually negatively impacts the project as political parties tend to personalize the project for the selfish benefits.

PM3 – once it is a government project, politics will be productive 100%
For private projects, the zone or location in which it is being undertaking determines if politics will thrive. For instance, I am a private contractor who has got a project and I am not a fan of the party in power. The project is located in a particular political zone so they ask for kickbacks to avoid interfering with your project so they will frustrate you till you give in. Sometimes, the traditional leaders in the area also frustrate you. These are stakeholders so they play key roles. They sell the land to you and you want to start to build, they frustrate you and try to get so much from you, huge sums of money.

PM4 – money can be found there – procurement is involved. Procurement takes about 65-70% of the GDP. So when it comes to procurement of works or goods or consultancy, politicians are always there. Party in power and their "special interest"

Positive, maybe in the sense that a project might not be in the budget but the project is being done so the community that is benefitting from it will see it to be positive, it depends on where you're sitting. The economy might also suffer from this same project as the contractors are not being paid sine no budget was made for the project.

PM5 – Structure of the company. Businesses that have most if not all positions occupied by family members.

PM6 – when government rules and regulations come in, politics thrives there.

PM7 – politics is all about numbers, money is involved here and projects reach out to a lot of people

PM8 – government projects are in the bosom of government, so those are exclusive so you would expect government to follow the laid down procedures to procure projects.
For private projects, only interference is with land issues and permitting issues because you have to interact with land title registry as well as EPA and municipal authorities. The artificial barriers within the process make the project delay and makes it frustrating.

PM9 – I honestly do not know how the project environment can make politics thrive.

PM10 – The money involved and the impact on the society. Projects usually are constructed for the masses and politicians use this for their own selfish and personal gains.

PM11 – I cannot say I have experienced that so I cannot tell.

PM12 – it involves money. Everyone wants money and politicians especially have their own interest which you cannot really out a finger on what it actually is.

PM13 – Ghana as a country can be seen to have limited resources. Every community also wants a "share of the national cake". All communities also have political leaders and these leaders want to show off and do things to gain trust from their community. Politicians come and make promises and this causes them to gain votes during elections. Once they are voted into power, come what may, the project must happen whether it is feasible or not, or whether it has been budgeted for or not because if they don't see it to fruition, the community starts to think they have been deceived. Simply put, politicians gain alot form this and that is why it thrives so much.

9. On collaborative projects, how do you deal with policies and regulations and the fusion of both 'worlds' in managing the project?

PM1 – Most construction projects come with certain international standards that you must follow, usually the terms that are negotiated between the parties involved.

PM2 – it is a small company so we are not faced with conflicting policies. On private projects, the contracts are structed to suit the private client, with public ones, the fidic books are consulted.

PM3 – when two people come with two different interest, it is kind of difficult but you try to come to a consensus. For instance, the financier and end user, the financier is looking at minimizing cost whereas the end user wants quality. Ideas keep conflicting as one wants quality more and the other is thinking of minimizing cost. Communication is very important to avoid conflicting ideas.

PM4 – accept things that cannot be changed

PM6 – haven't done any collaboration with anyone

PM9 – It all comes down to communication management. Form the beginning, both parties should have spelt out their policies and regulation s and things that cannot be merged you draw a common line somewhere.
PM11 – joint projects come with expectations from both parties. There is always a schedule of work and every company performs their various activities in different ways. So usually every entity has a particular task they perform so they are allowed to perform it per their standards and then collaboration comes with reporting and documentation. Consensus building also takes place when it comes to the need to meet particular standards such as quality, equipment choice, etc. Effective communication is key here.

PM13 – let me give an example. Let us say government has a project but doesn't have money so world bank decides to partner up and fund the project. they both have interest in the project so they are both stakeholders and both also bring their own consultants on board. Both parties work hand in hand to see to the completion of the project. what happens is that we draw a clear line of communication. We clearly spell out who is in charge of what, what is expected from whom, who is authorized to provide approvals fir what particular payment or task, etc. Simply put, everyone's role on such collaborative projects are clearly spelt out and effective communication is key

10. Regulations and legislation and how they affect and prohibit certain activities, how do you deal with that?

PM1 – Certification
PM2 – try as much as possible to satisfy and follow laid down rules and regulations, tweak ours to fit the larger authority so as to avoid issues.

PM3 – An example is a project that we were constructing and had issues with parking. The office is a nine storey building and apparently the space provided was not enough to cater for the facility so we weren't allowed to do it till enough parking was provide, so we had to construct a multi storey car park to cater for the facility before we were given the go ahead. So whatever be the case, these rules and regulations must be satisfied before your project can continue successfully.

PM4 – I can give you an example. Sometimes, especially with the Ghana Water Agency, when we want to construct and their pipelines are in the roadway it affects a lot of our activities and delays the projects. So once the project is awarded we try and liaise with them to get provisional sums for relocation of pipes. So we try to do the relocation before the time so as not to delay the scheduled time for the project. Sometimes you pay them and they don't even do and do the relocation. Sometimes you have to change it and align the road to another part because sometimes they bring very unrealistic estimates.

PM5 – regulations and legislation shape the project. do not negotiate when it comes to that.

PM6 – make sure all documents are gotten and rules are followed to the letter. We try as much as possible to follow all the regulations. In situations where it is difficult, that is during the execution stage we dialogue. There was a time where we were given a permit for a design but when construction begun the design was changed. When the authorities came they realised the construction was different from what the permit was given for so the constrcution was stopped and design had to be redone and new permit sought.

PM7 – indebt feasibility studies prevent this from happening. However, contingencies are put in place to cover these risks.

PM8 – regulations are restrictive and there exist certain things that do not make so much sense for instance the setback for a multi-story should be half the height of the multi storey. Imagine a building like Villaggio doing those setbacks, how does that work. They say it is mainly for fire trucks but in areas like Turkey and Denmark where buildings are terraced with no space between buildings, where do these trucks pass. They have fire suppression systems and hydrants and this makes the buildings more sophisticated.

PM9 – I will give materials as an example.. if there was a regulation that every project should use at least 30% local materials. Also, outsourcing should be just 50% of team members and not the whole things outsourced. These are some regulations that will help projects. The existing once are not that enforced for instance so many individuals are setting up fuel stations within residential areas and there is EPA, so I do not see these regulations working or how they are enforcing it. People are not enforcing these rules and everyone is doing what they like.

PM10 – regulations are followed to the letter to avoid any unnecessary interference that will hinder project success.

PM11 – Regulations tend to help shape my [projects, I haven't experienced any that prohibit any activity I intend to carry out