PSYCHOLOGICAL TRAITS OF TEAM MEMBERS THAT CONTRIBUTE TO PROJECT SUCCESS: A CASE STUDY OF THE GHANA URBAN MANAGEMENT PILOT PROJECT (GUMPP) SEKONDI-TAKORADI

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 previously 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 the Kwame 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

Usually, institutions set out to organize the best teams for their projects using criteria such as years of experience, level of education and professional achievements. The issue of selecting team members with regard to their inherent psychological characteristics that gives them an added advantage over others is ignored. Not all persons, regardless of their competence can work efficiently and effectively in every environment. This study sort to identify the Myers Briggs Type Indicator (MBTI) psychological types that characterize project team members in delivering successful projects under the Ghana Urban Management Pilot Project (GUMPP) infrastructural facilities within the Komkompe-Takoradi industrial enclave. This work was a pilot study to facilitate further related research for conclusive results. Simple random sampling was used to derive the number of respondents to issue the questionnaires to. Three hundred and fifty questionnaires were issued to the residents of Kokompe-Takoradi. With respect to the team members at Sekondi-Takoradi Metropolitan Assembly (STMA), eleven questionnaires were designed and issued out. Data was then analysed using SPSS software, to identify successful projects under the criteria of stakeholder satisfaction in terms of product quality and timely service delivery of project. A Chi test was conducted between variables (project success and psychological traits of team members) and a strong link was established. It was deduced that; seventy-three percent of the team members were introvert, intuitive, thinking, judging (INTJ) psychological type. The remaining introvert, intuitive, feeling, judging (INFJ), extrovert, intuitive, feeling, judging (ENFJ) and extrovert, intuitive, thinking, judging (ENTJ) were nine percent each respectively. Analysis showed that there was strong link between the psychological traits of team members and the success of a project. To attain project success the selection of project team members should have the appropriate blend of psychological traits to acquire project success.

Keywords: Project success, Psychological traits, Team members.

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ABBREVIATIONS

AFD	Agence Françoise de Development
ENFJ	Extraverted, iNtuitive, feeling, judging
ENFP	Extraverted, iNtuitive, feeling, perceiving
ENTJ	Extraverted, iNtuitive, thinking, judging
ENTP	Extraverted, sensing, thinking, perceiving
ESFJ	Extraverted, sensing, feeling, judging
ESFT	Extraverted, sensing, feeling, thinking
ESTJ	Extraverted, sensing, thinking, judging
ESTP	Extraverted, sensing, thinking, perceiving
GUMPP	Ghana Urban Management Pilot Project
INFJ	Introverted, iNtuitive, feeling, judging
INFP	Introverted, iNtuitive, feeling, perceiving
INTJ	Introverted, iNtuitive, thinking, feeling
INTP	Introverted, iNtuitive, thinking, perceiving
ISFJ	Introverted, sensing, feeling, judging
ISFP	Introverted, sensing, feeling, perceiving
ISTJ	Introverted, sensing, thinking and judging
ISTP	Introverted, sensing, thinking, perceiving
JHS / SHS	Junior High School / Senior High School
MBTI	Myers Briggs Type Indicator
NCJRS	National Criminal Justice Reference Service
NUP	National Urban Policy
PMI	Project Management Institute

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CHAPTER ONE

GENERAL INTRODUCTION

1.1 Background

Works on project success factors, lack in providing literature on leadership styles of the project manager (Turner and Muller 2005). Although some approved practices have been adopted, others have been abandoned. This is in relation to study on the team characteristics and project success in the industry. This study looks at personality traits that make an individual more suitable to undertake an activity, with reference to the Myers Briggs Type Indicator (MBTI). It will further dive into constructing a relationship between positive team characteristics and the sixteen MBTI psychological types, with focus on its relevance to project management.

Atkinson (1999) noted that, definitions of project management are diverse. One of such definitions, developed in 1996, defined project management as the motivation of team members, planning, monitoring and controlling of all project stages to achieve project objectives within the set scope, cost and quality.

A team, according to parker (1990), is group of individuals be it human or not, that are collaborating to achieve the common goal. Professor leigh Thompson defined it as a gathering of people who are interconnected regarding resources, skills and information who work in a combined force to achieve project objective (Thompson leigh 2008). Melsa James l. (2009) on the other hand commented that an assembly of people does not necessarily constitute a team but rather teams are selected persons who are brought together due to a project, and by this, work collectively to achieve the set goals. In project management however, project teams are those persons selected from different area of function in an organisation and are assigned to activities of a particular project or projects. This is done according to the specific needs of the project within a defined timeframe and budget.

The Ghana urban management pilot project (GUMPP) was established in 2010 by the then ruling government National Democratic Congress. The key objectives of the GUMPP was to design and build infrastructure to improve the living standards of the people in Kumasi, Sekondi-Takoradi, Tamale and Ho and in the process test mechanisms, approaches and systems that can be successfully replicated in other urban local governments. Agence Françoise de Development (AFD) was the main sponsor of this project, providing the funds, to the tune of about €40.5 million. The top-level owners of this project are the Ministry of Local Government and Rural Development, Republic of Ghana and the Institute for housing and Urban Development Studies - Erasnus University Rotterdam (GUMPP inception report, 2012).

One goal of the GUMPP is to increase investment in infrastructure and improve urban planning (GUMPP inception report 2012). To be able to achieve this goal, Project managers as well as team members were competent to deliver the project successfully, preferable before the stipulated deadline.

There are so many projects under the GUMPP at the Sekondi - Takoradi metropolitan Assembly (STMA), which included the expansion of infrastructural facilities within the komkompe industrial enclave. This research concentrated on the projects carried out in Kokompe-Takoradi because this project was replicated in four selected metropolis (Kumasi, Sekondi-Takoradi, Tamale and Ho) that had similar population characteristics making it a representative case study of the four metropolitans.

1.2 Problem Statement

As cited on the official webpage of Ministry of local government and rural development "forecasts have shown that by the year 2030, 65% of the Ghanaian population is expected to be living in urban areas, the figure is expected to double by 2040" (Metropolitan Planning Coordinating Unit 2010-2013). Increase in population size comes with its

associated benefits of high demand of large markets, poverty reduction and increase in gross domestic product (Ackah and Medvedev, 2010). However, if the population growth is rapid, it places undue pressure on both the secondary urban centres and the country's main cities (Awumbila et al., 2014). In the past a lot of challenges befall project managers and these challenges eventually lead to project failures which is quite evident in most public sector projects, in order to effectively and efficiently replicate successful projects, it is suggested that project managers invest in their teams to aid their evolvement from the state that they were employed to a level of competence suitable to produce project success example being personal emotional intelligent. This, if done, will result in high team performance to meet project objectives. Based on local demand for better living conditions by the four metropolitans, a five-year, initiative programme was designed to implement pilot projects to satisfy the national urban policy framework and thereby replicate it when the time was right (Metropolitan Planning Coordinating Unit 2010-2013). However, the contributions of the team players that led to project success or failure have not been assessed and this, if not considered with the importance it deserves may lead to failed projects and subsequent waste of scarce resources. This study is to identify and deliver with empirical evidence, those psychological traits of team members that bring about project success. This could then be incorporated into project team requirements to increase chances of obtaining project success.

1.3 Aim and Objectives

To identify the Myers Briggs Type Indicator (MBTI) psychological traits of team members that contribute to project success.

1.4 General Objectives

The general objective of the study is to identify the Myer Briggs Type Indicator psychological traits types that characterize project team members in delivering successful

projects under the GUMPP (Infrastructural facilities within the Komkompe industrial enclave).

1.4.1 Specific Objectives

The main objectives of this study are listed as follows:

1. To identify the projects that were executed at the Komkompe-Takoradi enclave under the GUMPP and assess project success through the lenses of the beneficiaries of these projects.
2. To identify the team players of the project and their psychological traits.

1.5 Research Questions

The motive of this study is to scrutinize team characteristics (psychological types) and its resultant effects on public sector projects. And also, identifying beneficial conclusions to these:

1. What projects were executed under the GUMPP and What is project success according the beneficiaries?
2. Which team was responsible for successful execution of the project and what are their personality types?

1.6 Methodology

Both quantitative and qualitative methods would be used. Quantitative methods would include but not limited to, correlational and descriptive research method. For qualitative methods, this would include focus group discussions of key stakeholders, interviews and data collection of sampled top management team members. The data will be collected through interviews with relevant persons from the Sekondi-Takoradi municipal assembly and beneficiaries of the project. Data gathered would be analysed and represented with some illustrations (pie charts, bar graphs and trend charts etc.).

1.7 Scope of Study

This research will take place in two folds one will assess the beneficiaries of sampled projects and identify what it means to have a successful project and the second would be to assess from top – level management and all relevant persons who worked directly with the projects identified as successful (because these persons had access to the whole project and not aspects of it)

1.8 Justification of Study

The construction of infrastructure will help cure issues related to proliferation of rural areas and its associated impact on sanitation such as flooding. Also, the development of the physical project creates jobs and this goes a long way to reduce poverty. The resultant change in the environment as a result of sanitation work will enhance the beauty of the areas.

The purpose of the GUMPP was to design and implement pilot projects that would be replicated throughout the country at appropriate times. However, contributions of team members that lead to the success or failure of these projects have not been critically looked at. This study therefore provides an insight into those team characteristics (personality types) that contribute to project success. This could then be incorporated into project team requirement.

1.8.1 Organisation of Study

This research is made up of five chapters. The first chapter, General Introduction, introduces and guides the reader throughout the research process. Chapter Two contains a review of works by other researchers, as well as, books and articles published. The third chapter describes the procedure used in the research. Chapter Four presented and analysed the empirical data. The last chapter, is summarizing the findings from the research and draws conclusion from all the information gathered.

1.9 Limitation of Study

Identified limitation to this study include:

- Top-level management personnel are key persons needed for my research. Their availability however will be a challenge as they are very busy people and may deprive me of other forms of data such as observation. The Researcher adopted strategies such as scheduling of time and booking for meetings far in advance to enable her obtained the needed information.
- Collection of relevant data from the Assembly. One major challenge was the collection of relevant data from the assembly. It took the Researcher almost three weeks to explain and persuade duty bearers to accept the questionnaires and also released the relevant documents on the study.
- Research is taking place long after the close of the project which means that data collected will not be in a suitable period for respondents.
- Finally, in view of the number of beneficiary communities and the limited time within which to carry out this research, it was impossible to cover all the over 30 communities/towns in the Metropolis. Therefore, the research was scaled down to the Kokompe –Takoradi Industrial Enclave to ensure in-depth analysis of the findings.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Since the 1990s research has found that good practices into project management has escalated, thereby increasing the magnitude of research papers in this area (Davies,2002). This fact indicates that project management entails a variety of parameters that need to be explored. In any given project, various stakeholders contribute with their individual objectives that shapes the nature and final output of the project.

Although previous researchers addressed the types of management skills and the significance of technical knowledge, emerging trends are focusing on relationships between capability, personality traits and project success. According to Vargas (2005) in his paper, "find the right people to the right function using Myers Briggs Type Indicator" to the Project Management Institute (PMI) tried to link the theory proposed by C. G. Jung (1971) and executing a project taking keen interest in the human resource acquisition (personality). He concluded that "allocation of resource using psychological types that fit into appropriate functions of the project reduces turn-over and increases motivation there by enhancing the development of the team.'' (Vargas 2005).

2.2 The Project Manager

The project manager is one who is not necessarily a professional in the field of work but has the appropriate leadership style needed to accomplish the work (PMI, 2017). According to Gaddis (1959), a Project Manager is one uses a team of specialized persons from different fields to create a product. The National Criminal Justice Reference Service (2015), viewed a project manager as one to draft and manage the schedule, create enabling environment for teams, identify and manage risks to optimize the project.

Inferring from the above, a Project Manager is one who poses high quality personality traits and uses such traits to mobilise divergent characters of team members, move along with them and egg them on to achieve desired project objective in a timely manner.

2.3 Project Teams

These are the assembly of expertise, organized by the project manager or the performing organisation, for the purpose of carrying out a project. They may be joined in different forms which include virtual teams, cross-functional teams, functional teams, problem-solving teams and self-managed teams (Heliriegel et al., 1998).

2.3.1 Functional Teams

This is usually made up of independent personnel that work continuous running task. These teams are found within functional departments and often a times there exist such kinds of teams within the department (Heliriegel et al., 1998).

2.3.2 Cross-Functional Teams

According to Wilemon (1998), "this may be defined as a group of persons from different functions of the organisation who form a team and whose collective effort are necessary for the progress of the project". Similar definition by Hellriegel et al. (1998), states that it's a group of people with different expertise such that this expertise come in handy to solve problems.

Such teams are most effective when goals such as meeting customer demands are set. These teams adapt fast and place more focus on the ball thereby achieving success. (Hellriegel et al., 1998). Parker (1994 in Wilemon 1998), identified that where time is a major criterion for success such teams perform well and the mix of different expertise creates a highly sophisticated team that solves complex problems.

2.3.3 Problem-Solving Teams

These are teams put together temporarily to find solutions to a problem, by analysing different solutions to identify the best one. These people are from one functional department that meet regularly. Though they have some authority to effect small changes, it is limited, as they cannot reorganize the work of the whole department. (Hellriegel et al., 1998).

2.3.4 Self-Managed Teams

This is usually made up of persons who have to work together on a daily basis and can operate without central control. This often raises productivity and removes the need for one or several approval levels (Hellriegel et al.,1998).

2.3.5 Virtual Teams

Globalization has resulted in projects being carried out in any part of the world using a virtual team. These are teams organized with members working from different locations. And this is made easier with the availability of communication technology such as audio conferencing and emails. Managing such teams allows the use of special expertise from different parts of the world (PMBOK® Guide - 6th Edition).

2.4 Organizing and Managing a Project Team

The task of organizing and managing a project team is one of the major steps in project execution and the details involved in completing this task is not as easy as the name sounds, the organisation and function of the team has a direct impact on the success or failure of the project. The outcome of the team however, depends on a number of factors that are also related. Hellriegel et al. (1998), defined these factors as external and internal which collectively influence the behavior of the team and affects the performance of the team. This section will however focus on only the internal factors. Example

Influence of the Team Members

Hellriegel et al. (1998) explained that if project team members are all self-centred and only focus on their own needs, the project will suffer thereby resulting in project failure. Members should have an open mind when it comes to cultural difference and it's by this that they can learn from each other's background. For project success, teams have to have a collective view with regards to project task and find a common team goal (Hellriegel et al. 1998)

Influence of the Organizational Process

Thamhain (2004) indicated that the performing organizational structure and processes were important so far as effective team performance is involved. Factors in this regard evolved around effective communication and projecting planning to name a few.

2.4.1 Team-Building Stages

Dinsmore (1993) and Hellriegel (1998), considered that there are five basic stages of team building which include storming, forming, adjourning, performing and norming. These stages show how the team evolves over time.

Forming: Team members at this stage learn about their roles and the project. They keep to themselves and are more independent.

Storming: There is fiction between members as they address the project work. The independent nature to take precedence over the objectives of the project. This creates a counterproductive environment if not addressed in due time.

Norming: This phase is characterized by the spirit of togetherness leading to collaborations and support for team members.

Performing: At this stage the team evolves into a well-organized unit, working through problems with ease.

Adjourning: This stage is characterized by the completion of work. Resources are returned to their original departments (PMBOK® Guide – 6th Edition, P. 338).

2.4.2 Team Motivation

Organizing a team is a great part of the project manager's role and failure to motivate the team may result in under performance of the team (Gray and Smeltzer, 1990). Motivation is a vital part of everyday life of people not just teams and proper implementation of this task will lead to people wanting to join and also stay till the project has been completed. When this happens the interdependency and creation of strategic ideas become easy (Gray and Smeltzer 1990). Grazier (2006) identified six factors that influences team motivation. First to consider is purpose. when team member feels their purpose in the group, the zeal to continue working is high. Next is challenge, with this he explained that human beings work better when the job is stimulating and competitive. Next is the relations that exist between team members. Next is responsibility. People are moved to perform well in the tasks given to them when they shoulder some form of responsibility, they begin to feel as part of the project and this positive feeling of ownership leads to high performance. The next is group and personal growth. When team members recognize project, progress coupled with innovative ideas and new knowledge acquisition the moral to stay is high. (Grazier 2006).

Lastly leadership. Without the right leader in terms of effectiveness, efficiency, requisite skill etc, project success is dead from the word go. As important as acquiring the right team is, acquiring the right leader is imperative to project success. (Grazier 2006).

2.5 Team Performance

The findings of Thamhain (2004), identified five factors as the internal stimulants of team performance. These factors are organizational process, tools and technique, work and people external factors, managerial support, the business environment, project complexity and organizational support.

2.5.1 Factors That Affect Team Performance

According to Paiva (2006), when a new project is started, one of the first activities to be carried out is the confirmation of members that will constitute the team. This ensures that only competent, qualified personnel with the requisite experience are selected. Generally, this is an accepted procedure to achieve project success. However, these factors alone do not always secure the success of projects. This is because the ability of individuals to exercise the role for which they are contracted is often ignored.

To achieve a successful project, it requires talents practically impossible to find in a single individual. The ability of people to relate to their environment depends largely on their character and personality. He highlighted the importance of having a solid and well-balanced team, made up of individuals whose functional and social skills complement each other and showed some tools that allows the roles to be identified quickly and easily.

Concluding that without denying the importance of the individual as an individual, more attention should be paid towards the work team considering the role that they play (functional role and team role) and that the latter depends largely on the personality of the individual and the way they establish relationships with other people. It is therefore of vital importance to evaluate those aspects of individual characteristics to ensure correct integration and functioning within a team.

There are some tools that allow a more complete evaluation of the people that will make up a project team. In the analysis of social styles four well defined styles were identified: impeller (driving), manager, mediator and methodical (Paiva 2006). The importance of identifying these styles in candidates is that it aids you to know their needs, motivations, how to treat them, their strengths and weaknesses, including the role they fulfil. Figure 2.1 gives a comprehensive view into these models (Paiva 2006).

Table 2.1 Training of high-performance team

	Driving	**Manager**	**Mediator**	**Methodical**
Needs	-Recognition and power	-Recognition and achievement	-Price and security	-Security and power
Motivations	-Personal success -Recognition to his person	-Professional performance -Recognition of your work	-Maintenance of good relations with your environment	-Safety through reasoning and logic to maintain their employment and living conditions
How to treat it	-Go straight to the point -Focus on the theme correctly - Don't let him dream -Show enthusiasm about your point of view	-Always ask their opinion -Go to the point -Don't interrupt them -Use solid arguments - Define objectives of the meeting	- Be kind - Take time - Be interested in them - Listen to them	-Give them time -Give them a lot of information -Ask them questions with delicacy -Have clear arguments -Show concrete data
Strengths	-Open -Optimistic Sure -Enthusiastic -Motivator -Creative	-Passionate -Energetic -direct Sure -Demanding -Resolute	-Open -optimistic -Impulsive -Co-operator -Motivator	-Direct -Patient -Effective -Efficient
Weak points	-Little reliable -Little faithful -Little constant	-Cold -Little motivator -Too energetic and direct	-very direct -Little authentic -Not very demanding -Not very effective	-some open -slow to decide -Some motivator -Some energetic
Roles that can be played	-Leader or second -Opponent to leader	-Leader -Organizer -Finisher	-Coordinator -Cohesive team	-Brain -Specialist -Researcher -Implement solutions

2.5.2 Project Success Criteria

The definition of project success has long been a contended matter, with not one true definition established. This has rendered it a subjective matter with different organizations defining it differently. Hussein (2012), indicated in his conference paper that project success criteria undergoes changes which leads to overbudget resulting to financial losses, project delay and unsatisfied stakeholders. His research identified that these changes that affect success criteria happen as a result of three factors including dissatisfied stakeholders, undue delay of project and monetary issues. In relation to dissatisfied stakeholders what accounts for this situation is the inability to properly measure and establish success criteria at the initiation stage. Financial losses occur due to primarily the changing conditions that are outside the control of project management (Hussein 2012).

Yeh and Hong (2012), defined project success criteria as those measurable parameters that defined the final product which is acceptable to the stakeholders and final users. Banner, Paul. L (2018) noted that the foremost criterion of project success is the design parameters and the actual performance of the project. This is with much relevance to cost, scope and quality. This is the definition of earliest era popularly referred to as the triple constraint and it however remains the most widely accepted and used measure of project success. This is so because it offers a direct and much simpler assessment of the project performance (Bannerman 2008).

The iron triangle was among the first attempts made to define and evaluate project success based on project performance, time and cost. As time went by these parameters were expanded to include stakeholder satisfaction (Albert et al.,2017). As cited by Englund et al., (2013), typically the goal for managers is to achieve project success and with this comes some factors that contribute to either project success or failure. They concluded

by stating that these factors have everything to do with people. In that the failure or success of project is not related to technical factors but to how well people work with each other. When this factor is considered insignificant, we turn to lose sight of factors such as management support, proper communication and clarity of purpose. This eventually leads to project failure. They defined stakeholders as those persons or individuals that work, care fund and are affected by our projects (Englund et al.,2013).

This report will however use end user or stakeholder satisfaction as the main criteria to measure project success under the following parameters: end user or stakeholder satisfaction in terms of product quality, end user or stakeholder satisfaction in terms of service and end user or stakeholder satisfaction with relation to delivery of project in terms of time.

2.5.3 Team characteristics (success factors)

Witt and Baker (2018), concluded that greater emphasis on soft skill training and developing greater internal focus of control would be beneficial in Six Sigma belt training. They also suggested that during team member selection process, a diversity of backgrounds would be beneficial to Six Sigma project success. A characteristic that is identified with a successful team is a strong team. A strong team with ethics, aid in the smooth running of the organisation or project. If team members do not collaborate with each other and work harmoniously, missed deadlines, poor organisation and conflicts may occur (Caillier, 2017).

Here are a few qualities that a successful team possesses:

They communicate well with each other

They have good communication skills by sharing ideas, being open and using appropriate body language (having a good demeanour).

They focus on goals and results

Team goals are based on results and outcome rather than magnitude of work being done. Plans are set taking into consideration the objectives of the project as well as individual contribution regarding the matter. This allow for a clear plan to be drawn and provides for a clear direction.

Everyone contributes their fair share

Each team member is an efficient and effective tool as far as work is involved. Roles and responsibilities are clearly understood and properly executed. Their sense of belonging to the team results in commitment to their work and the success of the company becomes paramount.

They offer each other support

Members offer a supportive hand to each other and makes them very productive coupled with the right amount of support from the performing organisation they become an unstoppable project success tool.

Team members are diverse

Diversity and the uniqueness of each member allows all gaps to be filled. They complement each other by allowing skills and knowledge transfer easily. This situation leads to the generation of creative ideas.

They are organized

They operate with little supervision which reduces time wasting. Setting regular reminders ensure all members are on the same page so far as work in involved (Wang et al., 2017)).

2.6 Project Management Success Factors

It has been proven that creating a universal criteria checklist with regards to project success suitable for all projects is near to impossible. Waterridge (1998), stated that success criteria differ from projects to projects and this is dependent on a number of

factors such as complexity, size and uniqueness. Pinto and Convin (1989) commented that, so many results have been achieved through the work of project management researchers and this has accounted for the variations in project performance. (Morris and Hough (1987) stated seven factors that contribute to influencing successful projects namely:

- That which the project is expected to achieve and the strategic approach as well as technological design put in place to achieve it.
- The attitude and support of management that depict importance attributed to the project.
- The entire team that is project leadership, management and team members.
- An effective system of control, planning and reporting.
- External stakeholders especially sponsors.
- Influences that affect the project especially external example political.
- Roles and responsibilities of the performing organisation.

These factors lead to a complete framework by which the ingredients of project success can be identified. Their book spoke of the concept of success as objective and subjective stating that the activities of various stakeholders and their respective interest results in various definition of success so far as the project is concerned and these definitions spread across the project stages and product life cycle (Morris and Hough 1987).

2.7 Project Success and Personality Traits

Carl G. Jung's (1971) theory of psychological types, distinguished people by their preference of general attitude namely: Thinking (T) vs. Feeling(F), Sensing (S) vs. Intuition (N), extraverted (E) vs. Introverted (I). These three categories of preferences are referred to as dichotomies, a bipolar dimension where each category represent a different

preference. It was from this theory that the famous Isabel Briggs Myers developed a fourth called the judging- perceiving dichotomy (Briggs Myers, 1980,1985). As a proven science, major corporations have turn to the identification of personality traits of their employees, so as to fit them into environments and give them task best suited for their nature and this in turn leads to maximum productivity. Based on the psychological types presented by the Myers Briggs Type Indicator (MBTI) it can be proven that as far as projects are concerned, each one of the psychological types has inherent easiness or difficulties to work in projects.

Kroeger et al., (2002), indicated that these types can be consolidated regarding project management into the following aspect, pathway to the professional growth, leadership qualities, suggested project management job, team spirit and workplace contribution.

Introverted, Sensing, Thinking and Judging (ISTJ)

Workplace Contribution – they are orderly and work steadily to complete work with in schedule and cost.

Pathway to Professional Growth – must come to terms with organizational change and people issues do play a positive and powerful role in the organizational life.

Leadership Qualities – they are dutiful, orderly and complete jobs efficiently while maintaining due diligence across the organisation.

Team Spirit – Teams are well managed. They complete tasks and projects successfully.

Suggested PM Job – Isolated tasks, technical problem solving controlling and financial work.

Introverted, Sensing, Feeling, Judging (ISFJ)

Workplace Contribution – From behind the scenes they offer support, pay attention to details and attend a sense of order.

Pathway to Professional Growth – Must learn to be flexible and be open to new possibilities and changing situations.

Leadership Qualities – Is able to perform jobs by oneself rather than delegate and gives result through one on one relationships.

Team Spirit - Teams are vital and meaningful structures.

Suggested PM Job –Idea generation, task with no delegation and one on one relations.

Introverted, iNtuitive, Feeling, Judging (INFJ)

Workplace Contribution – They are quiet and serious and work is more of a cause and inject system.

Pathway to Professional Growth – excitement for the future and the possibilities associated with it are often buried beneath a serious exterior.

Leadership Qualities – Appreciates change and development. Gives direction through vision and inspiration.

Team Spirit – these are complex teams, with the right amount of care and understanding can be managed to produce valuable and inspirational work.

Suggested PM Job – works well with complex situations. is good with idea generation and visionary tasks.

Introverted, iNtuitive, Thinking, Judging (INTJ)

Workplace Contribution – adds clarity, objectivity, vision and strategic thinking. Organizations benefit in terms of change and improvement.

Pathway to Professional Growth – must learn that issues associated with visionary changes are real and can be painful.

Leadership Qualities – trains individuals and groups through the unknown and change with fairness and decisiveness. Zeal is drawn from complexity of future possibilities.

Team Spirit – if well designed and managed team evolve to complex and powerful systems that can play an important role in achieving project success.

Suggested PM Job - problem solving

Introverted, Sensing, Thinking, Perceiving (ISTP)

Workplace Contribution – with a settled resolve solves issues immediately and practically. **Pathway to Professional Growth** – there is no quick fix when dealing with the complexity of people.

Leadership Qualities – not affected by tradition and is moved to work independently.

Team Spirit – teams are in effective and work is done best alone.

Suggested PM Job – conflict resolution, task done alone, direct project task.

Introverted, Sensing, Feeling, Perceiving (ISFP)

Workplace Contribution – gives support to people from behind the scenes, the approach is clam and attention is given to details.

Pathway to Professional Growth – must look beyond matters of the present and address root issues.

Leadership Qualities – best to provide support from an unassuming position. Leads by example.

Team Spirit -teams are fun. Quite support and diligence produces effective teams.

Suggested PM Job – tasks that must be done outside the recognition of team members, those without reward.

Introverted, iNtuitive, Feeling, Perceiving (INFP)

Workplace Contribution – uphold traditions of groups and organisations.

Pathway to Professional Growth – should accept that conflicts do occur and must address it in the moment.

Leadership Qualities -maintains such sweet relationships that those concerned are unaware that they are being controlled.

Team Spirit – teams are draining and difficult, motivation bring about collaboration.

Suggested PM Job – they provide moral and team support.

Introverted, iNtuitive, Thinking, Perceiving (INTP)

Workplace Contribution – provides organizational change and improvement through an unassuming manner. With a smart and independent way of thinking reinvent and solves problem

Pathway to Professional Growth – should assimilate with people and accept that communication brings about adaptation of ideas and enhances personal relationship.

Leadership Qualities – creates an environment that allows people to work at they own pace.

Team Spirit – teams are effective if members are allowed to enter upon their own terms and to contribute in their own way.

Suggested PM Job – project job, independent problem solving.

Extraverted, Sensing, Thinking, Perceiving (ESTP)

Workplace Contribution – adopts easily and is able to deliver irrespective of the project environment.

Pathway to Professional Growth – patience is key and must accept that others may find refuge in structure and contemplation of the future and the possibilities it holds.

Leadership Qualities -is responsive and doesn't really pay attention to tradition and hierarchy.

Team Spirit -without constant action. They can become inefficient. Teams can be fun; however, without constant action and variation, or in dull meetings, they can run aground.

Suggested PM Job – work well without the system of hierarchy and tradition.

Extraverted, Sensing, Feeling, Thinking (ESFT)

Workplace Contribution – provides the zeal that motivates people in positive directions.

Pathway to Professional Growth -must accept that challenges arises as a result of working with people.

Leadership Qualities – is a highly motivative individual due to personal and playful nature.

Team Spirit – adopt to teams easily and this is the best way to approach any work.

Suggested PM Job – problem solving in groups, multi-cultural leader.

Extraverted, iNtuitive, Feeling, Perceiving (ENFP)

Workplace Contribution – energize through inspiration and enthusiasm.

Pathway to Professional Growth – must learn that mood swings can negatively affect others and that must follow projects to its fruitful completion.

Leadership Qualities – inspires and motivates people to complete task both personally and professionally.

Team Spirit – without hierarchy and tight timelines, teams can be fun.

Suggested PM Job – a motivator and optimistic team leader.

Extraverted, Sensing, Thinking, Perceiving (ENTP)

Workplace Contribution – sees the workplace as system to be challenged and configured.

Pathway to Professional Growth – Must learn to direct focus on completion.

Leadership Qualities – challenging and confronting provides empowers oneself and others.

Team Spirit – teams are an arena for discussing differences, testing ideas and collaborating on ideas.

Suggested PM Job – from an opposing end can be a change leader.

Extraverted, Sensing, Thinking, Judging (ESTJ)

Workplace Contribution – to see practical facilitation of tasks there is a move to take charge and this is with still.

Pathway to Professional Growth - Must learn to listen to different opinions and be flexible.

Leadership Qualities – occupies the seat of authority very well and gets the work done by pushing hard.

Team Spirit – as long as teams are managed and people's roles are well defined, they evolve to become effective tool.

Suggested PM Job – executive manager, quick solutions to problems, role management.

Extraverted, Sensing, Feeling, Judging (ESFJ)

Workplace Contribution – the environment is harmonious and this in turn supports personal achievement and task accomplishment.

Pathway to Professional Growth – must accept differences and recognize conflicts are not always bad.

Leadership Qualities – is the pillar of inspiration and grace.

Team Spirit – productivity can be achieved if disagreement is managed appropriately.

Suggested PM Job – does not accept intolerances while providing good support to members.

Extraverted, iNtuitive, Feeling, Judging **ENFJ**

Workplace Contribution – motivates and inspires.

Pathway to Professional Growth – must accept that disagreements are not personal attacks and not all situations need rescue.

Leadership Qualities – provides the environment for accomplishment of tasks by nurturing.

Team Spirit – when the theme of togetherness is driven teams work efficiently.

Suggested PM Job – optimistic, positive team leader.

Extraverted, iNtuitive, Thinking, Judging (ENTJ)

Workplace Contribution – hard-charging argument results in intellectual inspirations that challenges everyone.

Pathway to Professional Growth -must accept everyone develops at a different pace.

Leadership Qualities – has a motivational spin, encouraging members to get on board the success train.

Team Spirit – so far as group process do not impede on the vision, they are an effective tool.

Suggested PM Job – demand driven, task-driven leader, intellectual and intuitive team leader. Kroeger, Thuesen, J. M & Rutlege. H. (2002) sited in Vargas, R. V. (2005)

2.7.1 Myers-Briggs Type Indicator (MBTI)

The Myers-Briggs Type Indicator (MBTI) personality test is to make the theory proposed by C. G. Jung comprehensible and practical in the lives of people. This indicator was developed by Katharine Cook Briggs and Isabel Briggs Myers to make C.G. Jung's theory of psychological type feasible and practical in the lives people.

With this people are able to recognize their strengths, weakness, characteristics, special abilities and points out the kinds of work that are appropriate for their type. It also shows how connections can be evolve for both personal as well as organizational success.

MBTI further indicates:

- How to revamp the ability to direct with proficiency.
- How to upgrade social relationships
- How to provide your organization with higher patterns of proficiency and productivity.
- How to develop high- yielding and participating teams.

The MBTI test is carried out by the Centre for Applications of Psychological through a 93 multiple choice questions. The result is presented with 4 letters that represents the individual’s personality trait (Pittenger, 2005).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

According to kallet (2004), research methodology is the process used to collect information and data for the purpose of making business decisions. The methodology may include publication research, interviews, surveys and other research techniques, and could include both present and historical information. (Kallet, 2004). Irny et al., (2005), cited that "methodology is the systematic, theoretical analysis of the methods applied to a field of study". It comprises the theoretical analysis of the body of methods and principles associated with a branch of knowledge. Typically, it encompasses concepts such as paradigm, theoretical model, phases and quantitative or qualitative techniques (Schwandt, 2007).. This chapter outlines the methods adopted for the study, explains the method employed to select the sample, discusses the tools used to collect quantitative and qualitative data, and traces the steps taken to screen, combine, and reduces the quantitative data in preparation for testing and validation of the theoretical model.

3.2 Approach and Methods

This research will take place in two folds one will assess the beneficiaries of the sampled population at Kokompe-Takoradi and identify what it means to have a successful project and the second would be to assess the psychological traits of top – level management and those individuals who worked directly with the projects identified as successful. The detailed breakdown is as follows:

- This study first measured the success of the completed projects using simple sampling and the criteria will revolve around end user or stakeholder satisfaction in terms of product quality, end user or stakeholder satisfaction in terms of service and delivery of project in terms of time. Questionnaires were designed for this purpose and data were gathered and interpreted using descriptive analysis.

- Questionnaires were adopted from the web page of human metric (Briggs and Myers, 1998). And data was gathered from the GUMPP secretariat and from top level persons as well as all relevant persons identified at STMA who worked under the projects identified and this was based on the MBTI standard test. This was done using the software provided by the human metric.
- Results from both were analysed to determine the percentage make up of personality traits of team members, after which conclusions and recommendations were made.

3.3 Research Tools

This study used different tools to collect data accurately. In this regard structured interviews as well as questionnaires were used. These tools were very important as they helped in gathering a deeper and broader understanding of how the project success was viewed from the perspective of the beneficiaries. Simple random sampling was used to collect data.

3.3.1 Making Use of the Research Tools

The questionnaires were prepared were divided into two sets eleven questions to address research question one and sixty-four questions for research question two. A week was used to conduct the entire research. In making use of the research tools, the process was made as flexible as possible. Three researchers were employed to aid in data collection and the exercise was managed to a practical extent as far as their abilities are involved. Identification of all relevant persons needed for the research were done a month before the beginning of this study. Each respondent was given at most five minutes to complete his/her questionnaire.

3.4 Research Method

In bid to satisfy the stated objectives this study employs qualitative research using interviews. This offers a complete description and analysis of the research study without limiting the scope of the research and the nature of participants responses.

Yin (2013), analysis of multiply cases allows for replication of logic and increases external validity of findings. In this research all relevant top–level management personnel's as well other persons related to the GUMPP project and the beneficiaries (sampled) of the projects were also studied. Revised documents gave more insight into project success and all the positive team characteristics. The research design adopted was that of Yin (2013). According to him the are six stages to carry out a case study is illustrated below.

Figure 3. 1 The flow of the case study research

Step 1: Plan – In the planning stage, a foundation for the study was established with the advantages and limitations considered and an application of the research study was described and explored.

Step 2: Design – In this stage, the case study questions were specified. Yin recommended developing theoretical proposals for the study. However, for the given research being investigative, no plans were suggested before the data gathering. Instead, the what to explore was specified, purpose of exploration, and the expected outcomes of the research are described under this chapter. The literature on the subject was reviewed in order to decide what kind of data were necessary to collect.

Step 3: Prepare – this stage saw the identification of key information sources and participation. Formal introductions were done to establish familiarity and ease of access to data when the time was right. Later on, interview and survey questions were developed, and the potential interviewees were requested to take part in the research at which interviews were scheduled.

Step 4: Collect – This stage saw the move of data collection through interviews. More details are contained in section 3.4

Step 5: Analysis and data presentation – the collected data was analysed to do an evaluation.

Step 6: Share – A copy of the final report was sent to the Sekondi-Takoradi Municipal Assembly, Department of Construction Technology and Management of the Kwame Nkrumah University of Science and Technology (KNUST)-Kumasi.

3.4.1 Sample and Sampling Technique

According to the president of the garage association of Kokompe and the GUMPP secretariat the population size of the Kokompe is two thousand eight hundred (2800). With a confidence level of 95 percent and a margin error of 5 percent, the sample size was determined. For the determination of the sample size, the statistical formula below was used:

$$n = \frac{N}{\left(1 + N(e)^2\right)}$$ (Yamane 1967)

Where n = the sample size

N =total population (student)

e = margin of error (5%)

The sample used for the population was computed using

N=2800 (total population size of residents in Kokompe Takoradi)

N=2800 e=0.05

$$N = \frac{2800}{1+2800(0.05)^2} = 350$$

The 350 sample that will be used for study. Simple random sampling technique was used to select 350 respondents for the study.

With regards to the GUMPP officials, the GUMPP coordinator made it known that the project was executed by an eleven-member team, hence eleven questionnaires were distributed.

3.5 Data Collection

As far as data collection tools is concerned, the conduction of the research involved the use of structured interviews. To achieve both objective one and two, a questionnaire will be used to solicit information from the respondents. The questionnaire was designed for the respondents who were deemed appropriate (of sound mind) for the study because it provided a much quicker means of gathering information from a fairly large semi-literate population this is for the sample calculated in section 3.4.1. The questionnaire will also allow anonymity of the respondents which will make it easy for them to volunteer information without fear of victimization. The questionnaires will be subjected to reliability test.

The GUMPP executed a project that resulted in the expansion of infrastructural facilities within the komkompe industrial enclave. The projects were executed in three tiers, the third tier is currently ongoing this is so because of additional support from AFD. The research was narrowed down to concentrate on the projects carried out in Kokompe-

Takoradi because the projects we replicated in four selected cities of Kumasi, Sekondi-Takoradi, Tamale and Ho that had similar population characteristics therefore the selection of Kokompe-Takoradi is a representative sample of the four cities. Below is a brief description of the projects carried out and their locations.

Table 3. 1 Projects Executed under GUMPP Komkompe-Takoradi Enclave

PROJECT DESCRIPTION	**LOCATIONS**
Construction of five additional garages	Kokompe-Takoradi
Chain link and ramps at Komkompe	Kokompe-Takoradi
Construction of storm drain 1.5m x 1.5mm rectangular drain of 700m*900mm 200m long	Kokompe-Takoradi
Construction of ten additional garages	Kokompe-Takoradi
Construction of twenty-five no. block of garages and two-storey skills and training centre	Kokompe-Takoradi
construction of internal roads and drains, public toilet/shower	Kokompe-Takoradi
Construction of Komkompe link road to taxi rank station and provision of water supply	Kokompe-Takoradi

Source: Sekondi-Takoradi Metropolitan Assembly 2019 GUMPP report

Data was gathered from beneficiaries of the projects, team members and top -level management persons who were involved in the project. According to Yin (2013) multiply data sources mitigates the probable problem of construct validity. Three types of data sources were used in this research project namely:

Documentation: Documents considered relevant to the study were accessed

Direct observation: Updated news published on the internet as well as press releases.

Interviews: Beneficiaries of the projects, team members and top-level management involved in these projects were identified and the subject area was discussed with them.

3.6 Data Analysis

Data was analysed in two parts: to identify successful projects and the second, is to identify the personality types of the people that worked on the projects identified. Then the two was evaluated to identify the percentage make up of personality traits of team members.

Research question one was analysed using descriptive statistics this was done using Statistical Product for Service Solution. (SPSS). Psychological trait test available on the website of human metrics was used to identify the personality traits of each team member.

3.7 Preliminary Analysis

The data for this study involves the use of descriptive statistical tool such as tables, percentages, charts, and graphs based on frequencies. Graphical method was used to depict the data set and to study the relationships between the different variables.

3.8 Assumptions and Limitations

It was assumed that all relevant team members and top level-management persons would be available for the interview.

It was assumed that the beneficiaries to the project would be capable (of sound mind) of answering interview questions to the best of their ability either in their local dialect or English.

It was assumed that set timelines would be met so far as interviews are concerned.

It is recommended that after the personality test a one on one talk with a qualified resource person would have been appropriate to confirm the systems result. But due to the nature of the respondents this was not a possibility.

The questionnaires formulated for the top – level management and other relevant persons excluded demographics such as age and sex. This would have given a more statistical view to the study but then the aim of the study rendered it unnecessary as the goal was not to identify the sex and age of those involved.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

The evidence presented here is based on interviews held with people from both the (GUMPP) secretariat and all relevant person from the various departments at the (STMA), as well as beneficiaries sampled out from the field where the projects were located. This chapter made bare the findings and analysis derived from the data collected. For GUMPP secretariat and all relevant person from the various departments at the STMA, 11 responses were received from the targeted 11 potential respondents, which constitute 100% response rate. With respect to the beneficiaries of the projects, 345 responses were received as against an expected response of 350 constituting a 99% response rate. The responses were analysed with the SPSS software and excel. This chapter solely focuses on presenting the gathered data in a meaningful way to facilitate discussions which will be presented in chapter 5.

4.2 Data Description

With respect to GUMPP secretariat and all relevant person from the various departments at the STMA, the 11-member team consisted of the development planning officer, accountant, finance officer, works engineer, urban roads engineer, budget officer, legal officer, waste management director, metro coordinating director, metro chief executive and metro physical planner. The beneficiaries of the project at the industrial enclave of Kokompe-Takoradi had a calculated sample size of 345. A total of 350 questionnaires were administered as extra 5 questionnaires were added.

4.2.1 Dispersion and Background of Respondents

This section will cover the response rate of both sides, biodata of the beneficiaries at Kokompe-Takoradi and its associated analysis.

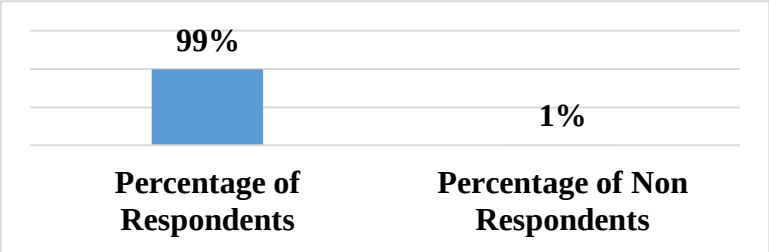

Figure 4.1 Responds Rate Analysis of beneficiaries of project

The analysis in the figure above shows the response rate analysis. Out of 350 questionnaires issued to the respondents 99% of them responded whereas the remaining 1% did not respond. **Demographic Characteristics of Respondents**

The primary purpose of this section is to describe the participants that undertook this study with respect to the following demographic variables: Gender, age and academic qualification (Junior High School (JHS), Senior High School (SHS) and Technical / Vocational)

Table 4.1 Demographic Characteristics of Respondents

Responses	Frequency	Percent (%)
Gender of Respondents		
Male	300	95
Female	45	5
Total	**345**	**100**
Age of Respondents		
Below 26 years	279	80
30-39 years	33	9
40-49 years	17	6
Above 50 years	16	5
Total	**345**	**100**
Academic qualification		
JHS	221	64
SHS	67	19
Technical /Vocational	57	17
Total	345	100

Table 4.1 depicts the demographic characteristics of respondents, 95% of the respondents were males and 5% were females. 80% fell below the ages of 26 and above, 9% fell within

the ages of 30-39 years, 6% and 5% fell within the ages of 40-49 and above 50 respectively. Regarding academic qualifications, 64% of the respondents were JHS graduates, 19% were SHS graduates, 17% were Technical / Vocational graduates.

Response Rate for STMA

There was a 100 percent response rate from the GUMPP secretariat and all relevant person from the various departments at the STMA

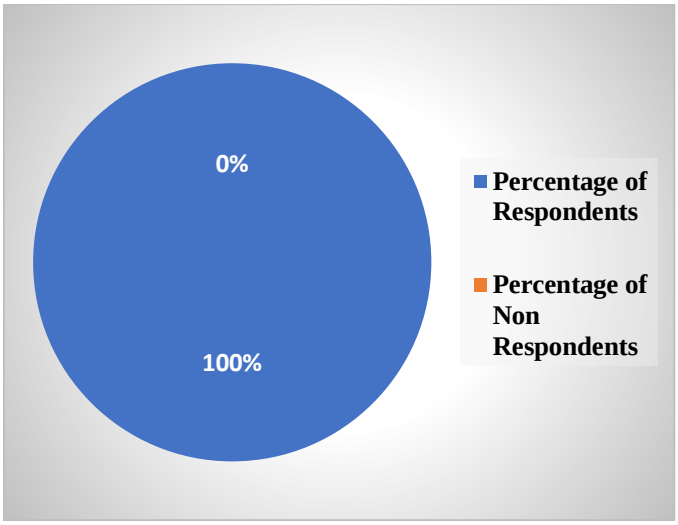

Figure 4. 2 Response Rate Analysis for psychological trait of team members

Figure 4.2 shows that out of 11 questionnaires issued to the respondents, none of they were not left unanswered.

4.3 Analysis of Project Success

As stated in chapter two, the study has defined project success under the following parameters: end user or stakeholder satisfaction in terms of product quality and end user or stakeholder satisfaction in terms of service and delivery of project in terms of time.

In that, a high rate signifies project success and the reverse is true. The main purpose of this section is to unearth the success of the projects executed at the industrial enclave in Kokompe-Takoradi through lenses of the beneficiaries.

Availability of Residents of Kokompe at the beginning of the Project

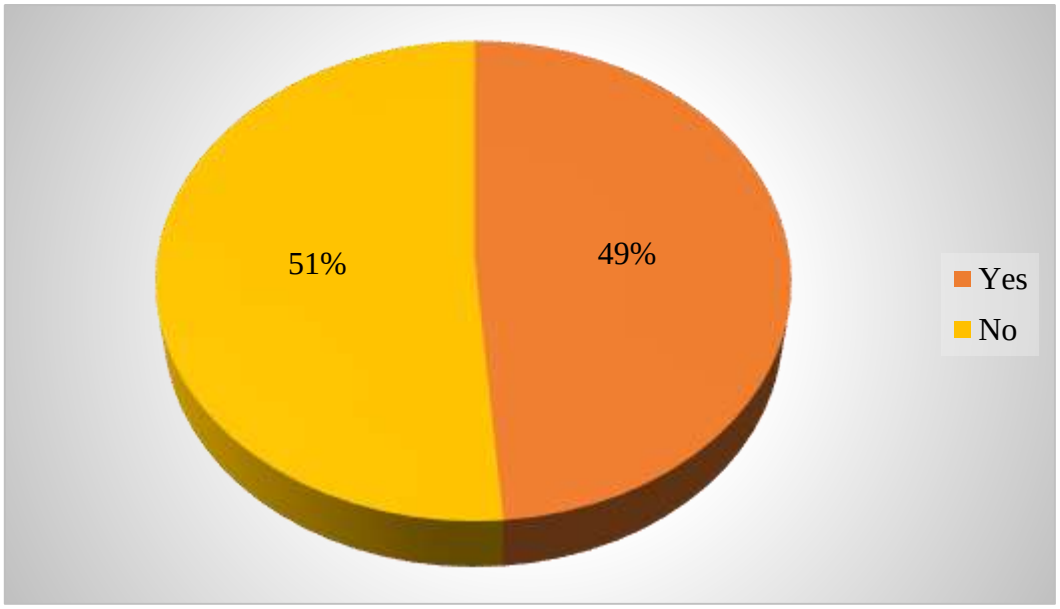

Figure 4.3 Availability of Residents of Kokompe at the Beginning of the Project

Majority of the respondents, recording 51%, stated that they were not available at the beginning of the project. Whiles, 49% recording the minority, indicated they were available at the beginning of the project.

Project Completion

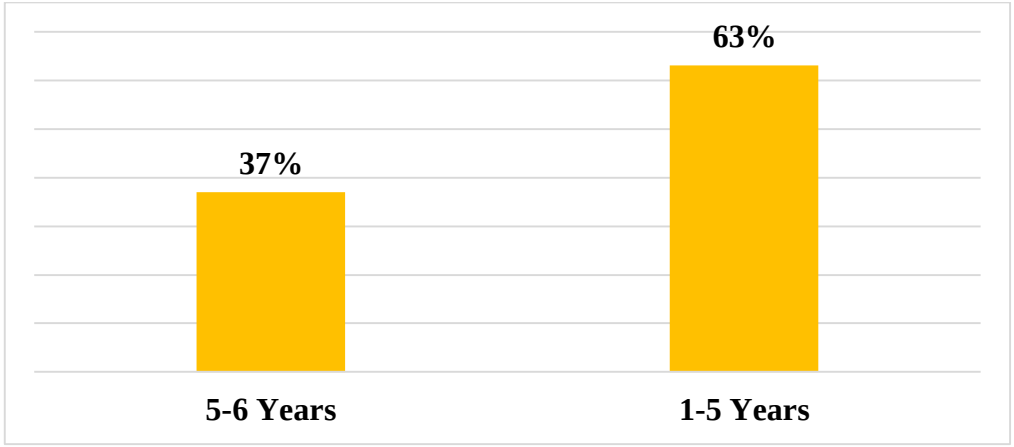

Figure 4.4 Number of Years Project was completed

Figure 4.4 depicts the number of years it took the project to complete. From the analysis, a greater proportion of the respondents, recording 63%, stated that they anticipated the Takoradi Kokompe project was completed within 1-5 years, whiles 37% of the respondents stated that in their view, the project took 5-6 years.

Timeliness of the Project

This concentrates on the timeliness of the projects executed, details of the results are shown in Table 4.2.

Table 4.2 Timeliness of the Project

	Frequency	**Percent (%)**
Yes	276	80
No	69	20
Total	**345**	**100**

The table shows that a greater proportion of the respondents, recording 80%, indicated that the project was completed on time. Whiles 20% of the respondents, indicated the project was not completed on time. In summary, the project was executed on time.

Project's Objective Obtained

Our next discussion led us to whether the project is serving its purpose or not details of this is depicted in Table 4.3.

Table 4.3 Project purpose obtained

	Frequency	**Percent (%)**
Yes	345	100.0

From the table above, it is evident that out of 345 respondents interviewed all the respondents stated that the project is serving its purpose.

Period of Utilisation

This lays emphases on the number of years respondents have been using the facility.

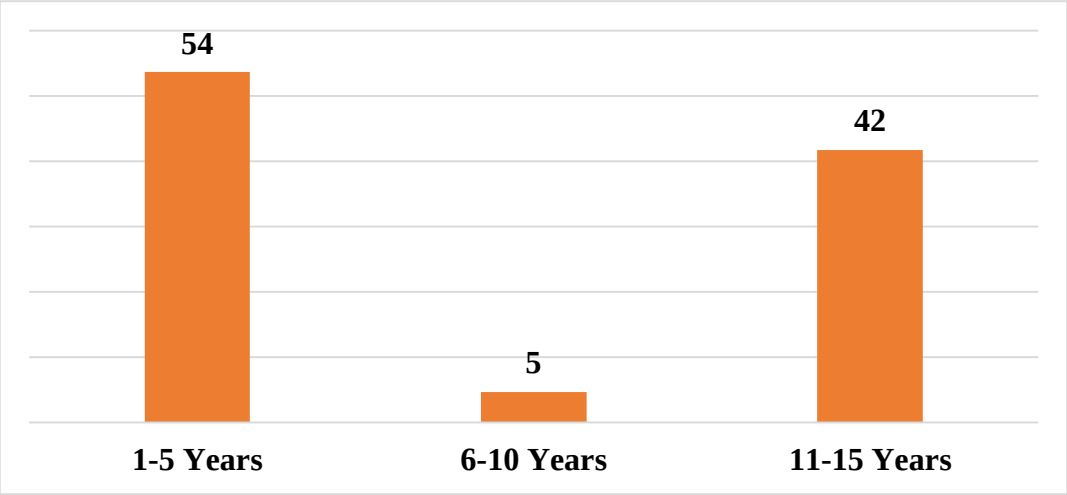

Figure 4.5 Number of Years Respondents has been using the Facility

From the analysis in figure 4.5, a greater proportion of the respondents, recording 54%, stated that they have used the facility for 1-3 years. 42% of the respondents stated that they have used the facility for 4-6 years whiles, minority of the respondents, recording 5%, stated that they have used the facility for 7-10 years.

Table 4.4 Project disability friendly

	Frequency	**Percent (%)**
Yes	255	74
No	90	26
Total	**345**	**100.0**

The above details whether the project is disability friendly or not. And the analysis shows that majority of the respondents, recording 74%, indicated that the project is disability-friendly whereas minority of the respondents, recording 26%, stated that the project is not disability friendly. In summary, the facility at Takoradi Kokompe is disability friendly.

Table 4.5 Quality and Standards

	Frequency	Percent (%)
Yes	326	95
No	19	5
Total	**345**	**100.0**

From the analysis above, majority of the respondents, recording 95%, indicated that the facility meets it basic quality and standard. Whereas 5% of the respondents indicated that the facility does not meet its basic quality and standards. In summary, we can conclude that from the responses that the facility meets its basic quality and standards

Stakeholder's Satisfaction

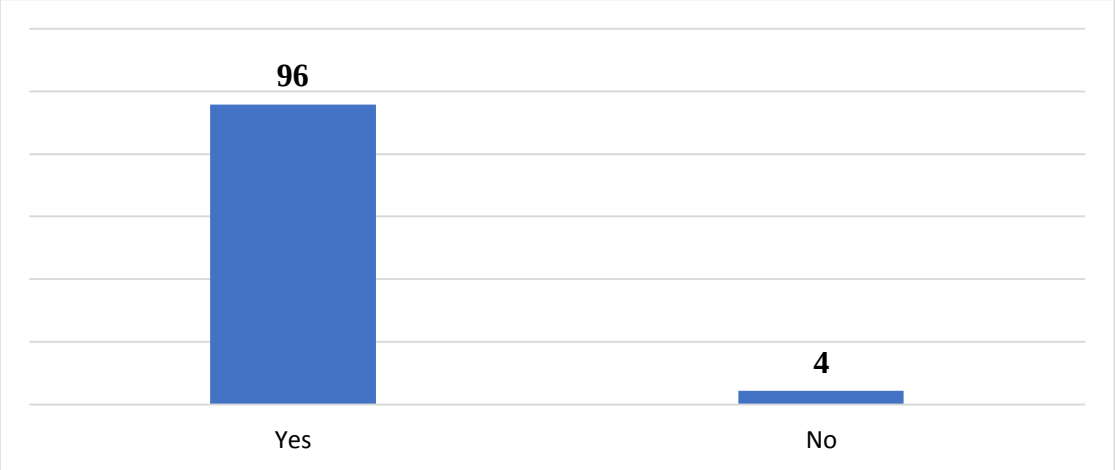

Figure 4.6 Stakeholder's Satisfaction in Terms of Project Service

The above talks about the stakeholder's satisfaction in terms of project service. The analysis illustrated that about 96% of the respondents indicated that stakeholders are satisfied in terms of project service whereas 4% of the respondents indicated that stakeholders are not satisfied in terms of project service.

4.4 Analysis of Psychological Types of Team Members

The main purpose of this section is knowing the response rate of psychological trait of team members. Analysis was done using a software available on the human metrics web page

(Jung typology test) http://www.humanmetrics.com. This mode of analysis only gave results but not how they were derived.

Table 4.6 Psychological Traits of Team Members

TEAM MEMBER	PSYCHOLOGICAL TRAIT
Development Planning Officer	INTJ
Account	ENTJ
Finance Officer	INTJ
Work Engineer	INTJ
Urban Roads Engineer	INTJ
Budget Officer	INTJ
Legal Officer	ENFJ
Waste Management Director	ENTJ
Metro-Coordinating Director	INTJ
Metro Chief Executive	ENFJ
Metro Physical Planner	INFJ

4.5 Analysis of Psychological Types with Regards to Project Management

The following analysis was done with reference to chapter two section 2.7, and a chi square test was conducted to determine if there is a link between project success and psychological traits of team members.

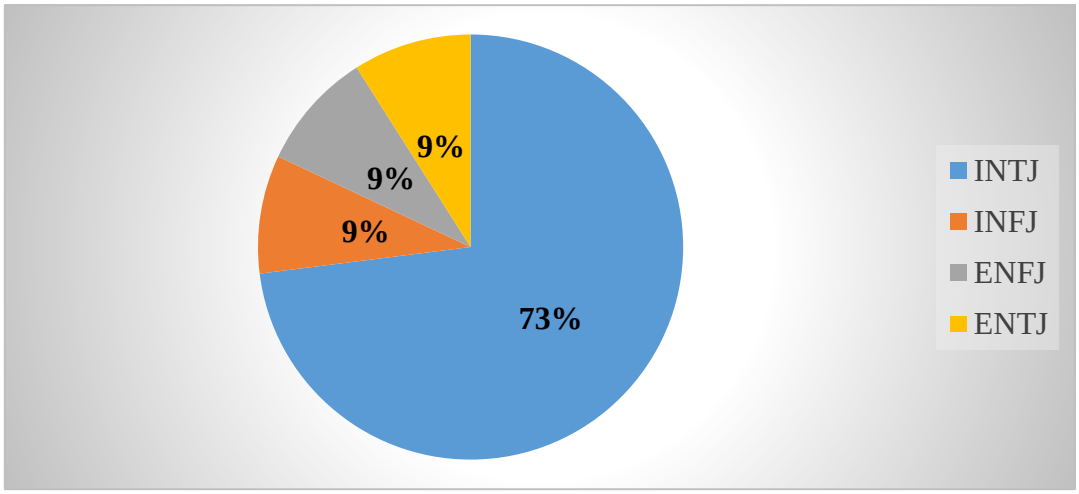

Figure 4.7 Analysis of Psychological Trait of Team Members

After analysis, it came to light that majority of the team members who responded to the questionnaire were INTJ constituting 73%. The rest of the respondents have INFJ, ENFJ and ENTJ personality types with respective percentages of 9% each.

In relation personality traits and project success Kroeger et al. (2002) established that each type of the 16 personality traits contributes differently towards project success in particular, teams made up of INTJ are 'powerful and complicated systems that, if well designed and managed, can play a pivotal role in bringing a group or organisation's vision to fruition'. This statement of factor has been proven to be true as per the analysis made from this study.

Chi Square Test

This discussion will lead us to further analyse with chi- square test of association, this is to assess if indeed there is a relationship between the psychological traits of team members and project success (to find out if there is a link between these variables).

Each of these variables can have two or more categories. This test compares the observed frequencies or proportions of cases that occurred in each of the categories, with the values that would be expected if there was no association between the two variables being

measured. It is based on a cross tabulation table, with cases classified according to the categories in each variable.

Table 4.7 Analysis of Chi Square Test of Association

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	0.888[a]	2	0.011
Likelihood Ratio	1.343	2	0.021
Linear-by-Linear Association	0.633	1	0.031

H_0: There is no association between the physiological trait of team members and the success of a project

H_1: There is an association between the physiological trait of team members and the success of a project

From Table 4.7, the p-value of the Pearson Chi-square is 0.011, which is less than the significant value at 0.05. This gives us enough evidence to reject the null hypothesis and conclude that, there is an association between the physiological trait of team members and the success of a project.

4.6 Advance Statistical Test (Reliability Test)

Cronbach's alpha measurement of internal consistency was utilized to evaluate the overall reliability of the measurement scale, where alpha estimates the proportion of the total variance that is not due to error which represents the reliability of the scale. The recommended minimum acceptable level of reliability "alpha" is 0.60 using Hair et al. (1998) criterion. Table 4.8 provides a summary of the reliability analysis.

Table 4.8 Analysis of Reliability statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
0.779	0.812	12

As shown in above the Cronbach's Alpha is 0.81 which is above 0.60. So, the scales that were adopted in this study are considered reliable per the data collected.

In summary, this chapter reported several statistics and related analysis. In particular, the specific statistical test reported a number of critical information; the chi square test established that there was a link between project success and psychological traits of team members, followed by the reliability test which indicated that the instruments used were sufficient.

A summary of the output of the analyses and findings of this research work are discussed in chapter five. Also, recommendations based on the analyses are suggested in the same chapter.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter is geared towards summarizing the findings of the research and the aim and objectives. The conclusion, relevance and contribution of study is also underlined in this chapter. For simple comprehension, the study was described in five chapters. Knowing the psychological traits of people, you work with play an important role in project success. This chapter address the overview of the study touching on areas such as major findings, implication of research and conclusion.

5.2 Overview of Study

Usually, when we talk of team acquisition it's a field that evolves around expertise, academic qualifications and years of experience. Hardly do you find the psychological traits of team members being a requirement. This research wanted to establish a link between project success and psychological traits of team members using the GUMPP as a case study. The GUMPP was initiated primarily to address the plight of the populace in this regard. The criteria for project success was stakeholder satisfaction and successful completion of the physical project.

Since the physical project has been successfully completed, the next parameter to measure in terms of project success was the stakeholder satisfaction this was what to lead the questionnaires being developed and sent to residents of komkompe-Takoradi. The questionnaires sent to STMA were prepared to assess the psychological traits of team members who executed the project.

5.3 Major Findings

5.3.1 Objective one: to identify the projects that were executed at the Komkompe-Takoradi enclave under the GUMPP and assess project success through the lenses of the beneficiaries of these projects.

Objective one was achieved by reviewing extant literature on the projects executed by GUMPP in the Takoradi enclave and project success. It was realised that seven different projects have been executed by GUMPP within the space of 1 to 5 years; below are the executed projects: construction of five additional garages, chain link and ramps at Komkompe, construction of storm drain 1.5m x 1.5mm rectangular drain of 700m*900mm 200m long, construction of ten additional garages, construction of twenty-five no. block of garages and two-storey skills and training centre, construction of internal roads and drains, public toilet/shower, and construction of Komkompe link road to taxi rank station and provision of water supply. The iron triangle was among the first attempts made to define and evaluate project success based on project performance, time and cost. As time went by these parameters were expanded to include stakeholder satisfaction (Albert et al., 2017). Waterridge (1998), stated that success criteria differ from projects to projects and this is dependent on a number of factors such as complexity, size and uniqueness. According to Morris and Hough (1987), activities of various stakeholders and their respective interest results in various definition of success so far as the project is concerned and these definitions spread across the project stages and product life cycle. Since every project success depends also on stakeholder satisfaction as postulated some authors, the seven projects executed by GUMPP was successful haven considered the contribution of stakeholders and other factors like, cost, time and quality among others. These projects have been completed and serving its purpose and the stakeholders are much satisfied.

5.3.2 Objective two: to identify the team players of the project and their psychological traits.

Having reviewed literature, eleven project team were identified to have participated in the GUMPP projects in the Komkompe-Takoradi enclave and four psychological traits identified as well with these team members. The eleven team members were; Development Planning Officer, Account, Financial Officer, Work Engineer, Urban Road Engineer, Budget Officer, Legal Officer, Waste Management Director, Metro-Coordinating Director, Metro Chief Executive and Metro Physical Planner. On the other hand, four psychological traits have been identified with the team members; extraverted, iNtuitive, feeling, judging (ENFJ), Introverted, iNtuition, feeling, judging (INFJ), Extraverted, iNtuitive, thinking, judging (ENTJ) and Introverted, iNtuition, thinking, judging (INTJ). Kroeger et al. (2002) established that each type of the sixteen personality traits contributes differently towards project success in particular, teams made up of INTJ are influential and that complicated systems if well designed and managed, can play a pivotal role in bringing a group or organisation's vision to realisation. After these eleven-member team was interviewed with respect to their psychological traits, it was realised that INTJ trait was the most of the members. Hence, one can conclude that the psychological traits identified with the team members contributed to the project success. The chi-square test that was performed has further established the link between project success and the psychological traits of team members.

5.4 Implications and Conclusion of Research

To replicate similar projects and obtain project success, the psychological traits of team members should be known due to strong link between traits and project success. This will lead to proper assimilation, effective communication and adaptation to the environment. What it implies is that, government and private individuals can use this study to plan future projects to achieve its objectives. The study holistically looked at every single

aspect of projects with respect to its success and psychological traits associated to it. This study will go a long way to ensures socio-Economic development of the country by boosting investors' confidence through infrastructure development.

5.5 RECOMMENDATION

Having concluded on the study the following recommendations were made;

- It is recommended that government pay attention to the people involve in project delivery and their psychological traits assessed to achieve stated objectives of projects carried out.
- Again, it recommended that government should make use of the link between projects success and psychological traits at every level in its developmental agenda with respect to rural areas to prevent heavy migration to the urban centres.
- Also, Top management of every project should be made to understand the importance of the assessment of psychological traits of the team members involve in the project delivery and its success.
- Education should be provided to every stakeholder that is involve in the any project to prevent project stagnation due to community disagreement to an intended goal.
- Further studies should be conducted to compare other GUMPP projects in Kumasi, Tamale and Ho, with this case study, in other to obtain conclusive results.

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APPENDIX A

The MBTI ® test is applied by CPP (Centre for Applications of Psychological Type) through a questionnaire with 93 multiple choice questions, tabulated through a data bank with millions of people who have already used MBTI®. The result is presented with 4 letters that picture the exercise of the individual preferences regarding perception and judgment, as follows:

- E or I – Where the person prefers to focus his/her attention (Extroverts or Introverts)
- S or N – How the person obtains information about things (Sensors or Intuitive)
- T or F – How the person takes decisions (Thinking or Feeling)
- J or P – How the person guides him/herself regarding the world (Judging or Perceiving)

By combining the individual preferences, we have the sixteen psychological Types. Isabel Briggs Myers has prepared a basic set of characteristics for each of these types, as will be presented below.

		SENSORS		INTUITIVES			
		With Thinking	With Feeling		With Thinking		
INTROVERTS	Judging	ISTJ	ISFJ	INFJ	INTJ	Judging	EXTRAVERTS
	Perceiving	ISTP	ISFP	INFP	INTP	Perceiving	
EXTRAVERTS	Perceiving	ESTP	ESFP	ENFP	ENTP		INTROVERTS
	Judging	ESTJ	ESFJ	ENFJ	ENTJ	Judging	

Exhibit 2 – Sixteen Psychological Types (©Consulting Psychologists Press Inc.)

ISTJ - Quiet, serious, earn success by thoroughness and dependability. Practical, matter-of-fact, realistic, and responsible. Decide logically what should be done and work toward it steadily, regardless of distractions. Take pleasure in making everything orderly and organized – their work, their home, their life. Value traditions and loyalty.

ISFJ - Quiet, friendly, responsible, and conscientious. Committed and steady in meeting their obligations. Thorough, painstaking, and accurate. Loyal, considerate, notice and remember specifics about people who are important to them, concerned with how others feel. Strive to create an orderly and harmonious environment at work and at home.

INFJ - Seek meaning and connection in ideas, relationships, and material possessions. Want to understand what motivates people and are insightful about others. Conscientious and committed to their firm values. Develop a clear vision about how best to serve the common good. Organized and decisive in implementing their vision.

INTJ - Have original minds and great drive for implementing their ideas and achieving their goals. Quickly see patterns in external events and develop long-range explanatory perspectives. When committed, organize a job and carry it through. Skeptical and independent, have high standards of competence and performance – for themselves and others.

ISTP - Tolerant and flexible, quiet observers until a problem appears, then act quickly to find workable solutions. Analyse what makes things work and readily get through large amounts of data to isolate the core of practical problems. Interested in cause and effect, organize facts using logical principles, value efficiency.

ISFP - Quiet, friendly, sensitive, and kind. Enjoy the present moment, what's going on around them. Like to have their own space and to work within their own time frame. Loyal and committed to their values and to people who are important to them. Dislike disagreements and conflicts; do not force their opinions or values on others.

INFP - Idealistic, loyal to their values and to people who are important to them. Want an external life that is congruent with their values. Curious, quick to see possibilities, can be catalysts for implementing ideas. Seek to understand people and to help them fulfill their potential. Adaptable, flexible, and accepting unless a value is threatened.

INTP - Seek to develop logical explanations for everything that interests them. Theoretical and abstract, interested more in ideas than in social interaction. Quiet,

contained, flexible, and adaptable. Have unusual ability to focus in depth to solve problems in their area of interest. Sceptical, sometimes critical, always analytical.

ESTP - Flexible and tolerant, they take a pragmatic approach focused immediate results. Theories and conceptual explanations bore them – they want to act energetically to solve the problem. Focus on the here-and-now, spontaneous, enjoy each moment that they can be active with others. Enjoy material comforts and style. Learn best through doing.

ESFP - Outgoing, friendly, and accepting. Exuberant lovers of life, people, and material comforts. Enjoy working with others to make things happen. Bring common sense and a realistic approach to their work, and make work fun. Flexible and spontaneous, adapt readily to new people and environments. Learn best by trying a new skill with other people.

ENFP - Warmly enthusiastic and imaginative. See life as full of possibilities. Make connections between events and information very quickly, and confidently proceed based on the patterns they see. Want a lot of affirmation from others, and readily give appreciation and support. Spontaneous and flexible, often rely on their ability to improvise and their verbal fluency.

ENTP - Quick, ingenious, stimulating, alert, and outspoken. Resourceful in solving new and challenging problems. Adept at generating conceptual possibilities and then analysing them strategically. Good at reading other people. Bored by routine, will seldom do the same thing the same way, apt to turn to one new interest after another.

ESTJ - Practical, realistic, matter-of-fact. Decisive, quickly move to implement decisions. Organize projects and people to get things done, focus on getting results in the most efficient way possible. Take care of routine details. Have a clear set of logical standards, systematically follow them and want others to also. Forceful in implementing their plans.

ESFJ - Warm-hearted, conscientious, and cooperative. Want harmony in their environment; work with determination to establish it. Like to work with others to complete tasks accurately and on time. Loyal, follow through even in small matters. Notice what others need in their day-by-day lives and try to provide it. Want to be appreciated for who they are and for what they contribute.

ENFJ - Warm, empathetic, responsive, and responsible. Highly attuned to the emotions, needs, and motivations of others. Find potential in everyone, want to help others fulfill their potential. May act as catalysts for individual and group growth. Loyal, responsive to praise and criticism. Sociable, facilitate others in a group, and provide inspiring leadership.

ENTJ - Frank, decisive, assume leadership readily. Quickly see illogical and inefficient procedures and policies, develop and implement comprehensive systems to solve organisational problems. Enjoy long-term planning and goal setting. Usually well informed, well read, enjoy expanding their knowledge and passing it on to others. Forceful in presenting their ideas. Myers, I. B. & Myers, P. B. (1997) sited in Vargas, R. V. (2005)

APPENDIX B

SECTION A

Demographic characteristics of respondents

1. Gender: Male [ ] Female [ ]
2. What is your age?

Below 29 years [ ] 30 – 39 years [ ] 40 – 49years [ ] Above 50 years [ ]

3. What is your highest academic qualification?

JHS [ ] SHS [ ] Vocational [ ] other, please specify ……

Section B

Accessing the project success through the lenses of the beneficiaries

3. Were you available at the beginning of the project?

a. yes [ ] b. no [ ]

4. How many month or year was the project completed?

a. 1-5 years [ ] b. 5-6 years [ ]

5. In your view was the project completed on time?

a. yes [ ] b. no [ ]

6. Is the project at Komkompe Takoradi serving it purpose?

a. yes [ ] b. no [ ]

7. For how long have you been using the facility?

a. 1-3 years[ ] b. 4-6 years [ ] c.7-10 years [ ]

8. Is the project disability friendly?

a. Yes [ ] b. No [ ]

9. Do you have people with disability working with you?

a. Yes [ ] b. No [ ]

10. In your view does the facility meet basic quality and standards?

a. Yes [ ] b. No [ ]

11. In your view do Stakeholders satisfied in terms of project service?

a. Yes [ ] b. No [ ]

APPENDIX C

1. You are almost never late for your appointments

YES yes uncertain no NO

2. You like to be engaged in an active and fast-paced job

YES yes uncertain no NO

3. You enjoy having a wide circle of acquaintances

YES yes uncertain no NO

4. You feel involved when watching TV soaps

YES yes uncertain no NO

5. You are usually the first to react to a sudden event: the telephone ringing or unexpected question

YES yes uncertain no NO

6. You feel that the world is founded on compassion

YES yes uncertain no NO

7. You think that everything in the world is relative

YES yes uncertain no NO

8. Strict observance of the established rules is likely to prevent attaining a good outcome

YES yes uncertain no NO

9. It is difficult to get you excited

YES yes uncertain no NO

10. When making a decision, you rely more on your feelings than on analysis of the situation

YES yes uncertain no NO

11. You often think about humankind and its destiny

YES yes uncertain no NO

12. You believe the best decision is one which can be easily changed

YES yes uncertain no NO

13. You often ponder the root cause of phenomena and things

YES yes uncertain no NO

14. You prefer to act immediately rather than speculate about various options

YES yes uncertain no NO

15. You trust reason rather than feelings

YES yes uncertain no NO

16. You are inclined to rely more on improvisation than on prior planning

YES yes uncertain no NO

17. You spend your leisure time actively socializing with a group of people, attending parties, shopping, etc.

YES yes uncertain no NO

18. You usually plan your actions in advance

YES yes uncertain no NO

19. Your actions are frequently influenced by your emotions

YES yes uncertain no NO

20. You are a person somewhat reserved and distant in communication

YES yes uncertain no NO

21. You know how to put every minute of your time to good purpose

YES yes uncertain no NO

22. You often contemplate the complexity of life

YES yes uncertain no NO

23. After prolonged socializing you feel you need to get away and be alone

YES yes uncertain no NO

24. You often do jobs in a hurry

YES yes uncertain no NO

25. You easily see the general principle behind specific occurrences

YES yes uncertain no NO

26. You frequently and easily express your feelings and emotions

YES yes uncertain no NO

27. You find it difficult to speak loudly

YES yes uncertain no NO

28. You get bored if you have to read theoretical books

YES yes uncertain no NO

29. You tend to sympathize with other people

YES yes uncertain no NO

30. You value justice higher than mercy

YES yes uncertain no NO

31. You rapidly get involved in the social life of a new workplace

YES yes uncertain no NO

32. The more people you speak to, the better you feel

YES yes uncertain no NO

33. You tend to rely on your experience rather than on theoretical alternatives

YES yes uncertain no NO

34. As a rule, you proceed only when you have a clear and detailed plan

YES yes uncertain no NO

35. You easily empathize with the concerns of other people

YES yes uncertain no NO

36. Often you prefer to read a book than go to a party

YES yes uncertain no NO

37. When with a group of people, you enjoy being directly involved and being at the centre of attention

YES yes uncertain no NO

38. You are more inclined to experiment than to follow familiar approaches

YES yes uncertain no NO

39. You are strongly touched by the stories about people's troubles

YES yes uncertain no NO

40. Deadlines seem to you to be of relative rather than absolute importance

YES yes uncertain no NO

41. You prefer to isolate yourself from outside noises

YES yes uncertain no NO

42. For you, it is easier to gain knowledge through hands-on experience than from books or manuals

YES yes uncertain no NO

43. You think that almost everything can be analyzed

YES yes uncertain no NO

44. For you, no surprises is better than surprises - bad or good ones

YES yes uncertain no NO

45. You take pleasure in putting things in order

YES yes uncertain no NO

46. You feel at ease in a crowd

YES yes uncertain no NO

47. You have good control over your desires and temptations

YES yes uncertain no NO

48. You easily understand new theoretical principles

YES yes uncertain no NO

49. You usually place yourself nearer to the side than in the center of the room

YES yes uncertain no NO

50. When solving a problem you would rather follow a familiar approach than seek a new one

YES yes uncertain no NO

51. A thirst for adventure is something close to your heart

YES yes uncertain no NO

52. When considering a situation you pay more attention to the current situation and less to a possible sequence of events

YES yes uncertain no NO

53. When solving a problem you consider the rational approach to be the best

YES yes uncertain no NO

54. You find it difficult to talk about your feelings

YES yes uncertain no NO

55. Your decisions are based more on the feeling of a moment than on the thorough planning

YES yes uncertain no NO

56. You prefer to spend your leisure time alone or relaxing in a tranquil atmosphere

YES yes uncertain no NO

57. You feel more comfortable sticking to conventional ways

YES yes uncertain no NO

58. You are easily affected by strong emotions

YES yes uncertain no NO

59. You are always looking for opportunities

YES yes uncertain no NO

60. As a rule, current preoccupations worry you more than your future plans

YES yes uncertain no NO

61. It is easy for you to communicate in social situations

YES yes uncertain no NO

62. You rarely deviate from your habits

YES yes uncertain no NO

63. You willingly involve yourself in matters which engage your sympathies

YES yes uncertain no NO

64. You easily perceive various ways in which events could develop