Research article

PROJECT LEADERSHIP COMPETENCIES; THE CASE OF PROJECT LEADERSHIP IN CONSTRUCTION PROJECT.

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Abstract

The current definitions of a project broaden the scope and areas in which project management can be learnt and understood. The traditional understanding of a project has always been in relation to engineering operations, but the current wave of *projectification* of operations has brought about new thinking. In line with tradition, this research was carried out amongst construction companies where project management is assumed to have matured over the years. Though project management can be studied as a generic discipline, there is an inherent organizational culture

typical of specific industries defined implicitly by the practitioners. The construction is no different and is known to be masculine and pressurized for time with clearly defined technical specifications as outline in the architectural plans. The demands at a construction site remain universal regardless of the size, technical complications and levels of mechanization. Of particular interest were the implied findings that relate to ideal leadership styles for the industry when measured against the expectations of time, cost and quality of the product. The people who were interviewed were project managers, engineers, technicians and general labourers at the plant sites. The questions were specifically compiled for project practitioners who are affected by day- to- day challenges that are encountered during project execution. The findings are interesting as some of the conclusions reached do not agree fully with previously held views about effective leadership and management.

KEY WORDS: behavior, competencies, hard skills, leadership, management and soft skills.

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INTRODUCTION

Too often the success of project management is assessed on the basis of the ability of the operations to be completed within the iron triangle stipulations. The success within the iron triangle stipulations is not in anywhere credited to good project leadership (Neuhauser 2007:21), most studies on project management success downplay or totally exclude the importance of the project leader. Turner and Muller (2005:49) concur with this view and asset that the role of the project manager is ignored in studies relating to effective project execution. The success of any undertaking is generally the result of the ability of someone to be the central figure that gives direction to the cause. Projects are conceptualised by human beings, designed to help human beings and are executed by human beings. For the execution and the eventual success of any project the human element is of paramount importance. The study of human behavior and relationships has introduced a new dimension in the understanding of the difference between managers and leaders. Too often leadership and management are used interchangeably even though they are not the same (Young &Dulewics, 2008:18). The study seeks to identify critical competencies, which are required by a construction industry project leader within the limitations inherent in project-structure-industries in contrast to the traditional management structure (Skulmonski& Hartman, 2009:).

BACKGROUND

In a matrix-structured organisation the project manager has to work across independent departments and coordinate resources from these respective departments. Embedded projects in organisations are traditionally designed to support functional managers, and the resources used by the project manager are rented to the project (Anantatmula, 2010:14). This structure creates a dependency on the functional managers by the project manager resulting in an authority gap. The traditional management structure endows the manager with authority, which he / she may use to direct employees towards the organisational goals (Young &Dulewics, 2008 :). Contrary to this, project managers

work without that authority because of the matrix structure and the subsequent authority gap (Jowah, 2012:1097 - 1106). The working condition of a project manager calls for other techniques that are traditionally not used by managers with authority. Instead, the project manager is devoid of that authority and resorts to the use of influence. This becomes the ideal *modus operandi* if the project management is to be a success, because leadership deals with giving direction to effective project execution. Management is associated with controlling and organising, leadership is about coping with challenges and directing the resources. Anantatmula (2010:14) differentiates between management and leadership but admits that the similarities cause overlaps in responsibilities. Burke and Barron (2007:28) defined leadership as the ability to establish vision and direction and to influence and align others towards a common purpose. In concurrence with this thought, Jones and George (2009:497) make reference to leadership as a process by which an individual exerts influence over other people and inspires, motivates, and directs their activities to achieve organisational goals. The position of manager implies formal authority and can therefore be used to direct resources. From the preceding definitions it is clear that it is possible to have a manager who leads, and a leader who manages. The differences between these two closely linked nouns are illustrated in table 1 below.

Table 1.1: Key aspects of leadership and management

Leadership	Management
Setting a direction	Planning and budgeting
Aligning people	Organization and staffing
Motivating	Controlling and problem solving
Mastery of the context	Control of the environment

Source: Young and Dulewics (2008:18)

Table 1 above illustrates that leadership focusses on people, whereas management focuses on tasks to be performed. This is emphasised by Anantatmula's (2010:14) assertion that management is concerned with making decisions about processes and functions to improve operational efficiency and effectiveness, while leadership is about motivating and guiding people to realize their potential to excel. Leaders have followers, but managers have subordinates; and leaders use power to influence, but managers use authority to get things done. Since most project exist in matrix structures with authority gaps, as alluded to above, management becomes difficult without authority. Leadership becomes the answer because of the inability of the project manager to control resources directly, and avoid pushing people to work without the legitimate power to do anything should they refuse. There is therefore a greater need for leadership skills as a way to overcome the effects of the authority gap in project execution. The project manager does not have direct authority over his subordinates and team mates, and in many instances some of the people working with him may be senior in the organisational hierarchy.

PROBLEM STATEMENT

The study sought to identify those critical behavioural competencies that enable the project leaders to influence the behavior of team mates and subordinates in order to reduce the effects of the limitations inherent in the structure ((Skulmonski& Hartman, 2009:63). The managers in the traditional organisation have authority to hire, fire, promote and instruct because they occupy formal positions with a clearly defined hierarchy (Young &Dulewics, 2008:18). By way of definition a project is a temporary structure and therefore the project leader will not have the powers of functional managers but are still expected to deliver (Jones & George, 2009:49) without the legitimate power. The absence of a clearly defined organisational structure in the project-matrix-structure (Curtis & Manning, 2009:139) creates a disempowered manager without a clear line of command (Ferreira, Erasmus & Groenewald, 2011:339).

The extent of the power of the project manager is dependent largely on the size, structure and politics of the organisation (Rao, 2009:467). The project structure is inherently temporary as per the definition "a temporary undertaking limited by time, cost, quality and scope." The matrix-structure-system creates operational problems impacting on the project manager's leadership and performance, these are; dual reporting system, divided loyalty, and increase on goal conflict and ambiguity (Sy& D'Annunzio, 2005:39-48). Critical in this study is the matrix structure's consequent disempowerment of the project manager and the temporary nature of the project itself (Brown &Hyer, 2010: 34).

The manager in such circumstances may use any one of the following or a combination thereof; consultation, rational persuasion, inspirational appeals, ingratiating tactics, coalition tactics, pressure tactics, upward appeals or exchange tactics. Leadership becomes an indispensable option to manage the project by influencing and not instructing people. Young (2003: 65) emphasises that leadership is using necessary skills to energise and direct a diverse group of people to give high performance, willingly and enthusiastically, throughout the life cycle of a project. A leader carries out this process by applying certain attributes such as beliefs, values, various skills, knowledge and ethics (van Eeden*et al.* 2008, 264), which are all enshrouded in power and the ability to influence.

Competencies as shown in the combination of skills, knowledge, behaviour or attitude should assist towards personal effectiveness (Lewis, 2003: 20). Primary competencies refer to relationship skills which relate to dealing with other people, whereas secondary skills are technical knowhow as in the qualifications a person has (Mumford and Gold, 2004: 54-55). Tools, techniques and technology enable people to work smarter and faster, but these have significantly reduced the projects failure rates, hence the study is turning to relationships that enable willing workers to work together to achieve goals and objectives.

RESEARCH OBJECTIVES

Identify human relations competencies that are used by project leaders specifically in the construction industry.

RESEARCH DESIGN AND METHODOLOGY

A theoretical background was established through literature review which subsequently influenced the decision on what information to gather and how to structure the data gathering instrument.

Target population

The target population for this research was the project practitioners in general and specifically the project team members. It was assumed that subordinates and team members know how they want to be treated, and will, therefore, evaluate their manager's role in their performance in the organisation. The research was conducted in the Gauteng province of South Africa amongst construction companies at construction sites.

Sample selection method and sample size

The stratified random sampling technique was used amongst respondents from different construction companies in Gauteng. Because of the serious imbalance in racial and gender distribution, it was necessary to stratify the population and avoid skewing the results towards one group of people. The sample size was arbitrarily put at 100 managers and team members who work and interact with the project leader every day at work. The final analysis after data cleaning and editing was made from 63 questionnaires only, the rest were spoilt questionnaires.

DATA COLLECTION METHOD

The questionnaires were handed over to respondents and the interviewer waited for the respondents to complete the instruments, and the questionnaires were collected immediately the filling in was complete. The respondents had opportunities to ask questions to clarify any ambiguous statements or questions asked. The main reason for the selection of this method is that if there were any ambiguities in the questions and questioning, they would be dealt with immediately. The questionnaire was divided into subsections, namely demographics and soft skills (primary competencies).

Data analysis

The SPSS (Software Program for Social Sciences) was used for analysis because of its effectiveness and user-friendly qualities. The data was converted into graphs and tables for easy reading and comparisons, where necessary.
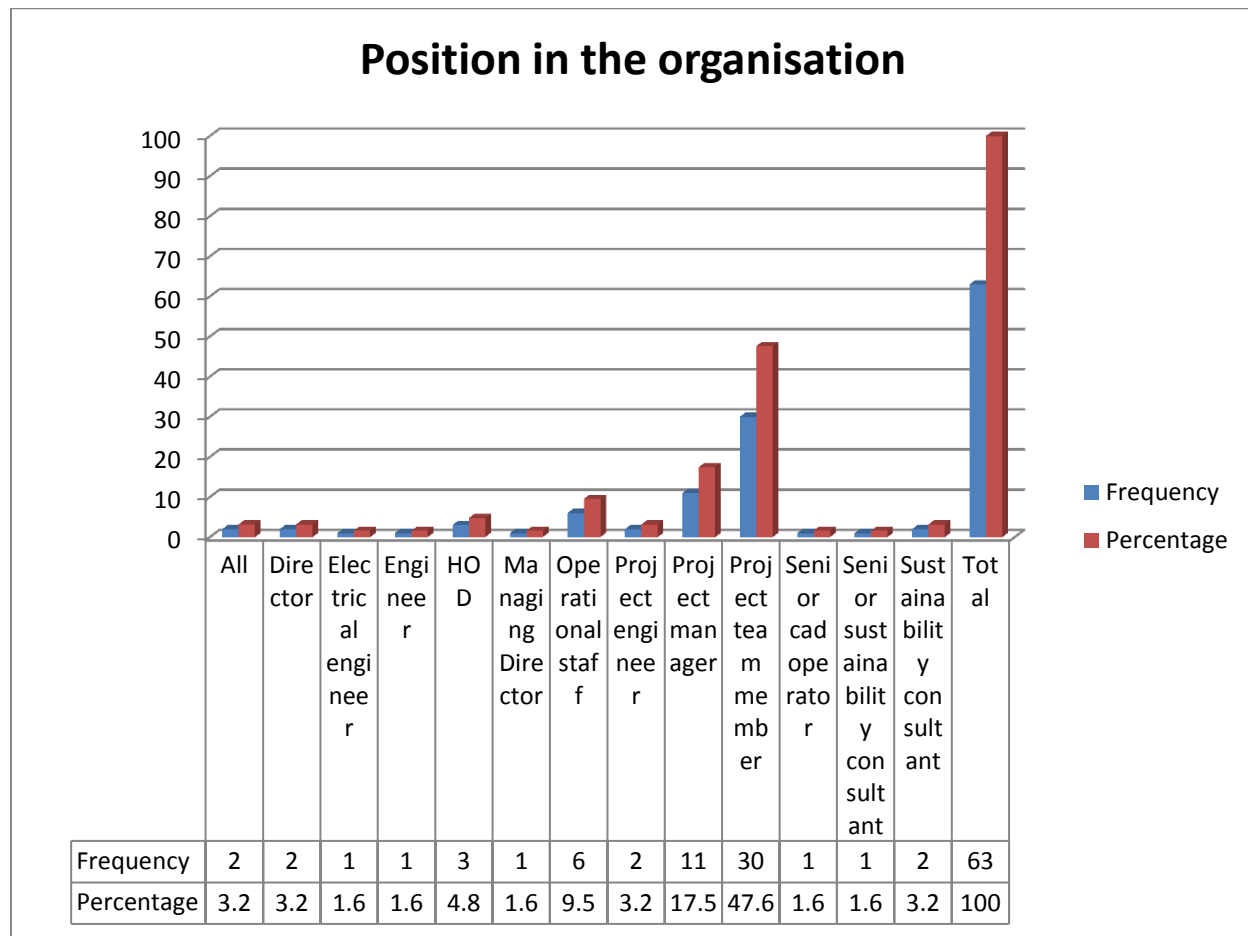
RESULTS AND FINDINGS

The aim of the study was to: 1) identify generic competencies of effective project leaders in the construction industry; and 2) identify critical indispensable competencies that the project manager at a construction site needs to reduce project failure. The study was conducted amongst individuals who work in the construction industry and the findings are discussed here below in a question by question format to avoid leaving out any important findings.

SECTION D BIOGRAPHY

Question 1; What is your position in the organisation?

The idea behind the asking of this question was to establish the eligibility of the respondents. It was necessary to eliminate those who may not have functions and responsibilities that made them to interact on a regular basis with the project leader. The position in the industry has a lot to do with the respondent's understanding of what constitutes effective leadership. Figure 1 below illustrates the distribution of respondents in respect of their positions.

Figure 1: Position in the organisation

|	All	Director	Electrical engineer	Engineer	HOD	Managing Director	Operational staff	Project engineer	Project manager	Project team member	Senior cad operator	Senior sustainability consultant	Sustainability consultant	Total
Frequency	2	2	1	1	3	1	6	2	11	30	1	1	2	63
Percentage	3.2	3.2	1.6	1.6	4.8	1.6	9.5	3.2	17.5	47.6	1.6	1.6	3.2	100

The largest group responding is that of project team members at 47%, this is followed by operational staff at 9% and the HODs at 4.8%. The rest of the respondents have insignificant percentages as individual groups except if they are put together. There was no measurement of opinion in this question, it was purely descriptive statistics.

Question 2: How long have you been involved in projects at this level?

The number of years experience together with the education has a positive influence on the levels of emotional experience of an individual (Jowah, 2013:278). Because of the stated direct relationship between levels of emotional intelligence and an individual's experience, it was considered necessary to ask this question. Figure 2 below shows the different levels of experience found in the industry.

Figure 2: Time involved in projects at this level

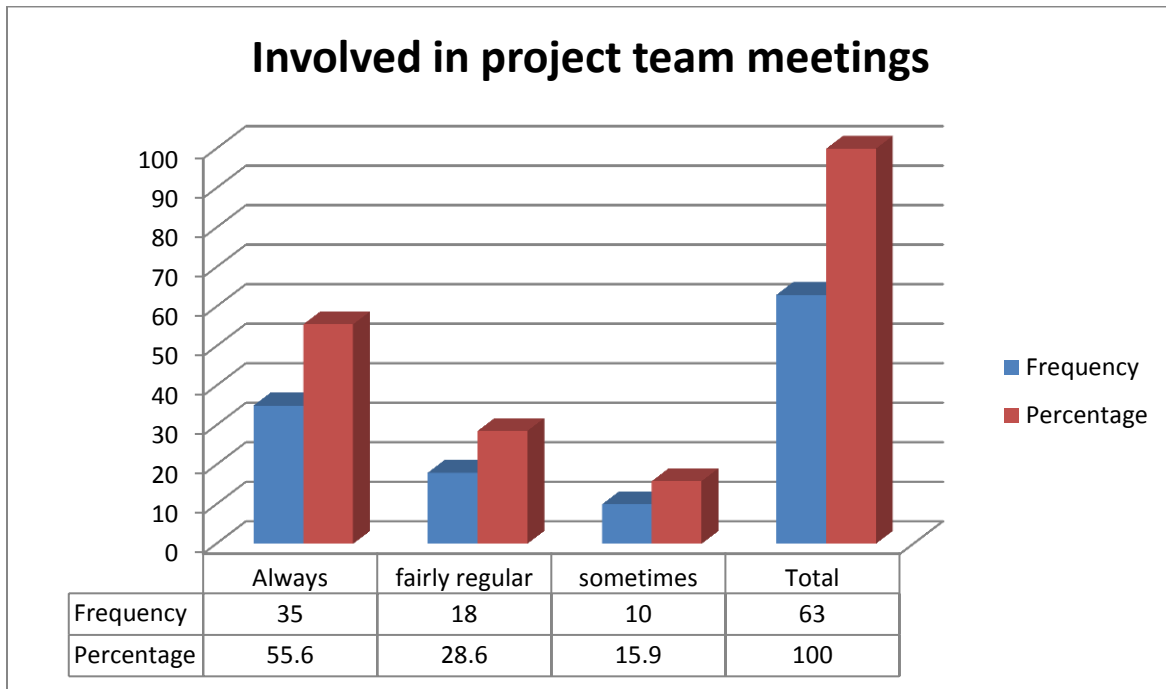|	0-5	6-10 years	11-15 years	16-more	Total
Frequency	28	21	3	11	63
Percentage	44.4	33.3	4.8	17.5	100
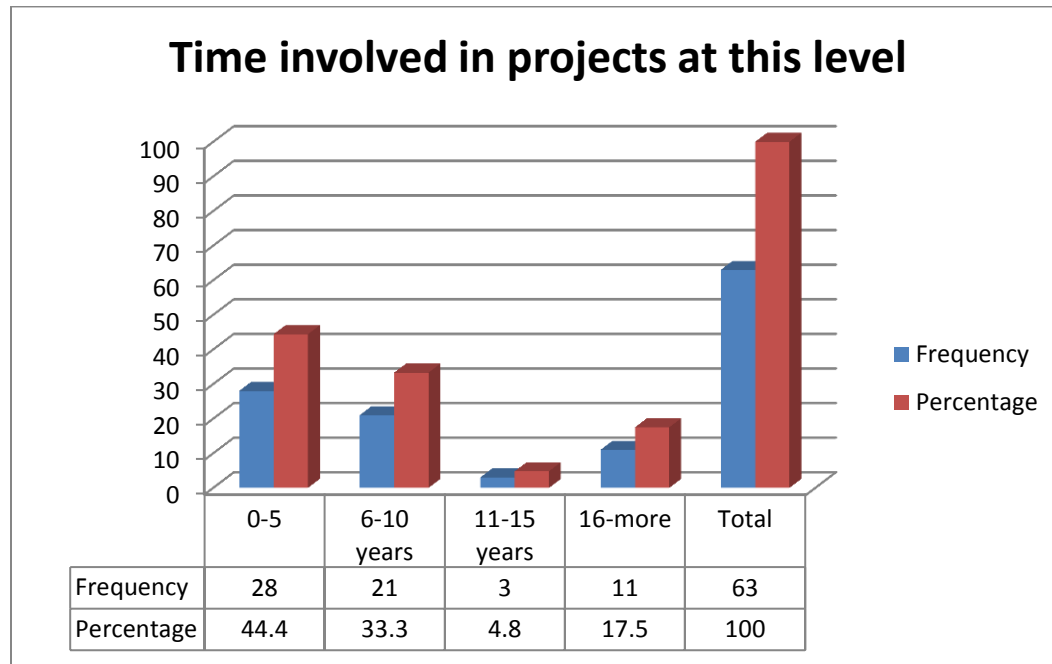
The majority of respondents (44.4%) had five and below years of experience in their positions, giving the impression that most of the people may not have had extensive experience. The next stage of 33.3% (6-10 years) is followed by the 17.5% (16+ years) skipping the 11-15 years (4.8%), this looks unusual though. It is evident that the majority of the respondents have been involved with projects at a professional level for between 0-5 years. This may be in accordance with the current trend in construction engineering where there are huge gaps between professionals in their mid to late 30s and 50+ year old professionals. This gap threatens the knowledge transfer pattern but may provide an opportunity for young engineers/professionals to learn the basics of project management.

Question 3 Are you involved in project team meetings? Team membership was considered critical in identifying what approaches are required to get people to cooperate. These people are in the system and see all the successes as theirs and failures as those of the project manager, it was important therefore to have a contribution from such people. Figure 3 below shows the distribution of the respondents according to type of practitioners they are.

Figure 3: Involvement in project team meeting

Involved in project team meetings

|	Always	fairly regular	sometimes	Total
Frequency	35	18	10	63
Percentage	55.6	28.6	15.9	100

The 55.6% respondents were team members who attended team meetings regularly, possibly as heads in their own sections. The question did not break down as to what constituted or qualified people to attend certain meetings, but these people would be able to understand problems in the decision making system. 28.6% attended project team meetings fairly regularly and 15.9% sometimes attended meetings. It is evident here that the majority of the respondents (55.6%) were always in meetings and were able to make critical judgments on the necessary leadership competencies.

Question 4 Are senior managers involved in the day- to- day operations of the project?

Project practitioners involved in project team meetings have more insight into the happenings in the project management meeting environment. To understand the competencies needed by the project manager, it was necessary to get information on possible intervention or takeover of responsibilities by senior management. Senior managers are not always part of the project team, but they have access as and when they feel, too often outside of the structure. Figure 4 shows the activities of the senior managers on project operations.

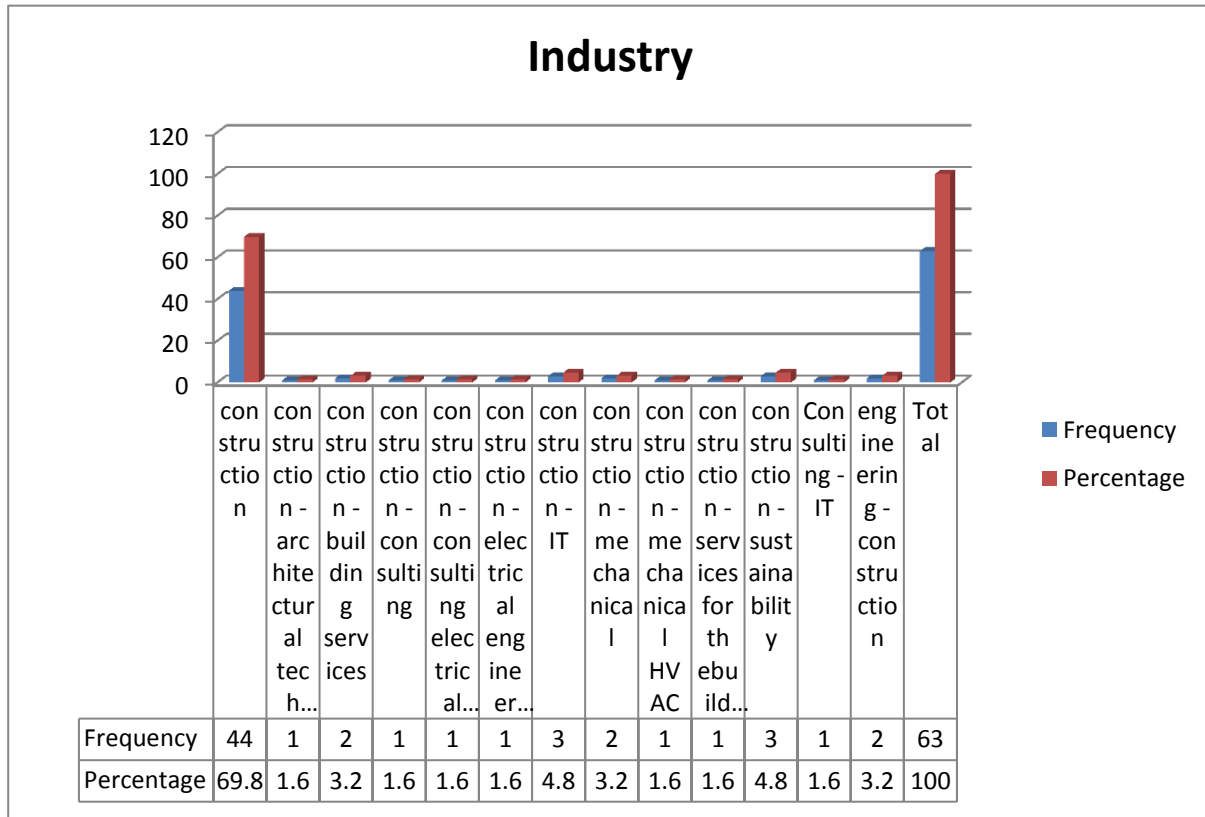**Figure 4: Senior management involvement in day to day operations.**
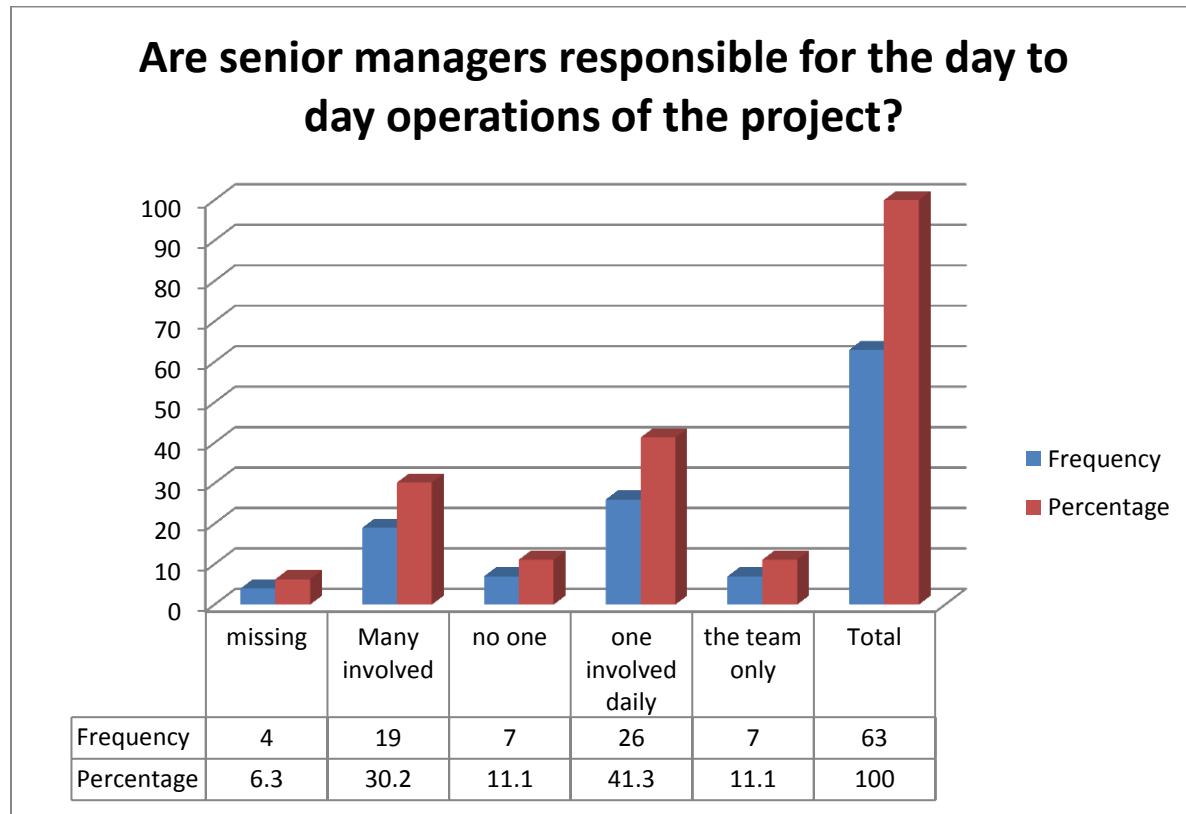
41.3% of the respondents admit to the presence of at least a senior manager in the day-to-day project operations.30.2% said many senior managers were involved, while 11.1% had not seen senior managers in the day-to-day project operations. Another 11.1% indicated that only the team manager was involved and 6.3% did not respond to the question. The presence of senior managers in the day to day operations overshadows the project manager nullifying the use of certain competencies. The seniority of the project managers in relation to the senior managers and their terms of agreement in terms of operations are not known.

Question 5 What industry are you involved with?

The study was carried in a construction industry environment, but the question meant to identify the different discipline within the construction industry itself. Within the construction industry are many other disciplines involved such as; electrical, civil IT and mechanical engineers, quantity surveyors, architects, human resource managers, finance managers, consultants, and the list goes on. Figure 5 below shows the distribution of the different disciplines amongst the respondents.

Figure 5: Discipline of respondents to the questionnaires

	construction	construction - architectural tech...	construction - building services	construction - consulting	construction - consulting electrical...	construction - electrical engineer...	construction - IT	construction - mechanical	construction - mechanical HVAC	construction - services for the rebuild...	construction - sustainability	Consulting - IT	engineering - construction	Total
Frequency	44	1	2	1	1	1	3	2	1	1	3	1	2	63
Percentage	69.8	1.6	3.2	1.6	1.6	1.6	4.8	3.2	1.6	1.6	4.8	1.6	3.2	100

The figure above illustrates the different professions/industries of the respondents with the figures as; 69.8% in construction, 4.8% in IT division of the construction, 4.8% in sustainability division of construction industry, 3.2% in building services construction, 3.2% in engineering division of construction, another 3.2% in mechanical engineering division of the construction. Architectural, civil engineering, electrical engineering, consulting, and mechanical engineering (HVAC) are all at 1.6%. A construction project requires multi-disciplinary professionals to attend to the different aspects of the project.

SECTION A

The next set of questions related directly to the competencies, these had been compiled by practitioners themselves during the pilot study. The respondents were required to rate the leader based perceived qualities of effective project leaders. The Linkert scale used ranged from 1-5; 1 =Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly agree. The main question to be answered which was subdivided was;

6. What do you consider as desirable behavior by an effective project leader?

The sub-questions follow below numbered as 6.a up to 6..t.

6a An effective leader believes in working as a team; from the literature review it was emphasized that working in a team produces good results, this question sought to confirm this hypothesis with people in the industry. In specific terms the question was to determine if the professionals in project management in the construction industry believe that an effective project manager should work as a team. Figure 6a below illustrates the findings.

Figure 6a: Believes in working as a team

	Neutral	Agree	Strongly Agree	Total
Frequency	1	19	43	63
Percent	1.6	30.2	68.3	100.0
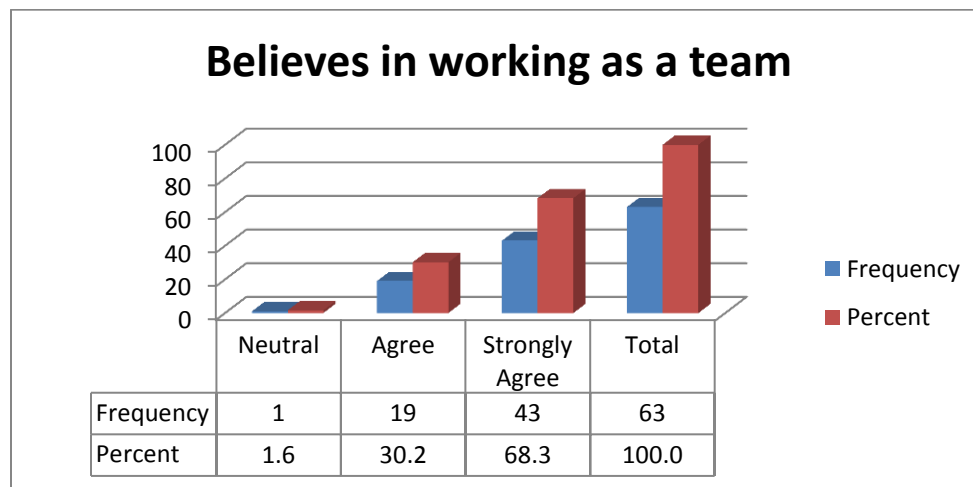
 Current literature on management promotes the use of working with teams as a means of mobilising and getting cooperation to get good results. Figure 6a illustrates that a total of 98% (68.3% strongly agree and 30.2 agree) consider it a good competency for a project leader who wants to work with and through a team. It can be generalized that it is good leadership competency to work in and with a team.

6b An effective leader communicates activities regularly; communication is sending and receiving of messages, this entailed giving information or giving feedback. 80% of the manager's work is spent liaising and communicating in meetings, interaction and other forms of communication. Figure 6b below illustrates the findings.

Figure 6b : Communicates activities regularly

	Neutral	Agree	Strongly Agree	Total
Frequency	1	18	44	63
Percentage	1.6	28.6	69.8	100.0
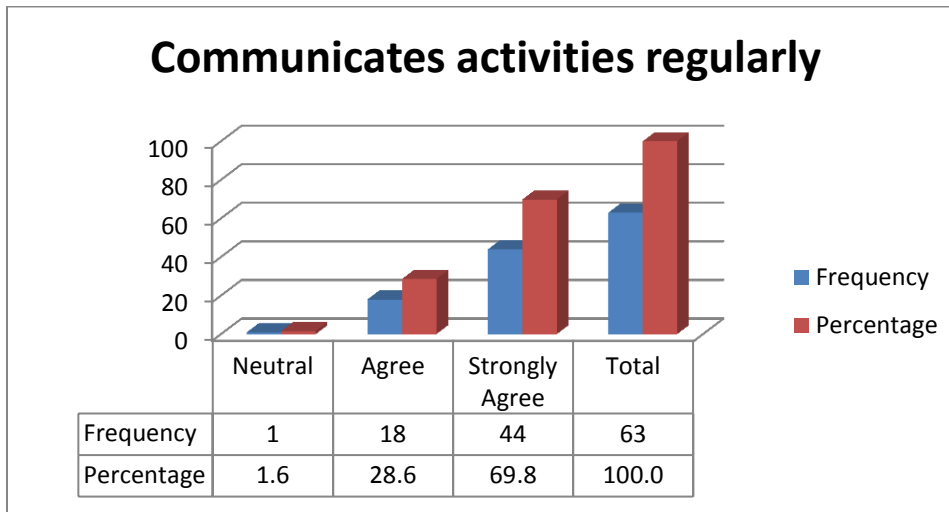
98.4% of the respondents believe that an effective project leader should be someone who communicates activities regularly,1.6% of the respondents remained neutral. Suggestions in literature propose the establishment of a communication strategy, this will ensure that all the project stakeholders are involved. It can be generalized that communicating activities regularly constitutes good leadership in construction.

6c An effective leader has high self-esteem; this is the overall emotional evaluation of self-worth by an individual based on the positive attitude one has towards oneself. It gives self-confidence and positive beliefs about oneself, the question sought to evaluate general perceptions about self-confidence and sometimes bordering on pride and arrogance. In figure 6c the perceptions of the team members towards high self-esteem are reported.

Figure 6.c: leader should have high self-esteem?

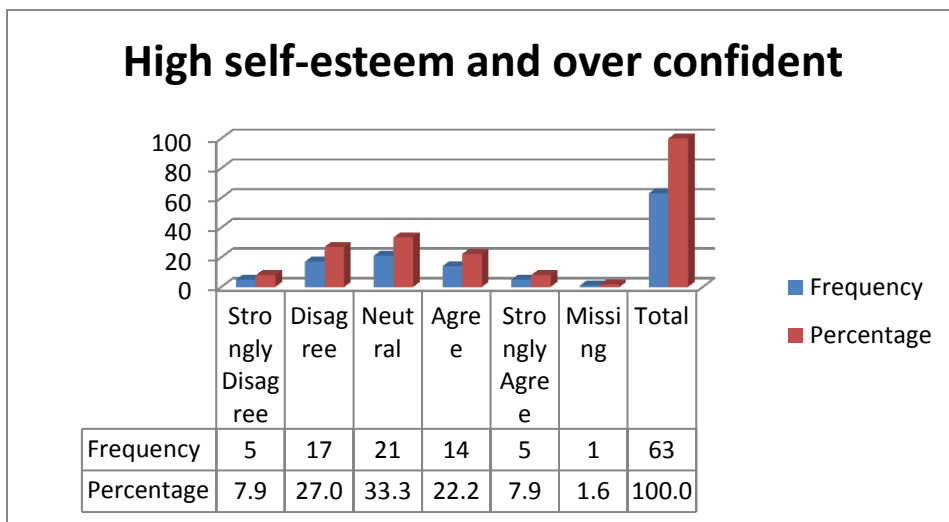|	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Missing	Total
Frequency	5	17	21	14	5	1	63
Percentage	7.9	27.0	33.3	22.2	7.9	1.6	100.0

Figure 6c shows 30.1% of the respondents as believing that an effective leader should have high self-esteem and over confident while 34.9% disagreed. The percentage of those ambivalent is high at 33.3%. No generalisation can be made about high-self-esteem as a competency for effective management.

6d An effective leader does not worry about employees' personal problems; in as much as personal problems have nothing to do with work problems, but the same person with personal problems is expected to be performing well at work. A happy person at home is likely to be more positive and productive at work, a troubled person may never focus properly on their work obligations. This question sought to identify perceptions about the effectiveness of getting close to the employees and empathizing with them as a competency that might attract loyalty and by derivation committed employees. Figure 6.d below illustrates the findings of the survey. Figure 6.d below illustrates the findings from the research.

Figure 6d: Leader should not worry about employees personal problems

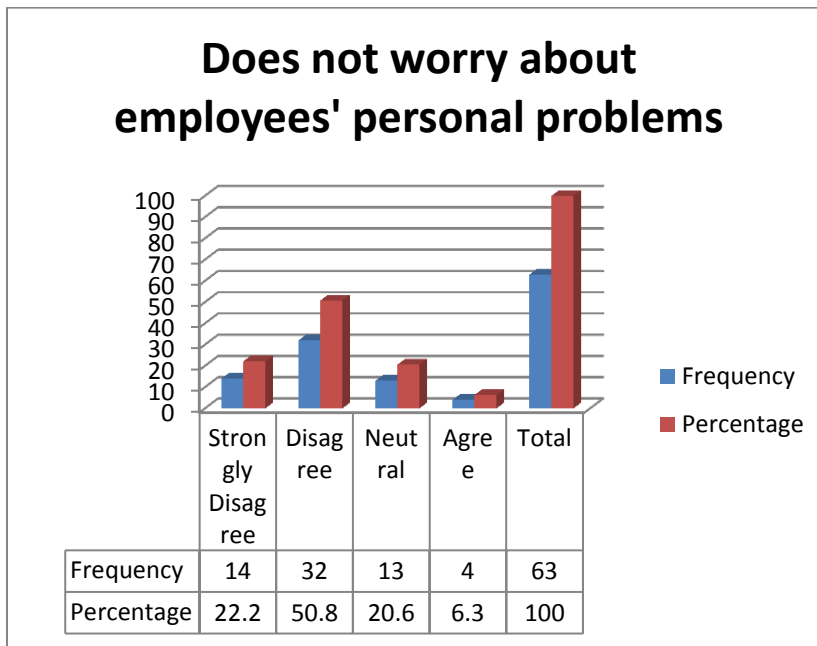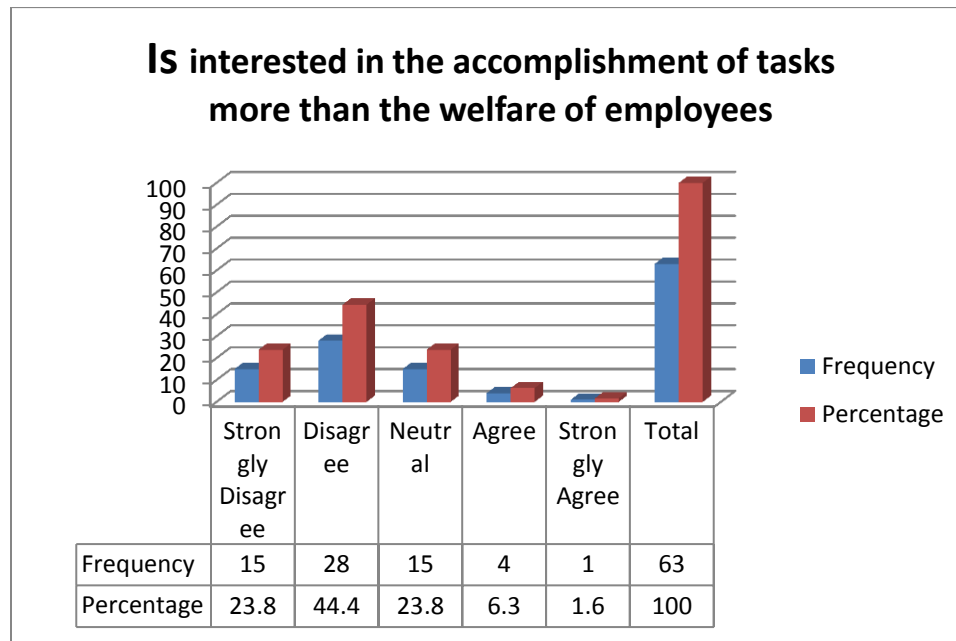|	Strongly Disagree	Disagree	Neutral	Agree	Total
Frequency	14	32	13	4	63
Percentage	22.2	50.8	20.6	6.3	100

Figure 6d above shows that a total of 72.2% (50.8% disagreed and 22.2 strongly disagreed) think that it is not competency at all for the leader not to help employees with their personal problems. A total of 20.6% of the respondents remained neutral while 6.3% agreed with the assertion. It can be generalised therefore that empathy is a competency managers can do well to have. It is suggested that it should not be exaggerated and should be within reasonable boundaries.

6e An effective leader is interested in the accomplishment of tasks more than the welfare of employees. This is a pretty tricky situation for the project manager whose success is evaluated on his ability to provide the deliverables within the iron triangle of costs, time and quality. Inevitably such a demand on the project

manager will compel him to be focussed on the tasks to be accomplished. Figure 6e explains the practitioners' perceptions on this matter.

Figure 6e : Effective leader focused on tasks and not welfare of personnel.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
Frequency	15	28	15	4	1	63
Percentage	23.8	44.4	23.8	6.3	1.6	100

In Figure 6e 68.2% did not agree with the statement, 23.8% remained neutral and 7.9% agreed that an effective leader should not be interested in the accomplishment of tasks more than the welfare of employees. It can be generalised that it is good leadership competency to be concerned about the welfare of subordinates.

6f An effective leader trusts the subordinates and delegates work to them; this question sought to identify the style of leadership exercised by the project leader. Trusting subordinates and delegation is a form of acknowledging the abilities of the subordinates and it is empowering. This may possibly be because of trust in the development of the employees or may be a way of training junior members to be responsible. The results of the study are shown in Figure 6f below.

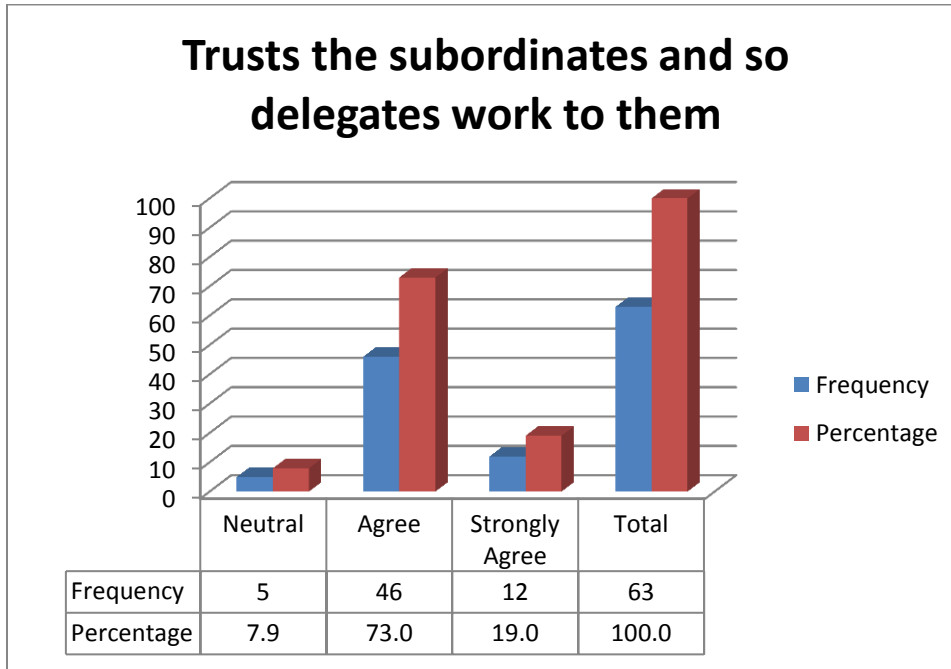**Figure 6f : Trusts the subordinates and delegates work to them.**

Figure 6f above shows that 92% of the respondents considered it a positive competency to delegate responsibilities to the subordinates. It can therefore be generalised that delegation of responsibilities is in fact a good leadership competency in construction management. It is important for the project leader to clearly define the roles and responsibilities of the different stakeholders, it is impossible for a project leader to be everywhere all the time. Nor is it possible to do electrical engineering work if he is a civil engineer.

6g An effective leader allows subordinates to make crucial decisions; wrong decisions may create costly problems for the project and sometimes for the whole organization. The level of trust and the expected expertise by the manager to the subordinates may be factors that influence the delegation of this crucial task by the managers. The results of the study are shown in Figure 6g below.

Figure 6.g: Allows subordinates to make crucial decisions

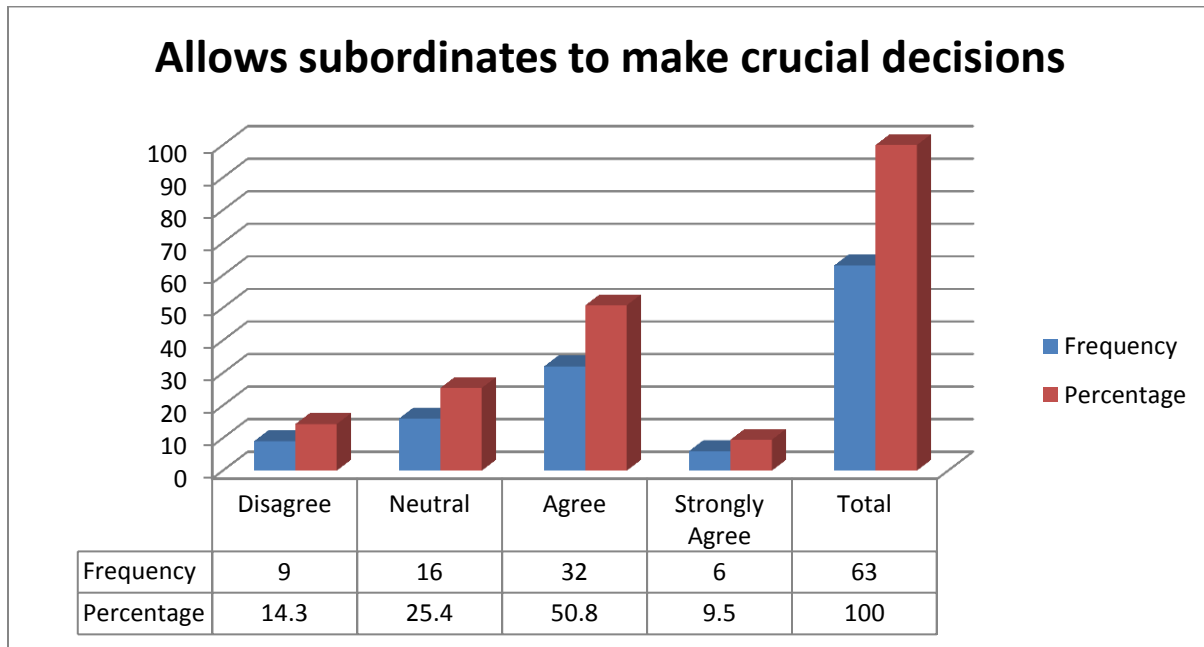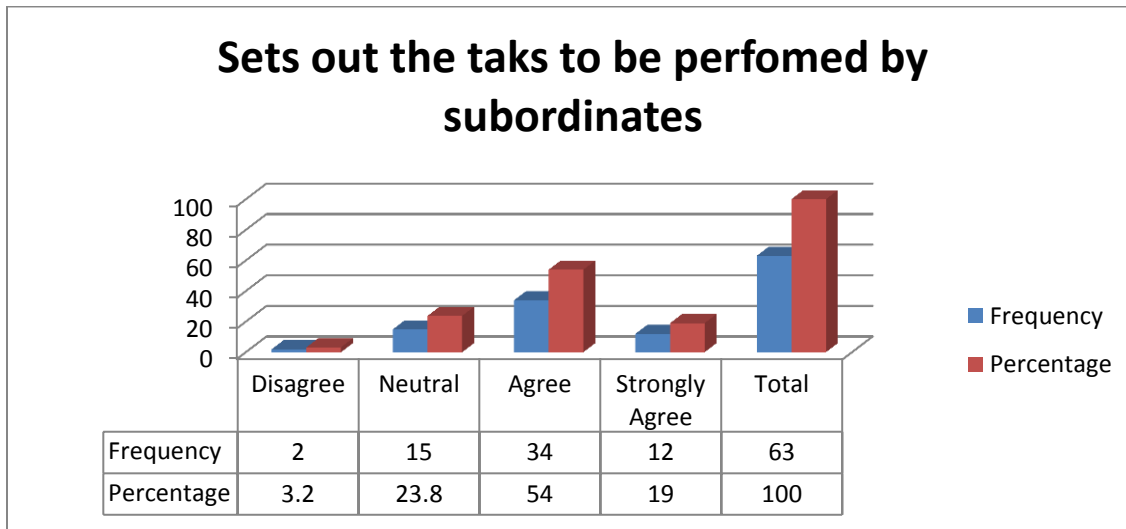|	Disagree	Neutral	Agree	Strongly Agree	Total
Frequency	9	16	32	6	63
Percentage	14.3	25.4	50.8	9.5	100

Figure 6g above shows that a total of 60.3% of the respondents agreed that it is competent for a project leader to allow subordinates to make crucial decisions. It can be generalised that it is perceived as good leadership to allow subordinates to make some crucial decisions. The risk is too high, it therefore takes much trust and confidence in the subordinates by the manager.

6h An effective project leader sets out tasks to be performed by the subordinates; the question sought to determine if project practitioners considered it competent for the project leader to set out tasks against scheduled times. It sounds like transactional leadership, but projects are controlled by time, what then would be the ideal? Figure 6h below reports on the findings.
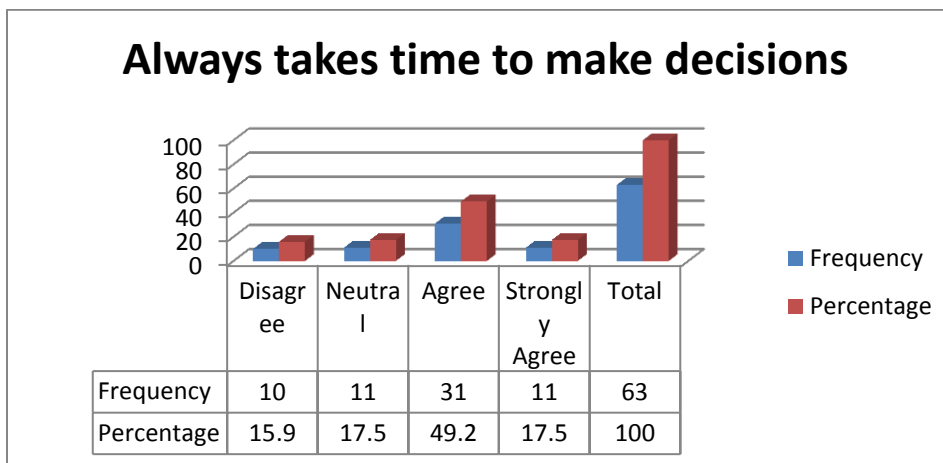
Figure 6.h: Sets out tasks to be performed by subordinates

	Disagree	Neutral	Agree	Strongly Agree	Total
Frequency	2	15	34	12	63
Percentage	3.2	23.8	54	19	100

63% agreed with the assertion that an effective leader sets out tasks to be performed by subordinates, 23.8% were neutral and 3.2% disagreed. It is crucial that a project leader should clearly define the scope, responsibilities and deliverables for each project stakeholder at the beginning of the project during compilation of the project charter. It is the leader's role to make sure that each project team member knows what should be delivered and by when.

6i   An effective leader always takes time to make decisions; the intention was to establish the practitioners' attitudes towards the leader's responsiveness as a management competency. It is necessary to state here that some of the delays in deciding may be because the project manager may need to consult with senior management. Team members do not always understand the powerlessness of the project manager due to authority gap. Figure 6i below reports on the findings.

Figure 6i Always takes time to make decisions

	Disagree	Neutral	Agree	Strongly Agree	Total
Frequency	10	11	31	11	63
Percentage	15.9	17.5	49.2	17.5	100

Contrary to expectation, 66.7% of the respondents were in agreement with the assertion, 17.5% were ambivalent and 15.9% disagreed. Depending on the problem, it may be that regardless of the pressurised project environment, the practitioners considered it competent. It can be generalised that taking time to make informed decisions is an acceptable competency for effective leadership in construction.

6j An effective leader has no time for small talk with subordinates; small talk will be seen generally as interaction with subordinates on issues which have nothing to do with the project. This would be a measure of the degree of socialisation by the project leader. Figure 6j illustrates the respondents thoughts.

Figure 6j: Has no time for small talk with subordinates

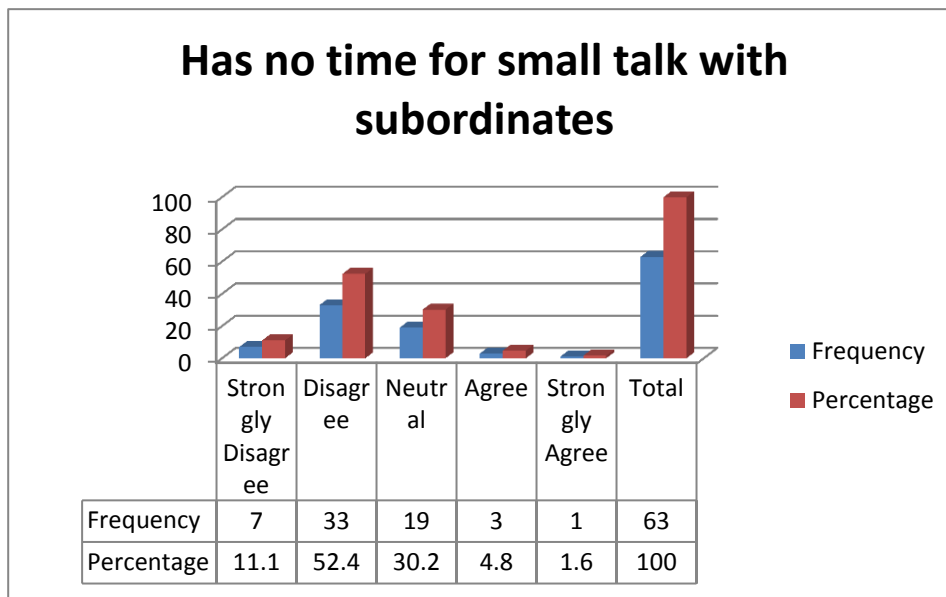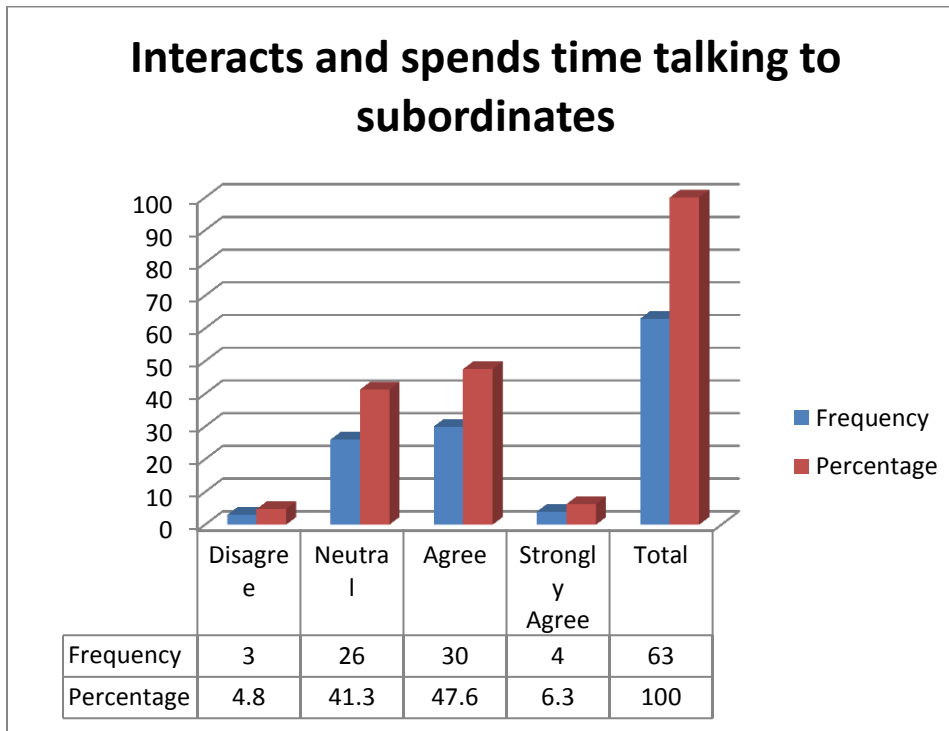|	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
Frequency	7	33	19	3	1	63
Percentage	11.1	52.4	30.2	4.8	1.6	100

Figure 6j shows that 63.5% of the respondents disagreed, this is a clear indication that socialization is considered important as a way of influencing the subordinates towards performance. Ambivalence was at a 30.2% high with those in agreement at 6.4%, it can be generalised that socialisation (small talk) is a sign of good leadership.

6k An effective leader interacts and spends time talking to subordinates; this question is closely related to the preceding question in figure 6j above. This would be typical of extroverts who are known for their ability to interact . Jowah (2013:302) asserts that extroverts are most likely to work well with people, as they have time to listen to people's problems. Smit and Cronje (1997:337) concur and suggest 'management by walking around' (MBWA) as an effective tool which promotes communication with subordinates. Figure 6.k below illustrates this.
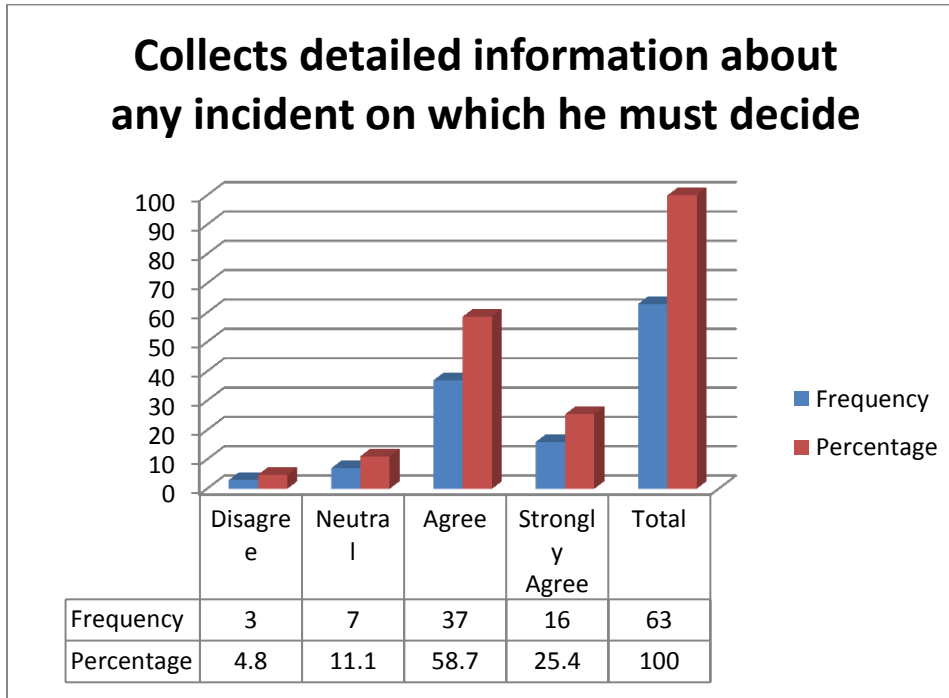
Figure 6.k : Interacts and spends time talking to subordinates.

	Disagree	Neutral	Agree	Strongly Agree	Total
Frequency	3	26	30	4	63
Percentage	4.8	41.3	47.6	6.3	100

53.9% of the respondents agreed, but the level of ambivalence is unusually high at 41.3% with 4.8% disagreeing. It can still be generalised (but cautiously) that there is an acceptance of interaction between the manager and subordinates and team members. The disparity between the results from the previous graph pause questions to the reason why there is such a high ambivalence.

6l Collects detailed information about any incident that he must decide upon; the success of good decision making resides in the availability of information necessary for the making of those decisions. The expectation was that subordinates may not be happy if too much detail is required, unless if they feel that the detail is necessary for effective decision making. The purpose of the question was to determine whether asking for detail in order to make decisions is a sign of competency by the project leader. Figure 6l provides detail on the response from the interviewees.
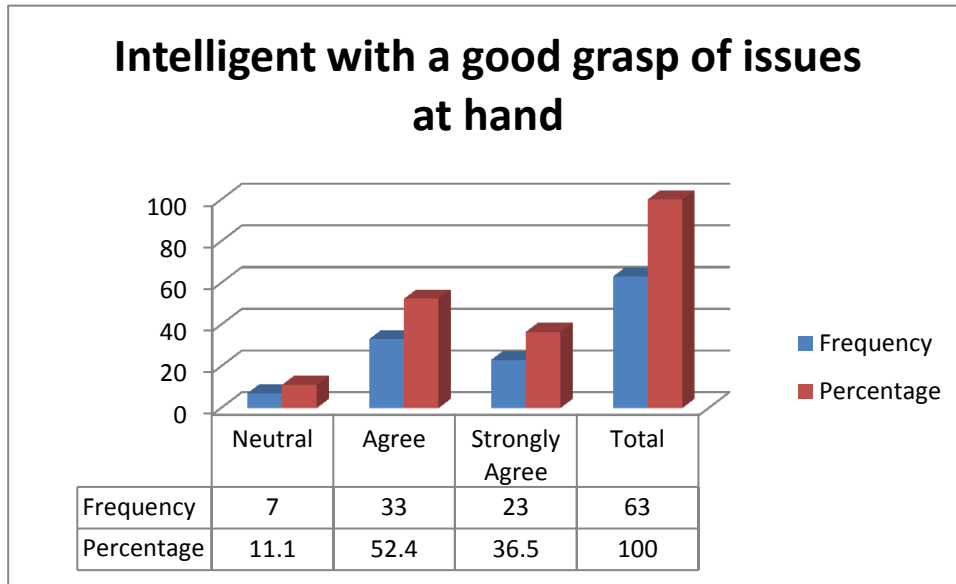
Figure 6l: Collects detailed information about any incident that he must decide upon.

Collects detailed information about any incident on which he must decide

	Disagree	Neutral	Agree	Strongly Agree	Total
Frequency	3	7	37	16	63
Percentage	4.8	11.1	58.7	25.4	100

84.1% agreed to this as a competency as shown in figure 6l above. 11.1% of the respondents were ambivalent and only 4.8% disagreed. It can be generalised therefore that the need for detail to make informed decisions is a competency necessary for construction projects. Projects are always pressed for time, quality and controlled by limited budgets, decisions should be considered against trade-offs between the project iron triangle and human expectations.

6m An effective leader should have a quick good grasp of issues at hand; projects, specifically large construction projects bring about a lot of complexities, and are multi-disciplinary. A project manager should be able to have a high IQ to enable him / her to grasp and understand and integrate diverse disciplines in the process of executing the project. This question was meant to test the preceding hypothesis that a level of intelligence (IQ) is necessary for effective management of a construction project. Figure 6m below has the detail.
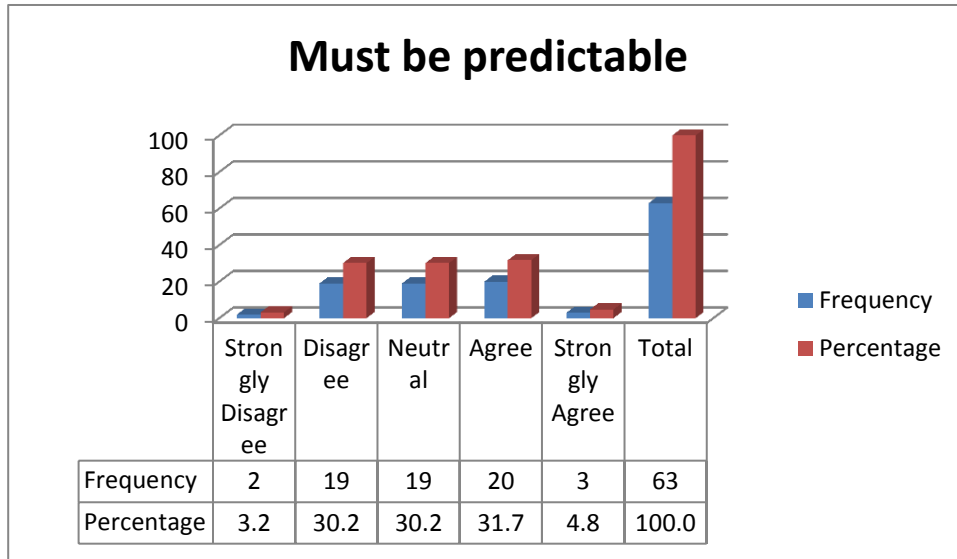
Figure 6m: Intelligent with a good grasp of issues at hand

Intelligent with a good grasp of issues at hand

	Neutral	Agree	Strongly Agree	Total
Frequency	7	33	23	63
Percentage	11.1	52.4	36.5	100

As expected the response was in favour of having an intelligent leader who would have a grasp of things, 88.9% was slightly higher than expected. It can be generalised that practitioners think that intelligence (IQ) is necessary for effective project execution in the construction industry. Neutral respondents were 11.1% with no one disagreeing. The intelligence (IQ) will primarily be for the technical aspects, since the previous results (figures 6d, e, j & k) indicated a strong leaning towards human relations as a sign of good management. Deriving from preceding results, there is a need for both IQ and EQ for the project leader to be an effective executor.

6n An effective leader must be predictable; predictability creates a sense of comfort and confidence in the minds of the people who the project manager works with. The intention of this question was identify the degree of anxiety or the absence thereof amongst project practitioners in this highly pressurized construction industry. The intention of this question was to determine whether a project leader should be someone who is predictable. The results are shown in figure 6n below.
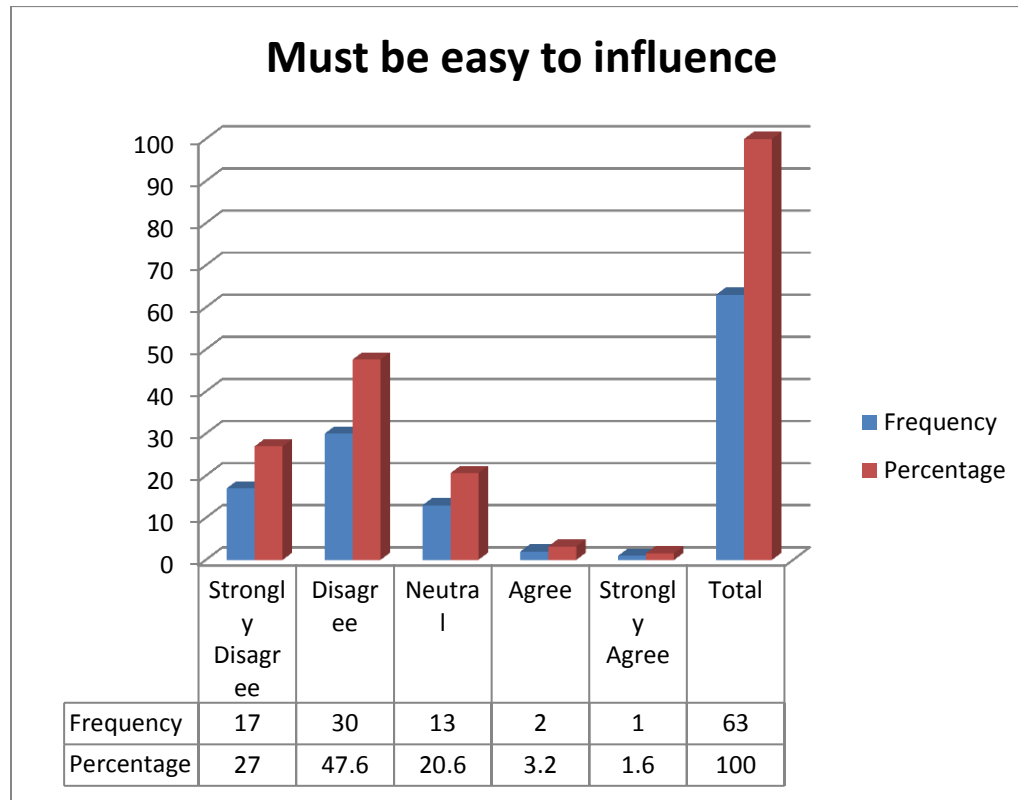
Figure 6n: Must be predictable.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
Frequency	2	19	19	20	3	63
Percentage	3.2	30.2	30.2	31.7	4.8	100.0

As reported in figure 6n, the practitioners are divided amongst themselves on this issue (33.4% disagreed, 36.5 agreed, and 30.2% were ambivalent)leaving no room for generalisation whatsoever. None of the agreeing and disagreeing constitute a score above 50%,and ambivalence is high at 30.2%.

6o An effective leader must be easily influenced; getting influenced means being made to change behavior to adjust to or help to accomplish certain objectives. Leadership by definition is the ability to influence the behavior of others and make them work towards an agreed on objective. A project manager that can be easily influenced will therefore be dealing with people who have more power than her / him. A project manager like that is considered weak and may not command respect from the team mates and subordinates. Figure 6o provides details of the perceptions of the responding project practitioners.

Figure 6.o: Must be easily influenced.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
Frequency	17	30	13	2	1	63
Percentage	27	47.6	20.6	3.2	1.6	100

The majority of the respondents in figure 6o (74.6%) did not agree that effective leaders should be easily influenced. Ambivalence is at 20.6% and 4.8% thought it competent for the leader to be easily influenced. It can be generalized therefore that being influenced easily is not a competency ideal for project leadership. The first assumption made is that a project leader should be an experienced practitioner who understands the project and knows what should be done.

6p An effective leader must have self-confidence; self-confidence is generally a result of power within the individual concerned, it can be through experience or position in the organization. A study on the personality traits of individuals also refers to some people as having traits that lead to self-confidence. Literature on leadership alludes to the need for leadership that knows what they want to do, consequently followers prefer a leader who knows where they are going. The results are detailed in figure 6p.

Figure 6.p: Leader should have self-confidence

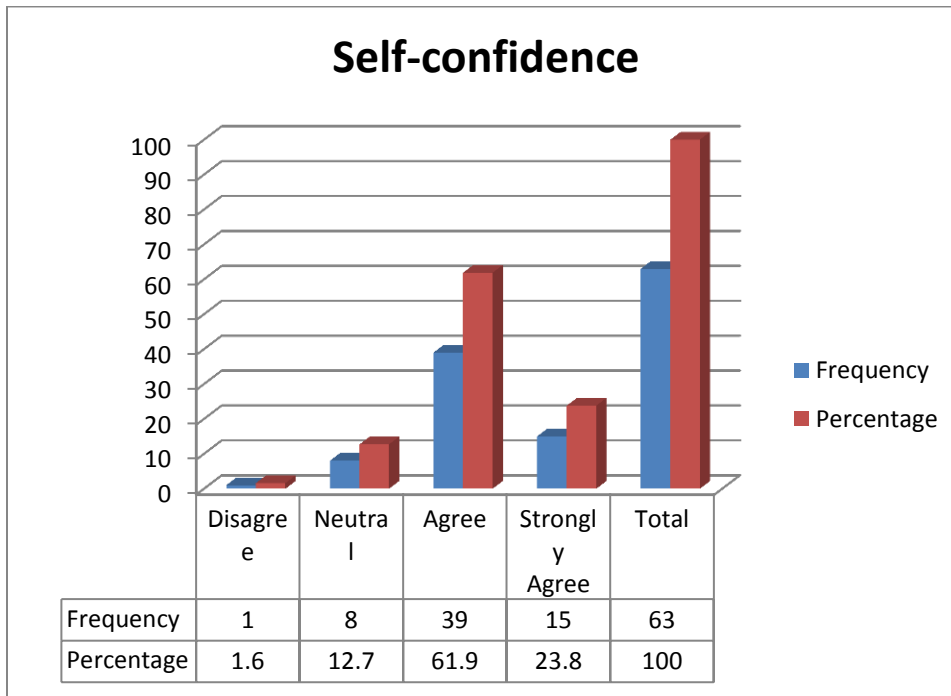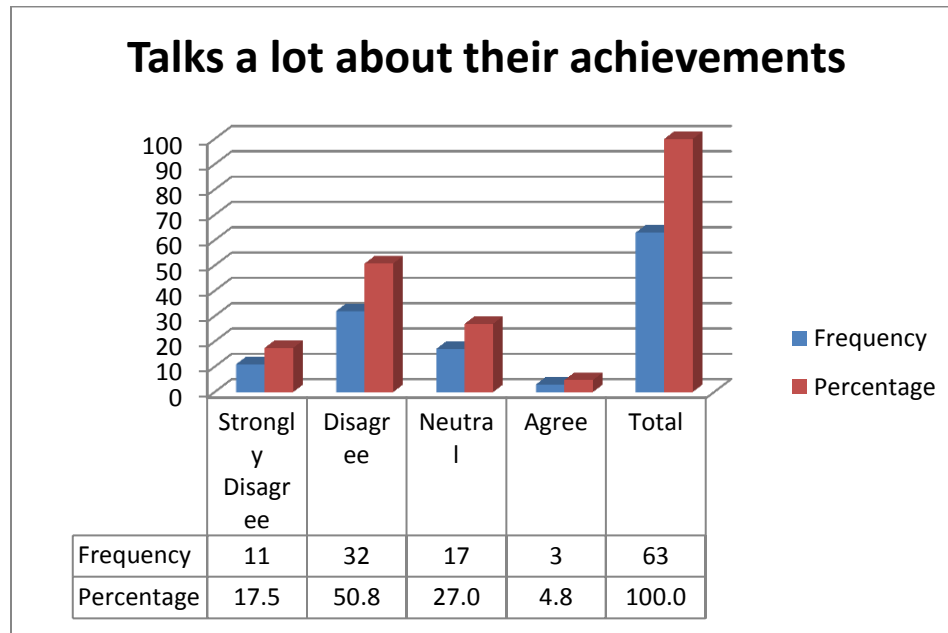|	Disagree	Neutral	Agree	Strongly Agree	Total
Frequency	1	8	39	15	63
Percentage	1.6	12.7	61.9	23.8	100

Figure 6p shows that 85.7% of the respondents agreed that an effective project leader should be self-confident, while 12.7% were neutral, and 1.6% believed that an effective project leader should not have self-confidence. It can be generalised that self-confidence is a critical element of effective leadership, and that a non-confident leader may not make decisions promptly fearing that he / she may make mistakes. The project leader's self-confidence is one of the critical factors that contributes to successful project delivery.

6q An effective leader will talk a lot about their achievements; talking a lot about oneself gives the impression of a lone player who makes the success alone. Such an individual looks into the self-in-side and ignores the contribution of the team and other members. The purpose of this question was to determine whether a project leader should talk a lot about his/her achievements to the exclusion of the team mates. Figure 6.q explains the perceptions of the interviewees.
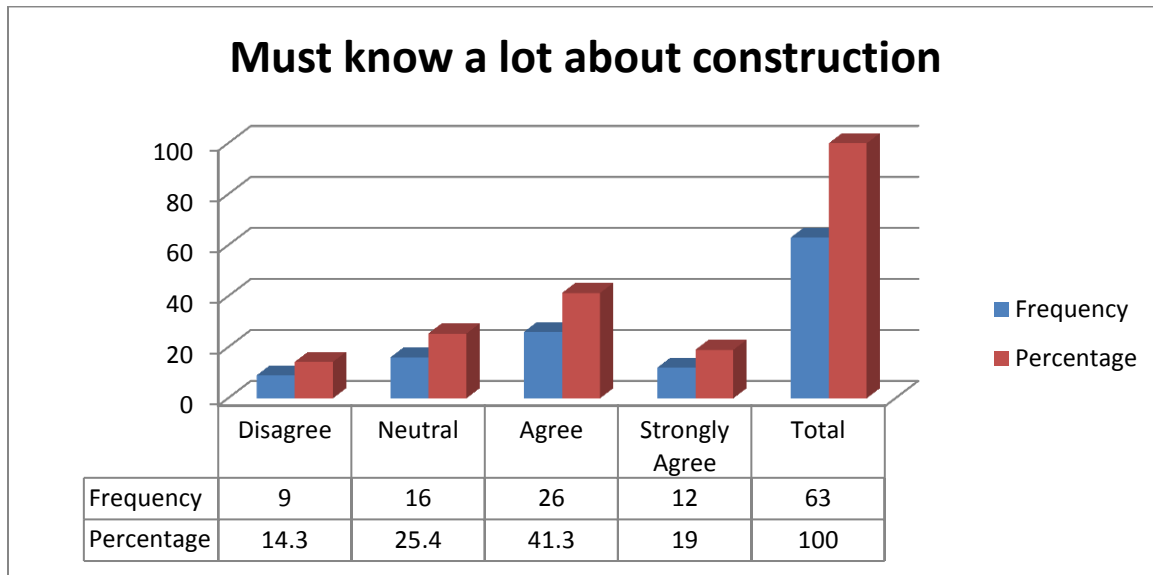
Figure 6.q: Talks a lot about their achievements

	Strongly Disagree	Disagree	Neutral	Agree	Total
Frequency	11	32	17	3	63
Percentage	17.5	50.8	27.0	4.8	100.0

A total of 68.3% of the respondents as shown in figure 6q above disagreed with the assertion, 27% were neutral and 4.8% agreed. A talk about one self's achievements relating to a project where others have participated gives them no credit for their inputs. Recognition of people's contribution boosts the morale of the subordinates and makes them want to perform more. It can be generalized here that talking a lot about self' is not a competent behavior. An effective leader acknowledges the team contribution and gives credits to team members. It is important for project team members to have a positive attitude about their leader and the project, such a positive attitude can be developed from acknowledgement by their boss.

6r An effective leader must know a lot about construction; this makes reference to hard skills, in practice exclusively engineers are given to be project managers in construction. Research has established than there is a high failure rate in engineering projects, and the reason given is the inability of engineers to develop the necessary soft skills to get people to perform. The intention of this question was to determine the understanding of practitioners in relation to the importance of hard skills, specifically what their perceptions are in relation to construction engineering as a discipline. Figure 6r below illustrates the findings.
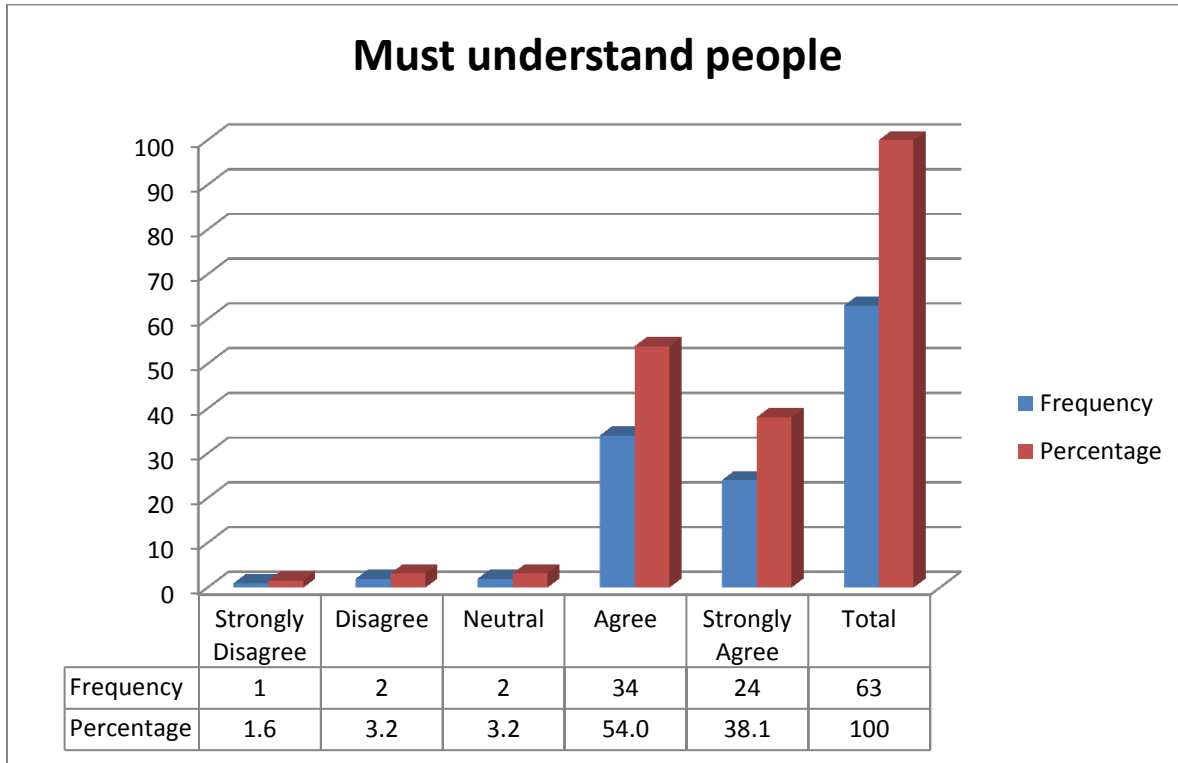
Figure 6.r: Must know a lot about construction.

	Disagree	Neutral	Agree	Strongly Agree	Total
Frequency	9	16	26	12	63
Percentage	14.3	25.4	41.3	19	100

A total of 60.3% of the respondents as indicated in figure 6r above agreed that an effective project leader must know a lot about construction, 25.4% were neutral and 14.3% did not agree. A project leader should have a technical background in the construction industry, but it cannot be an absolute necessity since the ability to get people to work is more important than the manager's technical knowledge. The project manager will always work with people who have qualifications in specific disciplines, the responsibility of the project manager is to coordinate and integrate the resources and activities of the project execution process. From the findings, the respondents feel that knowledge of construction is a critical competency, this may be because the people working in these projects do have technical qualifications themselves.

6s An effective leader must understand people; there is no effective leadership without effective followership, and effective followership results from an understanding of followers by managers. Followers have expectations in as much as the leader has expectations from the followers (Jowah, 2013;156) who are expected to help realise the firm's objectives. The platinum rule for good leadership is that the leader should 'treat people as they want to be treated.' The results are reported in the figure 6s below.
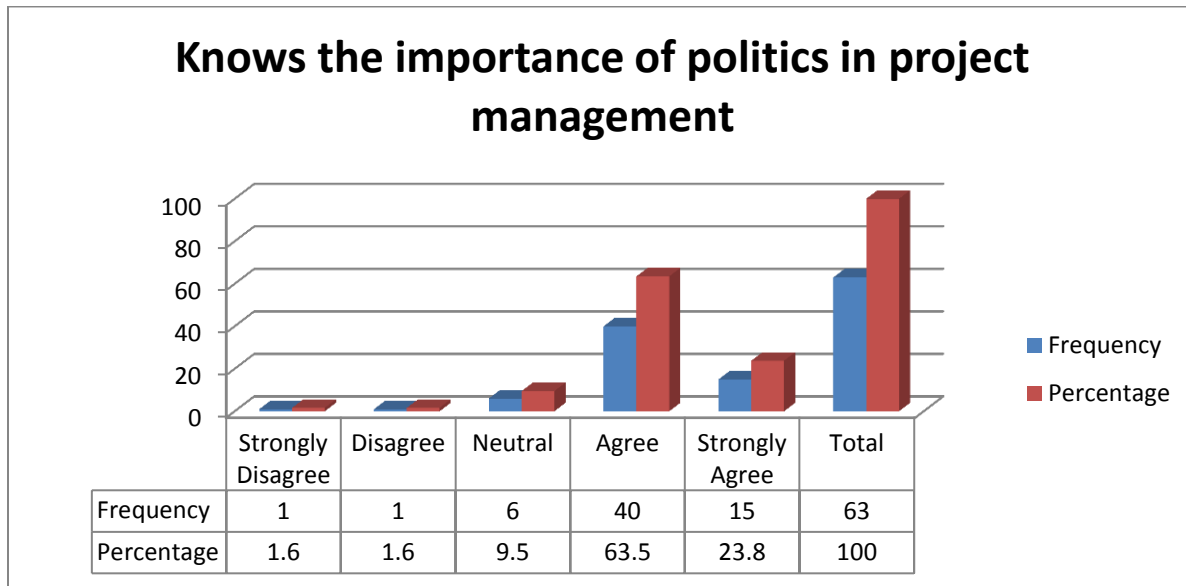
Figure 6s: The leader must understand people

Must understand people

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
Frequency	1	2	2	34	24	63
Percentage	1.6	3.2	3.2	54.0	38.1	100

As illustrates in figure 6s above, 92.1% of the respondents are of the opinion that the leader needs to understand people. As alluded to in previous results above and in leadership literature, followers are a critical component of effective leadership. A good understanding of the people enables the manager to assist the subordinates to realise their objectives whilst the project manager works towards meeting the organisational goals. It can be generalised that the ability to understand people is a critical element of effective project leadership. Different project stakeholders have different personalities that bring different contributions to the project, hence it is critical for an effective project leader to understand the people.

6t An effective leader will know the importance of politics in project management; politics is the coming together of people to try to get power to control resources. Politics is a common occurrence in all organizations, even though little seems to be discussed about project politics. The intention of this question was to determine whether a project leader needs political alliances to be effective. Figure 6t illustrates the responses from the practitioners.

Figure 6t: Knows the importance of politics in project management

Knows the importance of politics in project management

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
Frequency	1	1	6	40	15	63
Percentage	1.6	1.6	9.5	63.5	23.8	100

87.3% (figure 6t) of the respondents agreed to the need for politics by the project manager, 9.5% were neutral and 3.2% disagreed. Politics is important as a tool to enable the project manager to have more power, it means having a network of stakeholders that will help in the process of delivering the project. The project manager will find it easy to get required resources, reduce the authority gap through strategic political alliances, and have more control of the project processes. Failure to identify strategic alliances will create resource problems impacting on operations.

SUMMARY OF FINDINGS

Project management has always been associated with construction and other engineering disciplines to the level where it should be considered 'matured' yet the failure rates are unacceptably high. The advancement in technology has made many tasks easier to perform cutting down on the time needed to complete the tasks with high quality. All this and the use of these different tools and techniques has not helped in reducing the failure rate. The continued failure of these construction projects, and indeed other projects (IT etc), has shifted the focus from technology to the human aspects of projects. Consequently project management is taught to engineering students in universities and training programs to professional engineers continue to increase. This has allowed the focus to shift from technology, technics and hard skills to soft skills and leadership as a solution to the problem of project failure. This study sought to identify competencies that would make the difference in the management of construction projects. The summary of the findings is interesting, only the highest six (scores 70%+) are recorded as the most critical effectiveness of a project leader.

Project practitioners do not want a project leader who can be easily influenced, possibly in reference to the need to play 'tough' for the macho environment in construction. The project manager may most probably be knowledgeable

with a strong personality hence the resistance to influence from other quarters. For this item the total score was 74.6%.

Project practitioners prefer a project leader who collects details before rushing to make a decision on an incident. There should be a cause for any problems that may be encountered in the implementation of any project, but the solution resides in the details. Without adequate information one is bound to make wrong judgment on issues, hence the need for a manager who will use all information necessary to make informed decision. For this item the total score was 84%.

Intelligence (IQ) was ranked highly, in that an intelligent project leader may remember much of the detail about the project. The ability to recall will enable the leader to integrate the project activities more effectively in that he will know how to join the pieces together. An unintelligent project leader is bound to forget other details and is likely to make mistakes or wrong judgment which may affect project execution negatively. Besides, construction includes a need for good working knowledge in architecture, electrical, mechanical, civil engineering, quantity surveying, civil engineering, and many other disciplines closely linked to the construction of a building. For this the score is 88.9%.

The ability of a project manager to put trust in subordinates or team members was considered highly by the respondents and was put at 92%. Trusting workmates is an acknowledgement of their worth and importance in their sections of the project. This trust will also help in both empowering and motivating the employees who will feel that they are important and belong. It should be emphasised that the project manager can only belong to one of the many disciplines involved in the construction process, and may therefore do well to entrust with responsibility those who are professionals in those disciplines.

Working in a team, with a team and through a team is considered highly by the project practitioners and they placed the item at 98%. The concept of working in a team has always been part of human life as found in sports, and other project undertakings. In the African context, the *botho* culture (*muthu kemuthu kabathu* – you are who you are because of others) the team spirit is part of the culture and it is practiced in all spheres of life. The high positive response to this item echoes the traditional African sentiments in working towards achievement of targets.

The highest score at 98.4% went to communication of activities, the project practitioners believe strongly that the project manager must communicate the activities regularly. There are a few possible reasons why this ability to communicate has been rated so highly; project managers use information as a means of helping the other practitioners decide on the next step. If the practitioners know about all the activities, it is empowering to them, knowledge is power.

Conclusion

Whilst the last six items above were considered highly, it is important to note here that there are many other identified in the research. Some of these competencies are; human relations and considering employees' welfare, confidence in oneself and abilities, interact formally and informally with workmates, and that tasks are not more

important than the people who perform them. The leader should be the glue that keeps the team together, meaning he should show high levels of impartiality and fairness amongst the workmates. Approachability will certainly make it easy for the leadership to know about any grumblings that might eventually cause discontent and disgruntlement. The leader should be empathetic, promote knowledge sharing, make time for subordinates, trust subordinates, and should be self-confident and steer the team in the right direction. In short an effective project leader should be an all-rounded individual with a good understanding of situational leadership with a good understanding and subsequent use of both hard and soft skills.

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