

Desirable Attributes Of An Effective Project Leader: Clients', Consultants', and Contractors' Perspectives

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ABSTRACT

The purpose of the study was to examine perceptions of the three significant actors in the construction industry (that is, the clients, the consultants, and the contractors) regarding the desirable attributes of an effective project leader. The study is limited to the views of a convenient sample of construction and property professionals - architects, engineers, builders, quantity surveyors, and estate surveyors and valuers, who are employed or engaged by clients' organisations, consultancy firms or contracting companies. The total sample used for the study is 120 broken down as follows: Clients N=40, Consultants N=48 and Contractors N=32. Twenty-five desirable attributes of an effective project were identified from the literature review. The practitioners rated each of these attributes according to their perception of the degree of importance. Frequency count, mean item score, Spearman correlation and t-test were used in the analysis. The results revealed that the three groups perceived the desirable attributes differently. To the clients the most important attribute was personal qualities; to the consultants it was problem solving while to the contractors it was technical expertise. However when the three groups were combined, interpersonal relations was rated as the most important desirable attribute of an effective project leader.

Keywords: desirable attitude, project leader, clients, consultants, contractors.

INTRODUCTION

A project manager or leader plays an important role in successful execution of construction projects. He has the responsibility of planning, controlling and coordinating a project on client's behalf from inception to completion to ensure that the client's objectives are met in terms of cost, time, quality and functionality (CIOB, 1982). It has been established by Odusami and Iyagba (2001) that any construction related professional can act as a project leader on

building project provided he is a corporate member of his professional body. However in addition to this basic requirement there are some attributes that are desirable for a project leader to be effective in the discharge of his duties. These attributes are examined in this study.

An attribute can be defined as quality ascribed to anything or anyone (Kirkpatrick, 1983). It is an inherent property. Quality on the other hand can be described as a distinguishing property or characteristics (Kirkpatrick, 1983). In this review attribute and quality are taken as having the same meaning. Many authors have written on desirable attributes or qualities for an effective project leader. Pettersen (1991) in particular reviewed 46 published works in the area of attributes or qualities and termed it as list of predictors for project managers. His list is generally grouped into five i.e.

- (a) Problem solving
 - (b) Administration
 - (c) Supervision and project team management
 - (d) Interpersonal relations and
 - (e) Other personal qualities.
- Each of these groups has subheadings.

Ceran and Dorman (1995) posited that a project manager must possess the following qualities:

Be proficient in his or her own discipline which can be architecture, building engineering or surveying. Have an appreciation of, and respect for, all the involved disciplines that is, other consultants.

Be as equally interested in the management of the project, including schedule and budget control, as in the technical solutions. Possess excellent interpersonal skills.

Be committed to meeting the requirement of the project in terms of cost, time, quality and functionality. For large project in particular, have an appreciation of the environmental, economic, cultural and social concerns of the communities affected by the project.

These qualities are similar to El-Najdawi and Liberatore's (1997) findings on the primary managerial attributes required in a program manager. In their study technical knowledge is found to be the most important attribute required followed by ability to interface with functional managers, ability to motivate team members, communication, and organisational skills in that order.

In addition to the qualities mentioned above the project managers should also possess some abilities. In fact performance according to Vroom (1964) is a function of abilities, motivation. However it has been established that these two parameters were not sufficient to predict performance and hence Blumberg and Pringle (1982) added other dimensions such as willingness, capacity and opportunity. Performance can then be said to be a function of abilities, motivation, willingness, capacity and opportunity.

Abilities according to Petersen (1991) include cognitive capabilities such as skills and knowledge, that is, what a person knows and can do. Most of these abilities are the results of aptitudes which are developed through time by all forms of learning and experience. Skills,

as stated above, is an ability that can be developed which is manifested in performance. It can also be referred to as an ability to translate knowledge into action.

Birchall and Newcombe (1985), in a related research, sought the views of practitioners about necessary skills for an effective project manager. These views could form a checklist against which a person may assess himself as a potential project manager. The list includes- (i) technical expertise (ii) commercial expertise, (iii) personal attributes and (iv) specific skills.

The technical expertise was broken down to understanding of computers, planning and time control along with monitoring skills, design organisation and techniques construction management techniques, procedures for

hand over and final completion.

For the commercial expertise the specific areas identified included contracts and contract laws; procurement methods and processes; estimating and cost control; marketing; operations management and human elements.

The personal attributes among these attributes are high personal motivation, stable personality, integrity, dedication; commitment and determination. The fourth in the category was coined specific skills. These are communication skills, ability to set up, organise record and control meetings. It also includes personnel selection; and man management skills. Others skills include breadth of vision - that is a project manager must be visionary, early warning antennae - this is ability to foresee a potential problem and prepares for it before it happens. Also included in the list are the ability to set clear objectives, ability to avoid getting too close to a problem, ability to continuously review all external and internal factors and relate them to the project task. The need for diplomacy, energy and excellent health were also stressed.

RESEARCH OBJECTIVES

The objectives of the study are as follows:

- (1) To identify the most desirable attributes of an effective project leader
- (2) To investigate the collective group perspectives on the desirable attributes of an effective project leader of the three principal industry participants that is the clients, the consultants, and the contractors.
- (3) To evaluate the degree of agreements/disagreements regarding the rankings of the desirable attribute of an effective project leader between any two groups of industry practitioners

METHOD

Scope of the investigation

The study is limited to the views of a convenient sample of construction and property professionals architects, builders, engineers, estate surveyors and valuers and quantity surveyors who are employed by clients organisation or engaged in consultancy firms or contracting business.

INSTRUMENT

A questionnaire was designed to obtain the required data and to test the hypotheses postulated for the study. It contained nine items such as the name of the respondent's organisation, the profession, the role of the organisation in the construction industry (that is whether client, consultant, or contractor) among others. It also contained the number of years the respondent has been in the construction industry. The questionnaire contained 25 possible attributes of an effective project leader to which the respondents are to react if they feel the attribute is not important (1), somewhat important (2), important (3), and very important (4). Most of these items are selected from Pettersen's (1991) list of predictors for project managers while some are selected from Birchall and Newcombe's (1985) work.

RESULTS AND DISCUSSION

Twenty-five desirable attributes of an effective project leader were presented. The practitioners were to rate each of these attributes according to their perception as to whether it is very, important, important, somewhat

Table 1: Mean scores and Rank of desirable attributes (most to least critical) of an effective project leader

An effective project leader should:-	Clients		Consultants		Contractors		Weighted Average	
	MS+	R*	MS	R	MS	R	MS	R
Establish work timetable and organise resource to achieve project objectives.	0.906	4	0.896	1	0.898	1	0.900	1
Have confidence in self and abilities, be emotionally stable and strong.	0.931	1	0.880	6	0.875	4	0.896	2
Understand procedure for project development, implementation, final completion and hand over.	0.925	2	0.891	2	0.852	7	0.892	3
Understands estimating systems, cost control, planning and time control along with monitoring skills, quality and safety.	0.925	3	0.859	8	0.875	3	0.888	4
Communicate efficiently in exchange with others.	0.850	10	0.885	4	0.898	2	0.877	5
Structure tasks to be carried out and communicate them clearly.	0.872	6	0.891	2	0.852	8	0.874	6
Ensure follow up and make correction if necessary.	0.863	7	0.859	10	0.871	5	0.866	7
Make decisions and apply solutions, which takes into account the constraints of the project and its environment.	0.856	9	0.885	5	0.828	13	0.860	8
Identify significant problems, develop all possible solutions and their consequences.	0.831	13	0.875	7	0.844	10	0.852	9
Allocate authority and resources to project team members to enable them make significant decisions in their fields of responsibility and competence.	0.856	8	0.839	13	0.852	9	0.848	10
Recognise a conflictual situation and resolve it efficiently.	0.833	12	0.859	9	0.828	11	0.842	11
Have propensity to change plans, approaches, strategies, policies or practices according to the demands of the situation.	0.881	5	0.854	11	0.758	19	0.838	12

Table 1 continued

	MS+	R*	MS	R	MS	R	MS	R
Have intrinsic motivation for the work itself and its different activities.	0.819	15	0.797	17	0.859	6	0.835	13
Be able to set up organise record and control meetings.	0.825	14	0.844	12	0.820	14	0.831	14
Place the project's interest before his interest.	0.806	16	0.814	15	0.828	13	0.815	15
Maintain climate that encourages the participation and implication of each team member.	0.800	17	0.807	16	0.805	15	0.804	16
Frequently assess the performance of each project team member and give him feed back.	0.838	11	0.766	19	0.805	17	0.800	17
Be committed to decisions even in difficult or delicate situation where the consequences could be personally unpleasant.	0.744	22	0.833	14	0.776	20	0.785	18
Be able to work in harmony with organisation's political reality.	0.763	19	0.771	18	0.750	18	0.763	19
Know the information; principles, theories and techniques that are useful for the various tasks to be done.	0.719	24	0.760	20	0.805	16	0.758	20
Be dynamic, relentless and be full of energy.	0.788	18	0.719	23	0.773	21	0.756	21
Have knowledge and understanding of computer, design organisation and techniques.	0.756	21	0.729	22	0.672	23	0.723	22
Be aware of the feelings, needs and expectation of others.	0.756	20	0.682	24	0.697	24	0.716	23
Behave kindly towards project team members.	0.725	23	0.729	21	0.656	22	0.708	24
Dominate others and not be dominated	0.438	25	0.354	25	0.391	25	0.392	25

importance or not important. Table 1 shows the mean scores and values for desirable attributes of effective project leader as perceived by the different groups.

The mean item scores for the desirable attributes were computed and ranked. Both the consultants and the contractors agree that the most important desirable attribute of effective project leader is the ability to establish work timetable and organise resources to achieve project objectives. This happens to be the overall consensus. However the clients' group perceived that the most important desirable attribute of an effective project leader is to have confidence in self and abilities, be emotionally stable and strong.

As to the least desirable attribute, all the three groups unanimously disagreed with the statement (attribute) that an effective project leader should dominate others and not be dominated.

The individual desirable 25 attributes used for the study were later partitioned to six main attributes to be able to appreciate better the desirable attributes of effective project leader under the six main groups. The first four items (a-d) are grouped under personal qualities. These items are:

- * Have knowledge and understanding of computers, design organisation and techniques.
- * Understand estimating systems, cost control, planning

and time control along with monitoring skill, quality and safety.

- * understand procedure for project development, implementation; final completion and hand over.
- * Be able to set up organise record and control meetings.

The second category of main attributes consists of these items (e-g) and is referred to as **problem solving**. These items are:

- * Identify significant problems, develop all possible solutions and their consequences.
- * Make decisions and apply solutions, which takes into account the constraints of the project and its environment.
- * Be committed to decisions even in differences or delicate situations where the consequences could be personally unpleasant.

The third category contains four items (h-k) and is termed technical expertise. These items are:

- * Establish work timetable and organise resources to achieve project objectives.
- * Ensure follow-up and make correction if necessary.
- * Be able to work in harmony with organisation's political reality.
- * Know the information; principles, theories and techniques that are useful for the various tasks to be done.

The fourth category called supervision and project team management comprises the following six items (e-q):

- * Allocate authority and resources to project team members to enable them make significant decisions in their fields of responsibility and competence.
- * Structure tasks to be carried out and communicate clearly.
- * Behave kindly towards project team members.
- * Frequently assess the performance of each project team member and give him feedback.
- * Maintain climate that encourages the participation and implication of each team member.
- * Recognise a conflictual situation and resolve it effectively.

The fifth category is **administration** and it consists of the following three items (R-t):

- * Communication efficiently in exchange with others
- * Be aware of the feelings, needs and expectation of others.
- * Dominate others and not be dominated.

The last five items are grouped under **interpersonal relations** and consists of the following items (u-y).

- * Be dynamic, relentless and be full of energy.
- * Have confidence in self and abilities, be emotionally stable and strong.
- * Place the project's interests before his interest.

- * Have propensity to change plans, approaches, strategies, policies or practices according to the demands of the situation.
- * Have intrinsic motivation for the work itself and its different activities.

The resulting main six desirable attributes identified are personal qualities, problem solving, technical expertise, supervision and project team management, administration, and interpersonal relations. The frequency

counts for each item was made and added for each group. The mean item score for each main group of desirable attributes for each of the three practitioners and the weighted average was computed, ranked in descending order starting from the highest to the lowest, and compared.

To the client, personal qualities are the most desirable attributes of an effective project leader, while to the consultants, it is problems solving. Technical expertise is the most desirable attribute

of an effective project leader to the contractor. However when the weighted average is taken overall interpersonal relations emerged as the most desirable attribute of an effective project leader. This indicates that there are disagreements among the various groups as to the most desirable attribute. This could be a reflection of the organisations that the respondents are drawn from and their roles in the construction industry. Emphasis on the desirable attributes of an effective project leader then depends on the organisation of the respondents.

Tables 2(a)-(d) below show the clients', the consultants', the contractors' and the weighted average mean scores and rankings of desirable attributes of effective project leader.

Table 2: Respondents' ranking of desirable attributes (most to least critical) of an effective project leader

(A) Clients' ranking (N= 40)

Desirable attributes	Frequency of responses					Mean score	Rank
	4	3	2	1	0		
Personal qualities	86	58	15	1	0	0.858	1
Interpersonal relations	100	790	20	1	0	0.848	2
Supervision and project Management	107	95	32	4	2	0.820	3
Technical expertise	67	71	18	4	0	0.814	4
Problem solving	47	58	12	3	0	0.810	5
Administration	35	41	20	24	0	0.669	6

(B) Consultant's ranking (N=48)

Desirable attributes	Frequency of responses					Mean score	Rank
	4	3	2	1	0		
Problem solving	79	54	9	2	0	0.865	1
Personal qualities	90	75	26	1	0	0.831	2
Technical expertise	85	78	28	1	0	0.822	3
Interpersonal relations	100	107	29	3	1	0.818	4
Supervision and project Management	118	130	37	3	0	0.815	5
Administration	38	43	26	36	1	0.645	6

(c) Contractor's ranking (N=32)

Desirable attributes	Frequency of responses					Mean score	Rank
	4	3	2	1	0		
Technical expertise	56	57	11	2	2	0.831	1
Interpersonal relations	66	76	14	4	0	0.819	2
Problem solving	37	46	13	0	0	0.813	3
Personal qualities	54	49	25	0	0	0.807	4
Supervision and project Management	70	93	26	3	0	0.799	5
Administration	27	29	19	21	0	0.661	6

(c) Overall ranking (N=120)

Desirable attributes	Frequency of responses					Mean score	Rank
	4	3	2	1	0		
Interpersonal relations	266	262	63	8	1	0.834	1
Personal qualities	230	182	66	2	0	0.833	2
Problem solving	163	158	34	5	0	0.833	3
Technical expertise	208	206	57	7	2	0.832	4
Supervision and project Management	295	318	95	10	2	0.825	5
Administration	100	113	65	81	1	0.665	6

TEST OF HYPOTHESES

Two hypotheses were set up for the study as follows

H1: In general, technical expertise will not be perceived to be the most important of all the desirable attributes of an effective project leader.

H2: There will be no significant difference between the perception of (a) clients and consultants (b) consultants and contractors, and (c) clients and contractors, regarding the desirable attributes of an effective project leader.

H1: In order to test the first part of the hypothesis, the frequency counts and means score for each group of desirable attributes were computed and ranked. This was done for the three groups of respondents in the study. See Table 3.

Table 3: Mean scores and ranks for desirable attributes of effective project leader as perceived by the different groups

Desirable attributes	Clients		Consultants		Contractors		Average	
	Mean s	Rank	Mean	Rank	Mean	Rank	Mean	Rank
Interpersonal relations	0.848	2	0.818	4	0.819	2	0.834	1
Personal qualities	0.858	1	0.831	2	0.807	4	0.833	2
Problem solving	0.810	5	0.865	1	0.813	3	0.833	3
Technical expertise	0.814	4	0.822	3	0.831	1	0.832	4
Supervision and project management	0.820	3	0.815	5	0.799	5	0.825	5
Administration	0.669	6	0.645	6	0.661	6	0.665	6

Table 4: Test of agreement on the ranking of the desirable attributes of an effective project leader as perceived by different groups

Project participants	Rs	t-cal	t-tab	Accept	P-value
				Ho	
Clients and Consultants	0.26	0.539	2.132	No	NS<0.05
Consultants and Contractors	0.54	1.283	2.132	No	NS<0.05
Clients and Contractors	0.26	0.539	2.132	No	NS<0.05

The frequency count and ranking of the overall perception of the respondents indicate the highest mean score of 0.834 for interpersonal relations. This was followed by personal qualities (0.833); problem solving (0.833); technical expertise (0.832); supervision and project team management (0.825); and administration (0.665). Since technical expertise came fourth in the ranking, the hypothesis that "in general, technical expertise will not be perceived to be the most important of all the desirable attributes of an effective project leader" is accepted.

H2: In order to test this hypothesis the frequency counts and mean score for each scale were computed and ranked for each group. Spearman's rank correlation coefficient (Rs) and t-values for the combination of practitioners were also computed.

The decision rule depends on whether the calculated values of t are greater than or less than the critical values of t for (n-2) i.e. 4 degrees of freedom. See Table 4.

For clients' and consultants' perception of desirable attributes Rs = 0.26 while t-value = 0.539 and t-tab = 2.132. Since t-cal < t-tab at 5% significant level the null hypothesis of no difference in the perception of the two groups is rejected while the alternative hypothesis that "there is significant difference between clients' and consultants perceptions of desirable attributes of effective project leader" is accepted.

(ii) For consultants' and contractors' perceptions of desirable attributes Rs = 0.54 while t-value = 1.283 and t-tab = 2.132. Since t-cal < t-tab at 5% significant level the null hypothesis of no difference in the perceptions of the two groups regarding desirable attributes of effective project leader is rejected while

the alternative hypothesis of difference in perception is accepted.

(iii) For clients, and consultants' perceptions of desirable attributes Rs = 0.26 and t-value = 0.539 t-tab = 2.132. Since t-cal < t-tab at p < 0.05 significant level the null hypothesis of no difference in perceptions of the two groups is rejected while the alternative hypothesis that "there is significant difference between clients' and contractor's perceptions of desirable attributes of effective leader is accepted.

CONCLUSION

Contrary to expectation interpersonal relations was rated the highest by all the respondents (combined) among the desirable attributes of effective project leader. This is an area where all the three groups differed in their perceptions. Clients group believed personal qualities is the most important, while the consultants perceived problem solving to be the most desirable attribute. To the contractors, technical expertise is the most desirable attributes of effective project leader. This is in agreement with El-Najdawi and Liberatore's (1997) findings. No two groups agreed in the overall rankings as can be seen from the low correlation coefficients Rs of 0.26 (clients' and consultants) 0.54 (consultants and contractors) and 0.26 (clients and contractors). This could be a reflection of the organisations that the respondents are drawn from and their roles in the construction industry. Emphasis on the desirable attributes of an effective project leader then depends on the organisations of the respondents. However one thing is clear from the 25 individual desirable attributes "a project leader should establish work timetable and organise resources to achieve project objectives". This seems to be the consensus of opinion as to the most desirable attribute of

effective project leader from the weighted average ranking.

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