

# A Study on Construction Project Managers' Temperament Qualities

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**Abstract.** Under the circumstances of more and more surging upward in construction field, if want to successfully ensure the quantity, quality and safety of each construction engineering project, this requires that our construction project managers constantly strengthen their connotation construction and qualities' training. On the basis of attention to the construction project manager for many years, I have felt the importance of temperament qualities of the construction project manager for his employment and career success. Therefore from the psychological discipline angle, using the method of AHP, the network interview, questionnaire investigation, informal discussion, visit, data collection method and other methods, considering the construction project management practices, I deeply analyze the temperament qualities and related issues of the construction project manager, build up the temperament formula of the construction project manager, obtain "how to mold the temperament qualities which construction project manager should have".

## Introduction

Through reading massive literature materials and own social practice construction engineering project management reality, find that a research on project manager temperament is very few at home and abroad from ancient to present, then, the research on temperament qualities of the construction project manager is more rare. I hope my analysis and exploration can fill this domain. I wish I can make due contributions for improving the quality of the construction project manager and selection of the construction project manager. [1]

## The Connotation of Temperament and the Cause of the Research on Construction Project Managers' Temperament Qualities

**The Connotation of Temperament.** Temperament derived from Latin, its original meaning is mix, blend, later is used to describe people excited, emotional, moody psychological characteristics. It is often said that the temper, natural disposition. In modern psychology temperament is defined as: Temperament is manifested as typical and stable dynamic characteristics of the psychological activity and behavioral aspects. Understanding of the definition should be paid attention to the following four points.

Firstly, temperament is the external dynamic characteristics of individual psychological activity and behavior, mainly manifest characteristics of the psychological activity of speed, strength, stability and directivity. Power refers to speed, strength, stability, internal and external orientation of psychological process and so on, it makes personal color on all psychological activity. [2]

Secondly, temperament as the dynamic characteristics of persons' psychological activities, it has nothing to do with the content and motivation of the persons' psychological activities, namely the temperament characteristics generally is not affected by the purpose of personal activity, motives and content, it has strong stability. It can make people's psychological activity infected with a specific color, form a unique style.

Thirdly, temperament is greatly influenced by innate biological factors, namely the congenital factor occupies the main status. Temperament is mainly affected by the nervous system type. [3]

Fourthly, temperament has certain plasticity. Although temperament is congenital, but does not

mean it doesn't change completely, Under the conditions of life and education, under the guise of the character, temperament can be considerable improved.

**Cause of the Research on Construction Project Managers' Temperament Qualities.** 1. It is of great significance and role for the construction project manager's career choice and the work allocation.

Although temperament do not affect active the nature, but can affect the efficiency of activities. If in the study, the work, the life considering this point, can effectively improve the efficiency of themselves and others. Relating to our architectural engineering project management, selecting the temperament appropriate personnel for construction project manager job, can obviously improve the work efficiency, reduce mistakes, it is helpful for successful and effectively completion of each building project. [4] In the special occupation of construction project manager, the many clues, the heavy shoulder pole, the tight duty, the outside high expects create his body and mind to have to be highly anxious frequently. So the status quo puts forward specific requirements for the temperament characteristics of the class of people, for example, he must have extremely sensitive response, willingness to take risks and crisis. Under the circumstances, temperament characteristics influences whether a person is suitable for the career. So employer shall determine the temperament characteristics in the selection and training of such professional personnel. [5] This is a basis for the occupation choice and elimination.

2. The construction project manager's temperament quality is indispensable important constituent in the quality structure system of construction project manager. Research on the construction project manager's quality structure has to be clearly analyzed his temperament quality.

3. In the construction project manager's training and education, temperament characteristics provides us the basis of teaching students in accordance with their aptitude. We only understand the temperament characteristics of each construction project manager, and according to these characteristics to take different education means and methods, therefore can obtain good education effect. [6]

## **Empirical Exploration**

This investigation and survey mainly through the questionnaire survey, the coordinate enterprise visits, visit of walk (letter) for frontline's construction technical personnel, the conference exchanges, individual interviews or any other means. During the research fully launched this professional full-time teachers and part-time teachers, and mobilized enterprises to actively participate in research work. Visited enterprise of 75 units, provided questionnaire total 465 parts, the returns-ratio is 98%. Interview object involves the government leading, enterprise general manager, chief engineer, enterprise human resources department leaders, project managers, frontline staff, graduate and so on. From the numerous construction projects Manager's temperament testing I sorted out the temperament test as follows in table 3 (the norm is moderate). This test contains 60 questions, the purpose is to know the temperament types and assigned appropriate jobs. Reply these questions should be realistic, how wants how to reply, don't have to do more consideration, because there is no standard answer and good or bad. [7]

Please assign points after see the topic, think it most fit for oneself situation to record 2 points; better fit for oneself situation to record 1 point; record 0 between conformity and unconformity, better unfit for oneself situation to record -1 point; completely unfit for oneself situation to record -2 point.

Question number of choleric temperament type: 2 6 9 14 17 21 27 31 36 38 42 48 50 54 58

Question number of sanguine temperament type: 4 8 11 16 19 23 25 29 34 40 44 46 52 56 60

Question number of phlegmatic temperament type: 1 7 10 13 18 22 26 30 33 39 43 45 49 55 57

Question number of melancholic temperament type: 3 5 12 15 20 24 28 32 35 37 41 47 51 53 59

See total score of each temperament type. If the score of a kind of temperament is higher 4 points than that of other three, the person can be classified as a person of the temperament type. In addition the score of the temperament is over 20 points, the person can be classified as a person of the

typical type. If the score between 10 to 20 points, the person can be classified as a person of the general type. If score difference of two kinds of temperament is less than 3 points, and obviously is higher than other two kinds to reach above 4 points, the person can be judged to be two types of hybrid; similarly, if score of three temperament is higher than score of the fourth temperament, moreover very close, the person can be judged to be three kinds of hybrid. [8] Summarize and conclude: construction project manager's temperament is taking the choleric type as first and guidance, sanguine type is normalizing (namely long-term throughout the work and life), When need to calmly and earnestly ponder should manifest the phlegmatic and the few melancholic type.

Table 1 The construction project manager's temperament questionnaire

n	content	n	content
1	work safely, do not make the uncertain matter	31	would rather talk than whisper
2	meeting exasperating thing is anger, only speaking heartfelt wishes can be happy	32	people say I'm always unhappy
3	would rather a person doing things than very many people in the same place	33	understanding the problem often slower than others
4	quickly adaptation to a new environment	34	as long as a short rest when tired can fiddle, back to work
5	weary of intense stimulation, such as scream, noise, danger, lens	35	would rather think confidence, reluctant to speak out it
6	quarrel with people, always a pre-emptive strike, like provocation	36	as soon as possible to achieve settled goal, not reach the goal never give up
7	enjoy a quiet environment	37	the same study, work with others after a period of time, often more tired than other people
8	like associating with the human	38	do thing boldly, often without thinking about the consequence
9	envy people who is good at control his emotions	39	when someone teaches new knowledge and technology, always hope he speaks slowly, repeat
10	life regular, rarely violating schedule	40	can quickly forget the unpleasant things
11	in most cases the mood is optimistic	41	do homework or complete a job always spend more time than others
12	think restricts very much encountering a stranger	42	like heavy strenuous activities, or participate in various cultural and sports activities
13	encounter an irritating, self-restraint well	43	cannot get attention from one thing to another thing
14	works always has the exuberant energy	44	after accepting a task, just hope solve it quickly
15	encounter problems often ambivalent, indecisive	45	think conformist stronger than risk
16	never felt too much restrictive in the crowd	46	can simultaneously pay attention to several things
17	when mood soaring, feel interesting does anything, when mood low, feel meaningless does anything	47	when I am annoyed, others is hard to make me happy
18	when focused on one thing, other things are difficult to distract me	48	like watching plot ups and downs, exciting stories
19	understanding problem always faster than others	49	conscientious, consistent attitude about work
20	face not liking things to never say to others	50	can't get along very well with the surrounding people
21	memory ability is strong	51	like reviewing the learned knowledge, repeat already grasped work
22	can long time do boring and monotonies' thing	52	likes doing work in a big changes and more kinds of work
23	a thing conforms to the interest done full of vigor, otherwise does not want to do	53	I as if compared to others clearly remembered poetry childhood could carry
24	a minor matter can cause the mood undulation	54	someone said I "language hurt", but I don't think so
25	hate to do that requires patience, careful work	55	in study and life, fall behind often due to slow

			response
26	not proud and inferiority in communication	56	respond agilely, cerebrum is quick-witted
27	like participating in the fervent activity	57	Like to work organized and less trouble
28	like watching delicate feelings 、 literary works of describing inner world	58	exciting things make me insomnia
29	often be tired of longtime's work and study	59	others speak new concept, I often don't understand, but after understand it is difficult to forget
30	don't like long conversation , willing to actually do	60	if work is dull, the mood will be low immediately

AHP was proposed by American scholar T.L.Saaty in 1977, the basic idea is to divide complex things into several order level, establishes an interior independent hierarchical structure of describing system function or characteristics, then based on a judgment of objective things, makes the quota indication on each level relative importance, namely constructs "comparison judgment matrix", by this matrix maximum characteristic value and corresponding characteristic vector, on the premise of through the consistency check, determine the relatively importance order's weight of each element in every level: through the analysis of all levels, then derives to analysis of the whole question, namely totally sorts the weight. [9]

Using the AHP can construct the following temperament's function formula of the construction project manager:

$$P=f(A, B, C, D)=\lambda_1A+\lambda_2B+\lambda_3C+\lambda_4D$$

$$X=g_1(w_1, w_2, w_3, w_4)$$

$$Y=g_2(w_5, w_6, w_7, w_8)$$

$$Z=g_3(w_9, w_{10}, w_{11}) \quad (1)$$

Among them A is choleric temperament type; B is sanguine temperament type; C is phlegmatic temperament type; D is melancholic temperament type.  $\lambda_1, \lambda_2, \lambda_3, \lambda_4$  is respectively weight coefficient of A, B, C, D; and  $\lambda_1+\lambda_2+\lambda_3+\lambda_4=1$

## Conclusion

Although the temperament's inborn factor occupies the major part, its formation also cannot leave the long-term accumulations of many acquired factors. So sometimes it can be understood as a subjective image people virtually cultivated in the social activities; or is environment feeling melted in the blood and gradually formed the attitude handles matters. Project manager's the experience of long-term team manages and the more special role localization, make him gradually develop a unique temperament belong to the project manager. His unique temperament is not single, but according to the needs of team management and project propulsion, synthesizes many different temperaments to become. Then let's discuss together how to shape the temperament qualities which the construction project managers 'should have.

Sometimes needs to build up a kind of synthetic temperament type composed of choleric temperament, phlegmatic temperament and melancholic temperament for project manager. As a team's leader and constructor, project manager needs to distinguish and record the project role, the responsibility, the skill, the report relations at the beginning of constructing project team, and prepare a staffing management plan; When the project is carried out, project manager needs to track the team members' performance at work, continuously carries on the team achievements appraisal to the project team. These management work for the team let the project manager in imperceptible have corresponding temperament of a leader. When you feel a person looks very a leader, talk like leadership, qualities like leadership, so he is very likely to be the project manager which has rich experience of team management. [10]

Sometimes the project manager should think of yourself as a migrant labor, no matter how big or trivial ,carry on all affairs on entire journey. Although he is not involved in the actual project development, his works actually are also many.

Team works overtime, project manager should accompany; if the project has changes, project

manager should timely change the project's relevant document content, adjust the project team; if the owner is not satisfied, project manager should be patient communication. As a versatile contestant, project manager is revolving the project all night and all day, the development personnel and the owner has all rested, he also needs to be vigilant the project situation frequently. Even in many non-public occasions, project manager is a pair of unkempt and overworked appearance, has the very strong temperament of migrant labors.

Sometimes completely need to shape sanguineous temperament type upon the body of a project manager, let him nimbly fickle, looks like a perpetual motion machine throughout. In the process of projects, will inevitably suffer from setbacks and misunderstanding, so the maintenance team atmosphere, cheer for the team member have become one of the project manager's daily work. Usually the project manager should incarnate the blood cheerleading, cheer for team members in the face of setbacks and loss; incarnate intimate aunt, coax out of team member who is lovelorn happy; incarnate psychology instructors, let the team members to be willing to work overtime and so on. In order to project, the project manager at self-destruction image incarnates various roles and morph to be funny image. Therefore project manager should usually demonstrate the active member and funny image on each kind of activity of the team construction, to bring us physical and mental relaxation. [11]

In brief the project's different stage, there is the different request to project manager, an outstanding project manager can change all kinds of temperament to adapt the project and to lead the project team. They are calm, cool and funny leader, they are overtime funny migrant labors which work hard all day and all night, they are funny images which enliven in each kind of situation, but it happens to be all sorts of seemingly contradictory temperament combine into an organic whole and form the project manager's own unique temperament.

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