Research on the Relationship between Team Roles Theory and Team Effectiveness

——Taking the Sales Team of Company A as an Example

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Abstract: With the constant changes and fierce competition in today's society, the working methods of the team are becoming more and more popular. As a new way of working, it is now quickly recognized by enterprises. Teamwork is the process of personnel allocation and cooperation. During this period, the assignment of team roles becomes an important module of team building. The definition of roles is also very helpful to improve the soft power of a team. Thus, in this paper, the concepts of the team, team role, team role theory and team effectiveness are fully summarized. Then, the team of A company is used as the research object. And the Belbin's team roles questionnaire is used as a research tool to analyze the factors, and last we analyse the current situation and problems of the company team, and conclude the correlation between the company's team roles, and analyse the relationship between each individual team role and team effectiveness. And eventually the author hopes the finding may provide the reference for some other enterprise teams.

1. Overview of Team Roles Theory

A team is a community organized by people with common beliefs for achieving common goals. Through communication and exchanges, members maintain a high degree of consistency in goals, means and methods, and use collective wisdom to pool human, material and financial resources to solve problems and achieve common ends.

The word "role" originated from the drama stage and was later used by sociologists to describe "the behavior pattern of an individual in a certain social status who adapts to the social environment with his subjective ability based on the objective social expectation". The role exists in a certain social environment, and is affected by both social expectation and personal ability. Generally, it is the result of the individual's coordination and adaptation to the external environment and finally manifests itself in a certain behavior pattern.

A team role is defined as the performance and team contribution of a team member with specific personality traits and abilities. In 1981, Belbin first proposed that there were eight roles in a team: plant, resource investigator, chairman, shaper, monitor evaluator, team worker, company worker, and completer-finisher. In 1993, he also added a specialist role and changed two names: coordinator for chairman and implementer for company worker. According to Belbin, team composition is an important factor for affecting team performance, which is related to the roles played by different team members and the interrelationships with other team members. Besides, Belbin's team roles theory also has a great effect on team building, and its theoretical model is considered to be an effective tool to guide the team.

2. Team Effectiveness Theory and Measurement

Team effectiveness is an important predictor of long-term, sustainable improvement of team performance, and also reflects the level of effort and sustainability of team work. The evaluation forms of team effectiveness are as follows: firstly, the team effectiveness questionnaire. The team effectiveness questionnaire is a self-assessment questionnaire for team members, which has been

widely used in the follow-up research. It mainly uses 7 feature variables as the measurement of team effectiveness, including production conflict resolution, mature communication, role clarity, interdependence, clear goals, common will, and psychological safety. Secondly, it's team effectiveness scale, which includes three aspects: task performance, relationship performance and cooperative development intention. The scale consists of 20 items, mainly including five factors: team mission, goal achievement, authorization, open and effective communication, clear roles and rules. Thirdly, it's team performance scale, which uses the 5-point scoring method and has good reliability with the coefficient of total scale being 0.901.

3. Research on the Relationship between Team Roles Theory and Team Effectiveness--a Case Study of a Real Estate Company's Sales Team

3.1 The Current Situation of the Company Team and the Existing Problems

In 1993, the company A devoted itself to the construction of China's reform and opening up, then setting up a precedent for Hong Kong real estate companies to invest largely in the real estate field of mainland China. In the past decades, the company has implemented such development strategies as the regional center and series of brands with its spirit of determination and dedication, and has become one of the real estate developers with the best performance, the largest development scale and the largest number of owners in mainland China.

The existing form of company A's team is basically a work team composed of functional departments, such as technical team, production team, management team, sales team. However, such an existing team has some problems, which as follows: firstly, team members feel that they have little autonomy, and have no right to make decisions except to complete the company's work and goals; secondly, the team members find it difficult to give full play to their talents, and think that there are some problems in the division of labor, and they are even not clear about their roles. At the same time, they feel that such a working environment will limit their vision greatly; thirdly, the team members think that the work flow is very complicated, and even small things need to be signed in 3 or 4 links, which is quite inefficient and becomes a huge burden for team members; fourthly, such problems as emotional estrangement between team members, different professional backgrounds and lack of coordination between team members and themselves, all make the team members' role distribution, team communication, team effectiveness and other advantages not fully played to achieve the optimal effect and best results.

Therefore, the author believes that it is necessary for the team of company A to know and use the team roles theory well in order to solve the above problems. And only in that case, the team members can fully understand the roles they are suitable for, and change the original way of forming a work team by functional departments, and finally improve the team cooperation. Besides, the members' autonomy should be promoted, and give full play to their potential for team members to better complete their work, and enhance the team cohesion so as to improve team effectiveness.

3.2 Research Tools

In this paper, Belbin's self-assessment questionnaire will be used for research, and the quantitative and qualitative analysis will also be carried out according to the results of the questionnaire. The subjects of this questionnaire were eight roles except experts. And the questionnaire is divided into seven parts. Each part will consist of eight sentences. The principle of distribution is: the sentence that best reflects your behavior scores the highest, and so on. In the most extreme case, all 10 points could be given to just one of the sentences. Finally, the total score was calculated according to Table 1.

Table 1. Statistical Orders of Team Roles Test Options

Question Number		CW		CO		SH		PL		RI		ME		TW		CF
No.1	G		D		F		C		A		H		B		E	
No.2	A		B		E		G		C		D		F		H	
No.3	H		A		C		D		F		G		E		B	
No.4	D		H		B		E		G		C		A		F	
No.5	B		F		D		H		E		A		C		G	
No.6	F		C		G		A		H		E		B		D	
No.7	E		G		A		F		D		B		H		C	
In Total																

Note: CW(Company Worker); CO(Coordinator); SH(Shaper); PL(Plant); RI((Resource Investigator); ME(Monitor Evaluator); TW(Team Worker); CF(Completer Finisher)

In his research, Belbin found that the degree of strength between role plays could not be simply determined by direct comparison with absolute scores. Then through further empirical study, he gave a corresponding table of criteria. Later in 1999, on the basis of Belbin, two English scholars, David Partington and Hilary Harris from School of Management of Cranfield University took more samples to study and finally a new set of quantitative values of judgment criteria was obtained, as shown in Table 2. In view of the fact that this table adopts more research samples and the research is relatively new, this paper mainly uses their criteria to measure the role distribution of the research team.

Table 2. Corresponding Criteria for Roles Tendency

The Degree of Roles Tendency	CW	CO	SH	PL	RI	ME	TW	CF
Low	0-8	0-5	1-10	0-5	0-6	0-6	0-6	0-3
Middle	9-12	6-9	11-14	6-9	7-10	7-9	7-10	4-6
High	13-16	10-12	15-19	10-14	11-13	10-11	11-14	7-10
Very High	17-27	13-27	20-31	15-36	14-25	12-25	15-26	11-19

3.3 Statistics and Analysis

The correlation between team roles is relatively complex, some with positive correlation and others with negative correlation. So this paper only studies the correlation between significant roles at the level of not less than 0.01.

Table 3. Results of Correlation Analysis

		CW	CO	SH	PL	RI	ME	TW	CF
CW	Pearson Correlation	1	-.016	-.221*	**-.506****	-.274**	-.060	-.140	.208*
	Sig. (2-tailed)		.865	.020	.000	.004	.536	.146	.029
CO	Pearson Correlation	-.016	1	-.189*	.057	-.344**	-.165	.009	-.258**
	Sig. (2-tailed)	.865		.048	.551	.000	.086	.924	.006
SH	Pearson Correlation	-.221*	-.189*	1	.272**	.009	-.252**	-.383**	-.290**
	Sig. (2-tailed)	.020	.048		.004	.924	.008	.000	.002
PL	Pearson Correlation	-.506**	.057	.272**	1	.164	-.241*	-.221*	**-.457****
	Sig. (2-tailed)	.000	.551	.004		.087	.011	.020	.000
RI	Pearson Correlation	-.274**	-.344**	.009	.164	1	-.126	-.066	-.317**
	Sig. (2-tailed)	.004	.000	.924	.087		.189	.493	.001
ME	Pearson Correlation	-.060	-.165	-.252**	-.241*	-.126	1	-.202*	.121
	Sig. (2-tailed)	.536	.086	.008	.011	.189		.034	.209
TW	Pearson Correlation	-.140	.009	-.383**	-.221*	-.066	-.202*	1	-.091
	Sig. (2-tailed)	.146	.924	.000	.020	.493	.034		.346
CF	Pearson Correlation	.208*	-.258**	-.290**	-.457**	-.317**	.121	-.091	1
	Sig. (2-tailed)	.029	.006	.002	.000	.001	.209	.346	

From Table 3, company worker and plant, company worker and resource investigator, coordinator and resource investigator, coordinator and completer finisher, shaper and monitor

evaluator, shaper and team worker, shaper and completer finisher, plant and completer finisher, resource investigator and completer finisher all have significant negative correlation relationship while shaper and plant are significantly positive correlation. The above situation is related to the different working characteristics and forms of each team. From the correlation, it can also be seen that each role could not only be complementary to each other but also conflict with each other, which also indicates that the team members should communicate more and then get along well with each other.

3.4 Correlation Analysis Between Individual Team Role and Team Effectiveness

Except for resource investigator, the relationship between other roles and team effectiveness has not reached the level of significant correlation. However, from the perspective of correlation coefficient, some roles are negatively correlated with team effectiveness, while some are positively correlated, both indicating that individual team role still makes a difference to the team effectiveness according to Table 4.

Table 4. Correlation Analysis Results

		T.E.	CW	CO	SH	PL	RI	ME	TW	CF
Pearson Correlation	T.E.	1.000	**-.010**	**.119**	**.034**	**-.001**	**-.203**	**.063**	**-.028**	**.034**
	CW	-.010	1.000	-.016	-.221	-.506	-.274	-.060	-.140	.208
	CO	.119	-.016	1.000	-.189	.057	-.344	-.165	.009	-.258
	SH	.034	-.221	-.189	1.000	.272	.009	-.252	-.383	-.290
	PL	-.001	-.506	.057	.272	1.000	.164	-.241	-.221	-.457
	RI	-.203	-.274	-.344	.009	.164	1.000	-.126	-.066	-.317
	ME	.063	-.060	-.165	-.252	-.241	-.126	1.000	-.202	.121
	TW	-.028	-.140	.009	-.383	-.221	-.066	-.202	1.000	-.091
	CF	.034	.208	-.258	-.290	-.457	-.317	.121	-.091	1.000
Sig. (1-tailed)	T.E.	.	**.458**	**.108**	**.362**	**.494**	**.017**	**.257**	**.384**	**.363**
	CW	.458	.	.433	.010	.000	.002	.268	.073	.014
	CO	.108	.433	.	.024	.276	.000	.043	.462	.003
	SH	.362	.010	.024	.	.002	.462	.004	.000	.001
	PL	.494	.000	.276	.002	.	.044	.006	.010	.000
	RI	.017	.002	.000	.462	.044	.	.094	.247	.000
	ME	.257	.268	.043	.004	.006	.094	.	.017	.105
	TW	.384	.073	.462	.000	.010	.247	.017	.	.173
	CF	.363	.014	.003	.001	.000	.000	.105	.173	.

Among them, coordinator, shaper, monitor evaluator and completer finisher all have a positive correlation with team effectiveness. Coordinators are relatively stable and have a strong sense of goals. Therefore they can lead team members to better achieve goals and maintain good interpersonal relationships. And generally, shapers can help to urge team members to complete tasks as soon as possible. When it comes to monitor evaluators, they usually have strong judgment and clear mind, and are decisive in making decisions. And for completer finishers, they are the core strength of the team, and the better their tasks are completed, the more beneficial they will be for the team. Besides, in this study, other roles are all negatively correlated while only the resource investigator (RI) is significantly correlated at the 0.05 level. Therefore, it can be seen that the role of RI has a significant impact on team effectiveness, but regression analysis is required to further prove whether there is a causal relationship.

4. Conclusion

According to Belbin's team roles theory, a good team should have balanced roles, each member meeting the specific needs without repeating with other roles, so as to overcome the weaknesses and give full play to their advantages. According to the correlation analysis results of team roles, some roles are significantly correlated. That is to say, one person can assume multiple roles in a team, or only one role. From the correlation analysis results of team roles and team effectiveness, it can be seen that only the resource investigator has a significant correlation with team effectiveness. Meanwhile, the resource investigator can have a prediction effect on the team effectiveness. Of course, other roles also have a certain impact on team effectiveness.

Anyway, when selecting team members, we should pay attention to the combination of different team roles. And the allocation of team roles is very key to a team because each team's role must be balanced so that it can effectively generate constraints and then improve team effectiveness. Therefore, when selecting a team member, enterprises should not only focus on the relevant professional or work backgrounds, but also pay attention to the role assignment of the existing team, and then use this as a reference to select the most suitable person. Meanwhile, for team members, they should correctly realize their personal characteristics, understand the tasks and functions of various roles, and then enhance their flexibility so as to supplement it in time without affecting the normal operation of the team when the team lacks this role.

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