

## Study of Team Effectiveness Models

<sup>1</sup>Mr. Dilip M. Chavanke, student, ME C&M.

<sup>2</sup>Upendra R. Saharkar Assistant Prof..Department of Civil Engineering,  
D.Y. Patil Institute of Engineering & Technology, Ambi, Talegaon, Pune.

**Abstract :** Building projects are often related to schedule and cost management constraints. It is essential for a team to understand the whole set-up and the significance of an effective team. The members of the building team are selected based on the abilities of each of the team members, particularly the specialist discipline, knowledge and experience. In addition, some are chosen depending on project needs such as social, political and economic factors. Team members share the same overall experience and impact of project operations. “According to Cornick and Mather, however, they are also extremely diverse, since everyone has:

- Unique and frequently complicated cultural features of companies that make them operate in a certain manner as a group that may be equally applicable for the companies of designers and builders as well as to the owners.
- Unique personal qualities help them conceive about the project in a holistic or concentrated manner, designing or producing, and behaving to other team members in a particular way.
- They have a disciplinary group history, which has historically placed them, via conventional contractual agreements, in specific positions and relationships, including owners.

**Key Words :** Team, Effectiveness,

**Introduction :** Different team efficiency research have resulted in model team efficiency. Models of team efficacy in this part primarily looked at teams in general, because in construction teams there is little literature on the team efficiency model.

Several studies have established sets of factors or notions for determining team efficiency. For this research, it is thus important to consider several team efficacy models to identify variables for team efficacy which may be used to create evaluation instruments for this study. In the late 1980s, normative team-efficiency models developed and emphasises leverage practitioners might use to improve team-efficiency[9]. According to the idea of input-process-output (IPO), the earliest development of team efficiency models was essential. IPO theory expects input

variables such as team and individual features to affect output, such as team happiness and performance, via mediators or moderators (Salas et al. 2009)". This section covers many key chronologically ordered model team effectiveness. "You are mentioned below

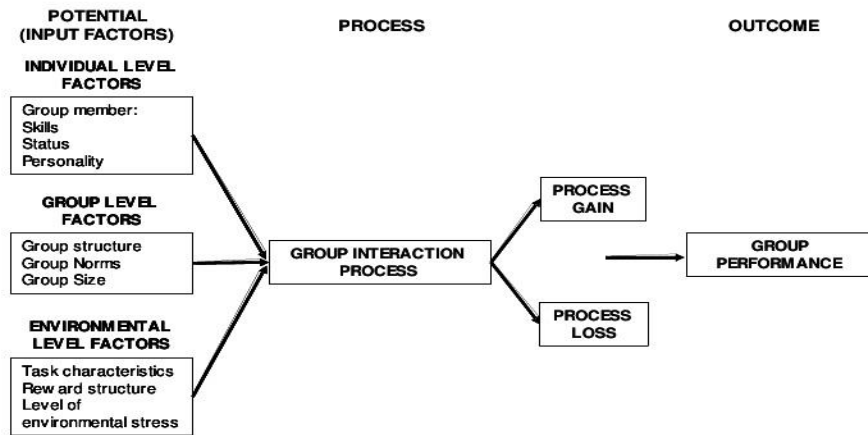
- Model Driskell
- Model of fir trees.
- Model Canon-Bowers
- Model Klimoski and Jones
- Model Raskar
- Model blended

Some of the key models are described in the chart below

### 1. DRISKELL MODEL

Driskell's team efficiency model in Figure 1 shows the IPO framework. There are three tiers of variables on the input side—indeed, individual levels, group levels and environmental elements. All input variables are considered productivity opportunities for the team, but they do not guarantee team efficiency. The input factors are the result of the group interaction procedure in which mountains may achieve above what was expected on the basis of group input factors when a team takes use of the opportunity to pool resources and correct errors, even beyond its cost component member. The efficiency model of the team, described by Driskell, takes into account how the environment affects team operations and results. It is enough to infer that efficiency has evolved through team interactions.

### ***Driskell et al. Team Performance Model***



**Fig. 1 Team effectiveness model by Driskell**

## **2. SALAS MODEL**

The model of team efficiency by Salas in Figure 2 indicates that the organisational context and team conception influence the communication process of the team, which ultimately affects the Team's performance quality. Team synergy contributes to the development of process efficiency criteria via interactions between team members, knowledge and skills which are used by team members for tasks and the strategies for task execution. Salas also indicates the resources given to the team affect efficiency; these proper tools, equipment, etc. are all elements which improve the performance of the team. This model of team efficiency stresses organisational context, team cohesion, resources materials and distinguishes team and task results in terms of Group effectiveness. The approach does not, however, emphasise the significance of team leadership.

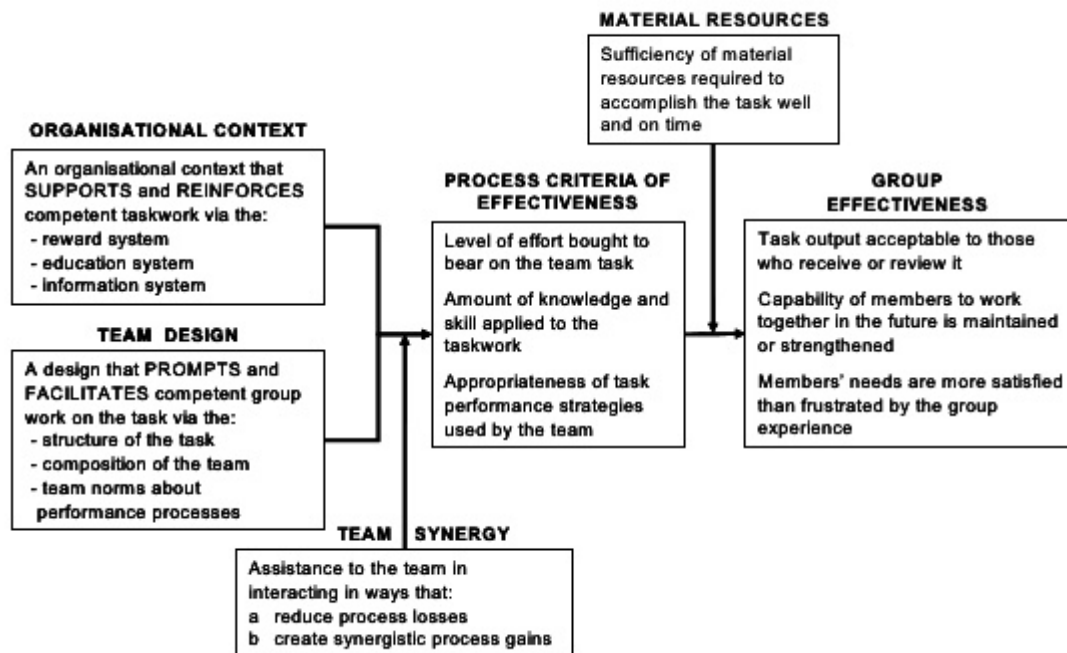


Fig 2. Team effectiveness model by Salas

### 3. TANNENBAUM MODEL

In Figure 3, The team efficiency model of Tannenbaum includes the IPO structure, acknowledges the significance of organizational and scenario settings throughout the process and integrates feedback loops. The input consists of four variables: work characteristics, job structure, person characteristics and team characteristics. Gladstein and Tannenbaum indicate that a better team has superior individual tasks, skills and abilities. This approach includes both team interventions and input variables - the team's overall performance is the final effect Due to team procedures, there will be changes within the team and individual changes. Once the performance of the team is evaluated, comments on the qualities, working structure or other inputs and processes of the members will be provided. In addition, a continuous team performance assessment may influence team procedures and team performance. This paradigm emphasises the functioning of teams and differentiates between collaboration and work at individual and team levels.

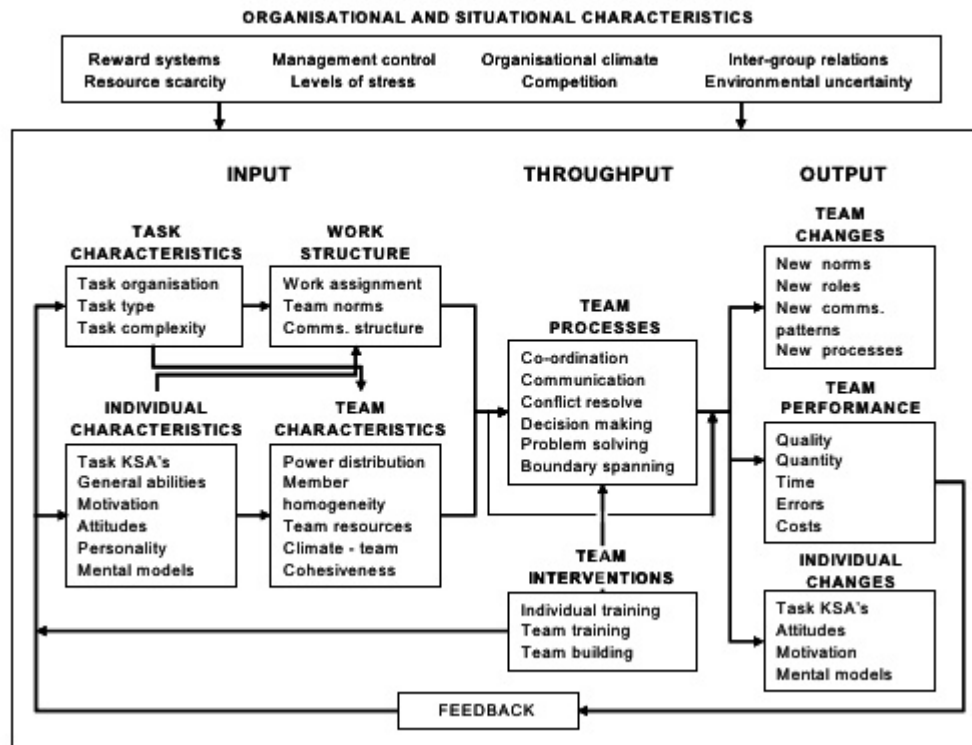
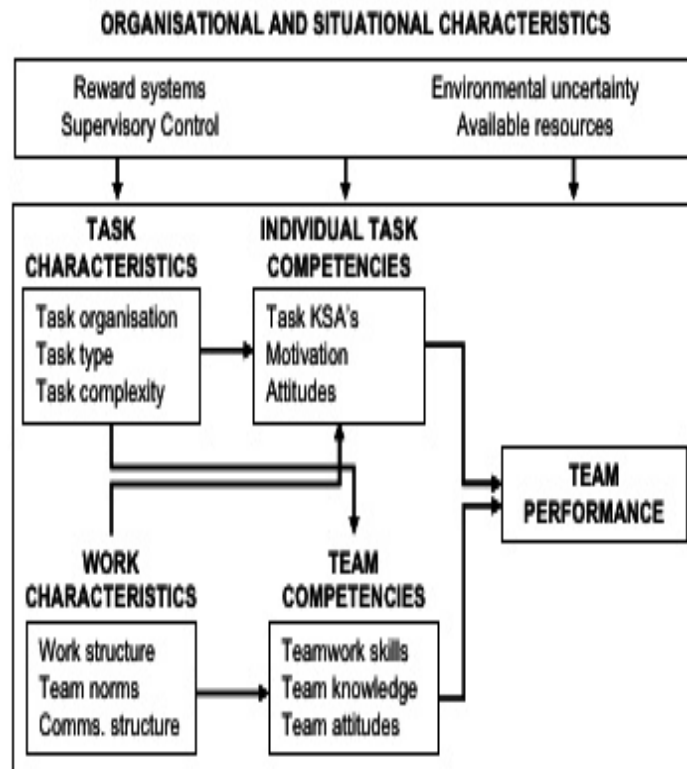


Fig. 3 . Model of team effectiveness from Tannenbaum

#### 4. CANNON-BOWERS MODEL

Cannon-Bowers adopted a framework similar to Tannenbaum's presentation. Organizational and scenario features are believed to be important for the overall success of the team. Cannon-Bowers suggests that tasks and working features assist to discover individual and team skills that influence team performance. This model, like the preceding model, emphasises the relevance of team and task skills for team training and performance. (Table 4)



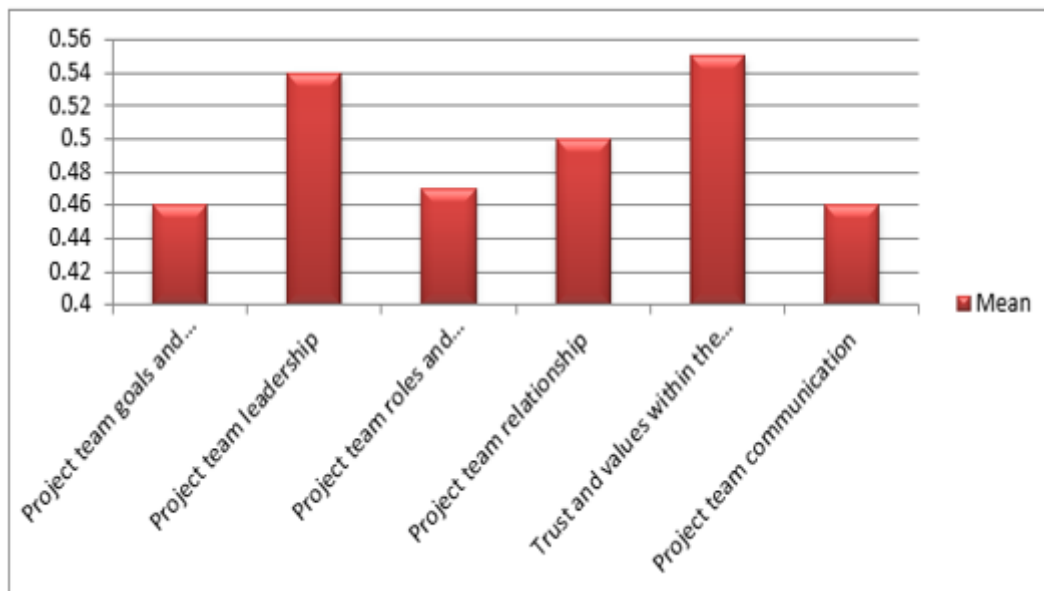
**Fig 4. Model of team effectiveness from Cannon-Bowers**

## 5. KLIMOSKI AND JONES MODEL

The model created by Klimoski and Jones shown in Figure 5 highlighted the environmental needs and resources as the most essential elements of the team. The input factors include organisational and team standards, composition of knowledge, skills and attitudes (KKSAs), team size and leadership, because the leadership effects of both formal and emergent leadership positions on team performance are leadership. Klimoski and Jones stress that successful teams rely on many elements for process variables, including team interpersonal dynamics, the degree of antagonism or mistrust in the team and compatibility team members. The Result The mentioned variables are a distinction between task-based and team-based. Team turnover may also be predisposed to the happiness and emotional tones of team members, such as a pleasant atmosphere and support.

Factor	Mean
Project team goals and objectives.	0.46
Project team leadership	0.54
Project team roles and responsibility	0.47
Project team relationship	0.50
Trust and values within the project team.	0.55
Project team communication	0.46

**Table : overall means of main factors responsible for team effectiveness**



**Fig: overall Main factors responsible for team effectiveness**

Above chart shows an overall comparison of the main factor responsible for team effectiveness for this project on the basis of relative index analysis. Fig shows a high relative index of trust and values within the project team i.e. 0.55 ranked at 1<sup>st</sup>. Project team goals and objectives and project team communication having lowest relative index of 0.46 ranked at 6<sup>th</sup> and all remaining factor are ranked in sequential order.

It shows that project team leadership has most influence the factor of team while project team roles and responsibility has least effect”.

### **Conclusion :**

For decades, the quest for a better, more inclusive view of team performance has persisted. Since the early 20th century, globalisation, technology and the complexity of the job have led

more companies to realise how important it is to assess the efficacy of teams in these contexts. It is essential for the team, once the idea of teamwork is established, to know how to operate together successfully. An successful team would need constant monitoring of team circumstances so that team members may adapt their duties to each other and the desired objective.

#### References :

1. C.I. Anyanwu, "The Role of Building Construction Project Team Members in Building Projects Delivery" 2013.
2. Ferguson, Jan (2003): Building in Practice. Mitchell, London. (2003, p.63),
3. Griffith, Alvan. Quality Assurance in Building. Macmillan London. 2009. (p. 8-1
4. Nurhidayah Azmy, 2012, The Role of Team Effectiveness in Construction Project Teams and Project Performance, Iowa State University.
5. Omid Khoshtale & Mehdi Mahdavi Adeli, 2016 "The relationship between team effectiveness factors and project performance aspects: A case study in Iranian construction project teams". Internal Journal of Humanities & Cultural Studies ISSN 2356-5926
6. TUULI, M.M. ... et al., 2012. Empowering the project team: impact of leadership style and team context. Team Performance Management, 18 (3), pp. 149 - 175