Accomplishment of goal levels in multi team systems: Role of leadership skills and multicultural teams

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Abstract- Teams are increasingly engaged in networked interaction across teams and organizational boundaries in order to achieve complex, lower order and higher order goals. Considering the fact that the goals accomplishment is the basic necessity of organizations, this study aims at exploring the accomplishment of goal levels in multi team systems (MTSs). There exists an absence of theoretical models focused on systems composed of such teams. This study therefore, proposes a predictive model to improve understanding in this regard. It has been suggested that the higher order goals are more effective to accomplish under sequential and reciprocal functional process inter dependencies. Conversely, the lower order goals are more effective to accomplish under intensive functional process inter dependency. However, this goal achievement requires facilitators to make it more effective because of which moderators such as leadership skills and multicultural teams are proposed within the suggested framework.

Key words: higher order goals; lower order goals; sequential; reciprocal and intensive functional process inter dependencies; multi team system; leadership skills; multicultural teams

1. INTRODUCTION

Multi team system (MTS) is such a system where two or more largely interconnection group pursue overall system goals and constituent team objective (i.e. objective of teams interconnecting the whole system). It is predominant to examine team and MTS results concurrently (Asencio & DeChurch, 2017)[1]. MTS may exist within and/or outside the organization, and it is a network of component teams working towards shared goals (DeChurch & Mathieu, 2009)[5] in addition to their predominant team objectives. Furthermore, according to Mathieu, Marks, & Zaccaro (2001)[20] within MTSs the predominant have systematic process interdependence which is defined as dedication, reliance, shared interest and reciprocal influence that component teams use to achieve MTS goals. Asencio & DeChurch (2017)[1] explained that in response to environmental contingencies, two or more teams interface interdependently and directly, towards the achievement of collective objectives. The borderlines of MTS are examine by the certainty that all teams under the process share at least one common major objective. Input, process, and outcome interdependence is exhibited by MTS (Mathieu et al., 2001)[20].

In MTSs’ the main objective hierarchy, objective level relates to the position of specific goal, for instance, lower order goal and higher order goal. In this perspective, Mathieu Marks, & Zaccaro (2001)[20] articulated that higher objective goals based on the performance of lower level objectives. The level of main objective matters as it seize predominant team objective decisions while dealing randomly with different low level and high level objectives. Furthermore, when ambulance crew have to manage with crucial road accident then It need the involvement of several crews and police as well, first ambulance crew arrives with the goal of coping with injured individuals for the purpose of providing first aid and to get them with the help of police. While, integrating the actions of other ambulance crew which may arrive later the injured individuals are taken to hospital with the least harm. So, the level of objective impact the choice of resource allocation between teams versus within team (Kanfer & Kerry, 2012)[14].

When predominant teams have identified and compute the goals, while going through a transition phase, then goal-striving process ensures and action phase begins. During
this action phase predominant teams attempt to extend their objectives (according to many viewpoints: Marks, Mathieu, & Zaccaro, 2001)[18]. Here, goal striving means the sets of processes and activities in the attainment and fulfillment of goals that can be achieved by individuals, multi teams and component teams. According to Luciano, DeChurch & Mathieu (2015), teams plan for a valuable advantage for the MTS in their planning process. However, the adaption of goal striving resulting from goal hierarchical changes are due to the insertion of new objectives that ascend from the operational conditions which are basically not included in goal hierarchy of MTSs. For instance, ambulance crew not only extracts victims from vehicle at road accident but also diverts traffic, clears the roadways and minimizes additional health loss. On the contrary, Luciano, DeChurch, Mathieu (2015) argued that goal striving adaption leads to diversion of attention because for achieving MTS goals the component teams cannot concentrate all of their resources in this regard.

While discussing the systematic sequence inter dependencies (back to back, corresponding, and concentrated), each systematic sequence imposes and differs on the basis of certain sequence of behaviors which lead them to the exploit of predominant team objectives. In this perspective, goal attainment coincides task requirement (control theory; Klein, 1989)[16], the lower the level of objective, the more malleable team members will be required to accomplish the goals. The flexible team members mean the flexibility of behaviors in team members. Thereby, we conclude that component team efforts may be redirected by the kind of practical procedure interconnected (back to back, corresponding, and concentrated) at performing their role within the MTS. In sum, the demand of higher order goals is to sustain efforts of planning which require longer duration of efforts; these efforts may be facilitated by reciprocal and/or sequential process interdependence. On the contrary, as lower order goals facilitates quick adjustment and promote the synchronization of predominant team objectives so, these the objective of attainment will satisfaction from concentrated systematic procedure of interconnection between them.

Thus, the purpose of this research paper is to investigate the effective accomplishment of goal levels (low level and high level objectives; discussed above) in MTSs in the presence of reciprocal, sequential and through systematic procedure inter interconnected. Since objective endeavor can facilitated by objective hierarchy and hindered by deflection of recognition, there may be other factors that may equally moderate the relationships between processes inter dependencies and accomplishment of goals. One such factor that may affect the goal accomplishment through sequential and reciprocal process interdependency is leadership skills which is referred to as ‘the appropriate two-way communication skills for communication, reinforcement and decision-making’ (Pearsall, Christian, & Ellis, 2014)[24] which is also being proposed in the current study. Secondly, while discussing the intensive process functional process interdependency it is possible that the culture from which the team members belong affects their perception and subsequent action in relation to the multi-team scenarios (Moriconi & Carvalho, 2016)[23]. Hence the moderating role of multicultural teams is being proposed in this study as well. Notably, in simple words the dominant construct and contribution in this study is leadership skills and multicultural teams. Their moderating role between functional process interdependence and hierarchical goal accomplishment has been neglected in previous literature, especially in the study of (Rico, Hinz, Davison, & Salas, 2016)[25]. Thus, we propose the proposition 1b and 2b i.e. the main contribution in the proposed model of (Rico et al., 2016)[25] who had extend the proposed theoretical model of Luciano et al. (2015)[17].

2. PROPOSITION DEVELOPMENT

Mathieu, Marks, & Zaccaro (2001)[20] defined functional process interdependence as it “involves the mutual reliance, determination, influence, and shared vested interest in task and team processes that are used to accomplish work activities”. These inter dependencies rather considering typical attention to outcomes focus on the process. Furthermore, functional process inter dependencies shows in three process named as: corresponding, sequential and concerted (Ven, Delbecq, & Koening, 1976[30]; Mathieu et al., 2001)[20].

When different parts of task demand to be completed in a give-and-take fashion then reciprocal functional process interdependence appears and there exists some level of pliability in the objectives of tasks in this type of inter dependencies. In this context, the transition and action series of each part of team extend. This corresponding kind of functional process interconnection shows in MTSs e.g. at intense road accident whereby ambulance squad, police and voluntary ambulance crew overlap in an interactive fashion while performing their activities until creating stable environment. In this scenario, coordination among component teams is a vital element, easing the operate of these MTSs, the coordination raises due to direct coordination strategies i.e. forecasting (Rico et al., 2016)[25] and leadership structure (Mathieu et al., in press).

Sequential systematic series interconnected shows when task requirements impose unidirectional workflow. There is need of interaction among component teams to effectively reach the goals. Nonetheless, component teams work in a sequence e.g. one element group requires to operate before another component team (Rico et al., 2016)[25]. Thus, in a specific sequence component teams operate for the MTSs to achieve their goals. For instance, in a medical field when patient being operated by a medical team first pursues blood from the donor then transportation/carrying groups transfer the blood to the executing group followed by a medical team which
implants the blood into the recipient. Lastly, a medical group takes care of the recuperation of the tolerant. Furthermore, there need to be a degree of consistency between systematic procedures interconnected and the objective hierarchies in the MTS.

Team task interdependence is therefore effective as long as there is coordinated effort between the team members (Pearsall et al., 2014)[24]. This interdependence becomes efficient only when there is a strong leadership that controls the interactions between teams in sequential or reciprocal processes (Sloan, Ostrom, & Cox, 2013)[26]. Leadership is always an issue of treating when collective procedure follow the common objectives. The study of leadership is already a rich area of MTS research (DeChurch et al., 2011[6]; DeChurch & Marks, 2006[7]; Marks et al., 2005[19]; Mathieu et al. 2015). Connecting this fruitful study on leadership with the theories included in our model could lead to absorbing research questions. For example, what is the moderating role of leadership skills between sequential process inter dependencies and accomplishment of goals? It will be interesting if we discuss that there is need of interaction among component teams to effectively reach the goals and here the coordinating leadership behaviors could have a strong role to create constituent teams objectives choice and goal-attempt links with MTS performance when component teams work in a sequence e.g. one element group needs to operate before another component team (Rico et. al., 2016)[25]. Therefore, it is not unexpected that the role of leadership in MTS research has received the consciousness to manage the sequential functional process interdependence when tasks require unidirectional workflow to get them completed (DeChurch & Marks, 2006[7]; Mathieu et al., in press). Leadership is needed to assign duties, allot resources, or synchronize tasks. Hence, if group members in component teams engaged in the shared leadership process to back up and promote their ceremonial leaders, team goal achievement in these constituent teams is likely to be higher when different parts of task demand to be completed in a give-and-take fashion and a result reciprocal functional process interdependence appears. In this context, the transition and action phases of each component team overlap. To resolve the issue of overlapping, an effective coordination looks very important to achieve such type of goals. Thus the systematization seize the spirit of merging individual temptation toward a collective goal, so the result of leader behaviors on this important process seem very important.

Most definitions of coordination further explain the reasons of collective tasks being performed with synchronicity (Zalesny, Salas, & Prince, 1995)[31]. Marks et al. (2001)[18] defined group engagement as “the process of orchestrating the sequence and timing of interdependent actions” (pp. 367–368). Coordination at the MTS level can be defined as range that ordering and timing of linkage actions between teams. Training MTS leaders to create design that focus on inter team activities during transformation periods that facilitate and kinked with inter team activities during action phases should result in more effective inter team coordination process. So we may propose that leadership skills moderate the connection between the reciprocal systematic inter dependencies and the accomplishment of goals.

For example, when the accident victim determines that there needs to be a leader at the spot who can simultaneously direct the team to call the ambulance, one to arrange the blood transfusion if required and one to deal with the police reporting routines. In the absence of leadership skills each person/team would start functioning on its’ own and there would be chaos that would result in unnecessary delays and unexpected (possibly) negative outcomes.

So we propose in this regard:

2.1 Proposition 1a
Higher order goal striving will be more effective to accomplish through sequential and reciprocal functional process inter dependencies

2.2 Proposition 1b
Leadership skills of the team manager will moderate the relationship between goal striving and sequential and corresponding systematic process inter dependencies in such a way that goal accomplishment will be more effective.

In terms of diversity, McGrath, Berdahl, & Arrow, (1995)[22] explained, it is a group’s characteristics which defines the demographic boundaries such as ethnicity, nationality, gender, or race, all of which possible contribution to a cultural identity. Individuals of these team tend to share certain priorities, norms, world views, sociocultural heritage and objective (Ely & Thomas, 2001)[8]. The proposition 2b focuses on diversity in national culture. Diversity exists due to cultural differences, culture is a series of shared assumptions, values, traits, norms and patterns of behaviors by group of people which distinguish them from other group of people (Geertz, 1973)[11]. In teams and organizations the diversity is increasing with significant implications for interpersonal dynamics and collective outcomes (Cramton and Hinds, 2014)[3]. However, despite its increasing importance and prevalence, management literatures have little attention on cultural diversity (Hinds, Liu, & Lyon, 2011)[13]. Therefore, this paper has novelty by focusing on multi-cultural teams (see fig 01) to accomplish goals. Although, in multinational companies many work groups are globally well known because their members are from several cultural identity groups (Brannen & Peterson, 2009)[2] but study on multicultural teams working in multi team system is in its nascent stages.

Now Beyond the cultural diversity the multicultural teams’ members exchange knowledge via teams’ interaction, coordination, cooperation and collaboration. Previous literature explicitly have emphasized the need of research at multicultural teams and knowledge exchange among multicultural teams for goal accomplishment.
Through systematic procedures interdependence shows when the duties requires correspondent groups’ concerted and joint actions in real sense. Therefore, in action to the need of concurrently coordination between component teams there is a big chance of overlap between action and transition phases of various Correspondent groups. The pattern of workflow within and between MTSs occurs in intensive functional process interdependence with the autonomy that which work needs to be done first and which one later. Thereby, Saavedra, Earley, & van Dyne (1993) explained parallel team interrelated forms and this type of interdependence relies on strengthened mutual interactions. In the context of mutual interaction Kennedy, Sommer & Nguyen (2017) demonstrated the benefits of using behavioral research methods to ensure behavioral patterns and generate propositions for actual research in the area. Intensive function can be establish when a MTS unflustered of ambulance squad and exigency medical teams operate simultaneously to provide first aid and take patient to hospital soon after accident where hospital’ medical team captures the patient (from example-01 and example-02).

Since parallel team interdependence relies on mutual interactions, culture plays an important role in this intensive functional process interdependency, because when component teams take joint actions in real time then may the cultural traits, norms, values, characteristics and more especially preferences of team members influence the required goals negatively. For example, corruption tolerance is of different level in different countries (Moriconi & Carvalho, 2016). Similarly if seen from a gender perspective males are more tolerant for bribery as compared to women. Preference of several different objectives in the hierarchal order should be prominent and understood to the component groups. For instance, in an accident if there are multiple victims, each of the families would want the emergency squad to look after their patient. In such a case there are a lot of chances of the squad members to be bribed or influenced through powerful people to give undue preference to victims. Hence multicultural teams may possibly hinder the accomplishment of goal through intensive functional interdependency.

So we propose that:

2.3 Proposition 2a
Lower order goal striving will be more effective to accomplish through intensive functional process interdependency

2.4 Proposition 2b
Multicultural teams will negatively moderate the lower order goal striving through intensive functional process interdependency

**Figure 1. Framework:** This model is grounded on goal hierarchy characteristics (goal levels; lower order goals & higher order goals) and functional process interdependence (sequential, reciprocal, and intensive).

### 3. DISCUSSION AND CONCLUSION

Hence these three types of systematic procedure interdependencies (back to back, corresponding, and concentrated) force that these order of behaviors which covers to the fulfillment of elements and multi group objectives. In this context, goal attainment have harmony with task requirements (control theory: Klein, 1989) and objective level achievement depends on the flexibility of behaviors (e.g. the lower the goal level, the more flexibility in group members’ behaviors in its attainment).
Similarly, in summarizing point of view the type of systematic procedures inter dependencies may redirect elements group efforts within MTS at participating their importance, as well as by helping and monitoring other component teams while operating and performing their tasks. Consequently, intensive functional process interdependence benefits lower order goal achievement because it nurtures the harmonization of group element’ tasks and further facilitate the quick adjustments. On the other hand, lengthier efforts for higher order goals will demand either reciprocal or sequential functional process inter dependencies, component teams sustain planning and efforts which may facilitate them.

In addition to the behavioral approaches, it is often the case that different elements group operate in an intensive manner and they have same proximal goals. On the contrary, other component teams’ operations are depend on a sequential or even reciprocal level of interdependence. While talking about the MTSs goal hierarchy the component team objectives are based on different places of hierarchy. The model proposed here is grounded upon the type of systematic procedure interdependence and MTSs’ goal hierarchical characteristics with moderating role of leadership skills and multicultural teams. The growing body of knowledge on MTSs has inspected elements which may hinder MTS performance (Asencio & DeChurch, 2017)[1]. In summarizing, it is concluded that the coordination of activities of multi teams and component teams are necessary to accomplish hierarchical goals. In this perspective, Davison and Hollenbeck (2012)[4] demonstrated that MTSs’ efficacy depends seriously on how well component objectives interrelate their activities with each other up to the maximum extent of cultural diversity in team members and finally what is the extent of their dependency upon leadership skills imposed efficiently. Furthermore, instead of coordination of activities, priority of different objectives in the hierarchy should be vital and understood by the component teams. For the goal attainment, component teams should understand clearly that the functional process interdependence correspond to the objectives and goals. In doing so, group members will be vibrant about where their efforts are directed and how these efforts will lead to goal attainment (Rico et al., 2016)[25].

This paper contributes in extending the literature of MTSs relative to the goal attainment and provides a more comprehensive picture of relationship between hierarchical goal attainments effectively and type of functional process inter dependencies. Moderating role of leadership skills and multicultural teams provide the core novelty of this study. These moderators contribute in extending the literature of MTSs’ by shadings the light and provide a deep insight into the working of multi-team processes.

4. LIMITATIONS AND FUTURE DIRECTIONS

Our proposed model does not shed light on the personal attitudes and behaviors of the human capital that may have a significant contribution in the accomplishment of goals. For example, motivation, tolerance, emotional stability, and emotional intelligence are some of the attitudes that could possibly hinder or facilitate the accomplishment of goals in the multi team systems. An interesting question aroused here as how does the emotional stability of the leader affect the accomplishment of goals in all three type of process interdependency? Does emotional intelligence of leader hinder or facilitate his/her cooperation with team members during accomplishment of high/low order goals? In addition demographic factors like experience and gender may also have significant effects on the goal striving process. As proposed multicultural teams have an effect on goal achievement but it is still to be explored that what cultural factors are influential and what is their intensity of their influence for example what would be the effect of employees different work experience on goals accomplishment during sequential and reciprocal process inter dependencies? Hence there are multiple avenues that are yet to be explored within the subject of multi-team process inter dependencies for the future scholar of the field and these investigations will be of equal interest to the practitioners as well.

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5. REFERENCES


