Working In Contemporary Teams

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Lecture - 14

Multiple Team Membership and Multi-team Systems

Welcome to the 5th lecture in module number 3. In this lecture, we will be looking at multiple team membership and multi team systems. Let us see the agenda for this lecture. As usual, I will be using the input process output model for us to better understand team functioning. So first, we will be looking at the factors which people need to keep in mind when they are creating multi team systems and multiple membership teams. Second, we will be looking at the dynamics which are special to such kind of situations.

We will look at how processes and emerging states are affected when people are working in these two situations. We will look at how performance also gets impacted when people work in such kind of teams and what are the insights that we have into improving performance. We will finish the chapter by looking at what are the challenges which people face when they work in such kind of teams and what the future holds for these kinds of teams. But first, let us look at what are the differences between multiple team membership and multi team systems.

No, they are not the same. Multiple team membership is when one or more members of the team are working in different teams simultaneously. On the other hand, multi team systems are systems which are composed of different teams. Let me give you some examples. A very common example for a situation for multiple team membership are projects of software development.

You will see that many team members are working in multiple teams at the same time. This is a good example for multiple team membership. On the other hand, you may also be aware of emergency response teams which are created by the government when there is an emergency in the land. These teams are systems which are composed of smaller teams drawn from multiple organizations. So you will have a few people from different

organizations forming small teams.

Then these teams work together to form a multi team system whose superordinate goal in this situation will be to provide the correct response to the emergency. So having seen the difference between multi team systems and multiple team membership, let us dive into the lecture. Multiple team membership or boundedness has been researched in teams for more than four decades now. So what is the meaning of boundedness or what is the meaning of multiple team membership? It happens when one or more members of the team work in different teams simultaneously. But this has different aspects to it.

It could mean that any given team member is working in another team or more than one team at a given time. That could be one meaning. Another way to look at it is that the membership of the team changes throughout the life of the team. A good example is that of a business analyst in a software development team. Business analysts are not required to give inputs to software development teams throughout the life of the team.

Usually they are required during the development phase of the software wherein they come to help give the developers an idea about the software they are developing and how it is going to impact the business. Once the coders have a good idea about how the code will integrate with the business of the customer, the business analyst will move on to the next team. The last aspect of boundedness is that some of the team members may be working on a core task while the other members may be working on peripheral tasks. Let us go back to the software development team. The team of software developers will consist of people who are developing the code who can be considered the core part and it also will consist of testers who will test the code which has been written by the software developers.

So in this case, the people who write the code will be considered as working on the core part of the team while the people who are testing the code will be considered as peripheral to the team. So these are three different aspects of boundedness that is same member working on multiple teams, different members coming through the life of the team but leaving at some point and some people working on the core aspect of the team and some people working on peripheral aspects. There is one more additional point which we need to see when we are looking at work in multiple teams. A team member who is working on another team might be working on something similar to the task that we are doing or he could be doing a completely different task on another team. So there is the aspect of number and variety when we are looking at multiple teams.

Why do organizations use multiple team membership or why do they assign team members to multiple Why do they assign team members to multiple teams at the same

time? Well, one reason could be the scarcity of critical resources because certain kinds of skills and competencies are very few in the organization. The organization may decide to assign one resource to multiple teams. They could also assign a resource to multiple teams if they feel that utilization is low. For example, as I said, a business analyst is not required to be a part of the software development team throughout its life cycle. Hence, we cannot utilize that resource if that person is going to be a part of the team throughout the software development life cycle.

So given these two reasons, organizations adopt multiple team membership. Now there is also the aspect of a continuum that is teams can be on a spectrum of low to high boundedness. Teams which have low boundedness are teams where there is a very high volatility in team membership or many team members are working on multiple teams at the same time. On the other end of the spectrum are teams which have high degree of boundedness. These teams are pretty much stable and their members are not working on other teams.

So boundedness operates on a continuum. The first point that we need to keep in mind is that diversity can become very difficult to manage in teams which have very low boundedness. Earlier, we had discussed that diversity can be a problem in teams when people from different backgrounds find it difficult to converge their ideas or work together towards the team goal. Now, if the team has a highly diverse background and the team is also very low on boundedness, it can become very difficult to bring a convergence of different team members ideas towards the team goals. The second aspect that we need to keep in mind when we are looking at team composition is the team size.

Team size affects team transactions because the larger the team, the more the coordination and the communication that needs to happen between the team members to ensure effective functioning. Now, if the team size is large and the teams are also very low on boundedness, it can become very problematic to coordinate and communicate between the team members. So if teams are high on diversity or if we have large teams which have very low boundedness, then we need to make sure that we give them additional support to converge their ideas towards the team goal. Now, let us see what are the team processes which get affected because of multiple team membership. Functioning of multiple team membership is characterized by the heavy dependence on technical factors.

We will see that there is a development of a lot of online networks to coordinate activities and to maintain communication between members when their time and their efforts are split across multiple teams. Just imagine if you were working on two or three

teams at the same time, how would you keep track of what work you have done in which team? How would you keep track of who you had to coordinate or communicate with on each of these teams? In this case, technical factors play a large role to ensure that people are able to keep track of their activities and meet the team goals. The next team process which is affected by multiple team membership is team boundary spanning. What is team boundary spanning? Team boundary spanning is any behavior when a team member contacts somebody outside the team for resources, information or access. Team boundary spanning becomes very important for teams which are externally dependent.

For example, take our software development teams. Software development teams are highly dependent on multiple stakeholders like the client, other teams and the top management to ensure that the team moves towards meeting deadlines and budgets. Teams need to get information about why they are designing the code, how their code interfaces with other teams code, how their code interfaces with the code existing with the customers. All these things the team members need to know when they are developing the code. That is at each stage team members need to continuously interact with people outside the team.

Now multiple team membership is an easy way to make team boundary spanning happen. That is if one member is part of an other team with which this team is closely working then we can be sure that he will be attending, he or she will be attending team meetings with these two teams and therefore some sort of information sharing happens because of this fact. The last aspect which is affected by multiple team membership is knowledge sharing. Like I said membership in multiple teams gives team members the opportunity to interact with people outside their team. Therefore they have the opportunity to gain new information and share information with other teams and other people easily.

However there is also a caddy. There is a curvilinear relationship between multiple team membership and learning or knowledge sharing. That is there is only a point up to which team members will be effectively able to share knowledge. After the number of teams increase beyond a certain point team members will find it very difficult to keep track of information and they will also not have the time and the effort to spend time with all the teams and therefore they will not be able to bank on the opportunity of multiple team membership. The next process which is affected by multiple team membership is coordination and collaboration.

Again because the focus, effort and time of team members are split across multiple teams it becomes difficult for members to keep track of who they were coordinating with and what work needs to be done next. It also becomes extremely difficult in case there is

a variety of tasks in which they are involved in across different kinds of teams. Coordination and collaboration have to be enhanced in these situations by relying on technical factors. The last process which gets highly impacted because of multiple team membership is conflict. Now I said earlier that one of the reasons why organizations give multiple team memberships to their employees is when there is a resource constraint.

So in such kind of a situation if the resources are critical to the functioning of teams, team leaders and project managers might try to hoard good talent within their team and refuse to share it with other teams. Sorry, refuse to share him or her with other teams. Therefore we have to be careful that there is no knowledge hiding or talent hiding in the teams by team leaders and project managers and that there is a proper way to resolve conflict in such kind of situations. Team dynamics is also highly impacted because of multiple team membership. You would remember that we had discussed team dynamics is something which emerges because of the interactions happening between team members throughout the life of the team.

Please remember that we said boundedness is multiple team memberships, changing membership during the time of, during the life of the team and also participation in core task and peripheral task. This means that the time and the effort which people put in spending with each other and on the team task varies with the multiple team membership. And because of this, almost all the team dynamics which I have given in this slide are affected because of this team, because of boundedness. The first aspect is team identity. If someone asks you, who are you? You would say, I am so and so, my name is this, I work in this organization, I work in this department or in this team, which means your concept of self is attached not only to your personal self, but also heavily with the team and the organization and the department with which you are working.

If you are working on multiple teams at the same time, which team would you most identify with? Or will you identify with all the teams at the same time? So this becomes a dilemma and a problem for multiple team membership. This creates a problem for organizations. So usually what organizations do in this situation is to create an organizational identity which is fixed on a superordinate goal. That is not only are the team members, not only are the members encouraged to identify with the teams which they work, they are also encouraged to identify with the organization as a whole so that they do not lose focus on the ultimate goal, which is the customer of the organization. The next team dynamic, which is affected by multiple team membership is cohesion.

Cohesion is the extent to which team members like to work with each other and like to work on the team task. Again, as I said, if you are working on multiple teams at the same time, can you develop cohesion or a strong cohesion with all the teams

simultaneously? This becomes slightly difficult. We are more likely to prioritize the different teams in our minds based on the status and importance of the tasks of those teams and spend more time and effort on those teams which have a higher status or higher importance in our own mind. The last team dynamic which we are discussing, which is affected by multiple team membership is team cognition. Team cognition is the knowledge which is important for the team, which is shared and held by all the team members.

This is possible only when team members interact with each other, when they know each other, when they know what are the strengths and weaknesses of the other team members and they know the team task. Now one interesting phenomena which has emerged in multiple team membership is called as team divergence. Team divergence is when team members and team managers are not even aware about the team size and they do not know who their team members are. That is, if you were to pick up a team member and ask him or her the question, how many members are there in your team, each person will give a different answer. Now when you are not even sure or aware of who is a team member, it will become very difficult to seek information, to share information and to coordinate on activities of the task.

At the next level comes the shared mental models. That is the knowledge about the strengths and weaknesses of the team members and a collective idea about the team task. This also develops only when team members interact with each other. If any team member is not spending the effort and time because his efforts are caught up on another team, you would find that it is difficult to create a shared mental model. So once again team dynamics are impacted in multiple team membership when team members work on multiple teams and they split their time and effort among multiple teams.

Now let us see how multiple team membership affects team performance. There is a curvilinear relationship between the number of multiple team memberships and performance. That is, membership in multiple teams improves team performance up to a certain level. But beyond that level, team members are overloaded with work and their efforts and their time are too fragmented to actually improve team performance. But we should not forget the fact that team performance does get a positive impact due to multiple team membership because there is an easier and informal way of knowledge sharing between different teams when the same member works in those teams.

However, in case performance does decline, what we need to do is, what we need to keep in mind is that performance can be improved if team members allocate more time on any one team. That is, if a manager notices that performance is decreasing in this situation, what he or she can do is to allocate less time on other teams and then spend

more time on the team which needs the help. There is a significant aspect of trade-off which we need to keep in mind when we look at performance in multiple team membership. The first trade-off is the trade-off between projects and individual teams. Multiple team memberships seem to be helping projects.

For example, the average time taken to resolve issues across the projects decreases when people have membership in multiple teams. However, the time taken for each individual team to resolve problems increases. Since our resources are utilized and controlled by managers in the teams, this is very likely to cause conflicts between project leadership and team leadership. The second trade-off happens between the team level behavior and the individual level behavior. When people have membership in multiple teams, it helps the team by easing knowledge sharing, coordination and collaboration.

However, working on many teams at the same time puts a lot of workload on individual team member. This can bring in conflicts between team leadership and team members. So multiple team membership is likely to bring conflicts at two levels between the project and the team leaders and between the team leaders and the team members. Structures and processes have to be put in place to ensure that these conflicts are avoided. We finish off this particular section on multiple team membership by looking at the relationship between boundedness and the team member.

A lot of research has been done on the effects of multiple team membership on the team and on the organization. That is, researchers have tried to look at how teams and organizations benefit from multiple team membership. There is very little research which looks at the individual perspective, that is, how does working in multiple teams affect the individual. One of the basic questions which come up in this situation is how many teams can a team member be on simultaneously and still be productive at work. While we can come up with algorithms to allot machines to multiple tasks, we have to make sure that when we allot or assign team members to different teams, we have to keep in mind their well-being and also their productivity.

Multiple team membership also gives team members an increased opportunity to learn and work. The very fact that they are present on multiple teams and its meetings gives them an opportunity to interact with different people and learn from different contexts. However, membership in multiple teams also means that there could be multitasking, task switching and also switching between team contexts. This can increase the workload for the team members, particularly if the variety of task which he or she is doing on different kinds of teams.

Another aspect which has to be managed is learning. Like I said, if the team member is

assigned to teams which have totally different tasks, this can increase the load in terms of learning. That is, the team member has to spend in more effort and more time to learn how to do different tasks on different teams. There is also a temporal aspect attached to this. Say you are assigned to two or three different teams at the same time and all of them are just starting out in their life cycle. The problem here is that teams take a lot of time in their early phase to learn about each other and learn about the tasks.

Therefore, if you are assigned to different teams in the same life cycle at the same time, then it means that your cognitive load will be very high and you will find that the steep learning curve is very difficult to climb. The last aspect here is that if team members are forced to switch between tasks or teams, then it can increase the transaction cost for him or her and also increase the turnaround time and decrease the person's performance in both the teams. With this, we finish our discussion on multiple team membership and we move on to multi-team systems. What are multi-team systems? Multi-team systems are two or more interdependent teams that work towards their own goals. These multi-team systems can be internal, that is, they comprise of smaller teams completely from within the organization or they comprise of small teams which are gathered from different organizations.

The example which I gave of the emergency task team which is formed by the government in case of a natural calamity is an example for a multi-team system. Now multi-team systems are different from the other forms which we are usually familiar with, for example, cross-functional teams. Cross-functional team is one team which consists of people from different functions. Multi-team systems is a whole system of teams, each team pulled from different functions. Multi-team systems are also different from matrix organizations.

Matrix organizations are where you will find people working across a functional and a divisional line. The thing here is that the teams in matrix organizations are silos or they are not very interdependent. However, the teams in our multi-team systems are highly dependent on each other. Some of the common examples for multi-team systems include emergency response teams, scientific collaboration efforts, cyber security and strategic business alliance.

Let us take the example of the emergency response teams. The emergency response team will usually be headed by the head of the state and he or she will be assisted by smaller teams which consists of people from the police, from the doctors, rescue workers, sanitation, infrastructure and so on. So each of these groups are coming from a different organization. They have a different function. They have a different objective but they are also together working for a superordinate goal which in this situation is to

deliver a proper response and help the public cope with the natural calamity which has happened. So what are the four factors that we need to keep in mind when we are designing multi-team systems? First, let us look at composition.

Now we have an interesting factor here. The component parts of a multi-team system are teams themselves and they are high in diversity. That is, they could be coming from different functions or they could be coming from different organizations or they could be having different goals which are smaller parts of the larger goals of the multi-team systems. Not only that, within each system also you might find different kinds of diversity. The second aspect of team design that we need to keep in mind is the team structure. The different components of the multi-team system are highly dependent on each other.

Because of the dynamic nature of the work they are involved in, the degree of interdependence is intensive. Consider our emergency response team which is responding to a cyclone or a flood. In this case, for any of the teams to be able to provide relief to the public, they should be able to coordinate with each other, they should be able to communicate with each other. Say for example, you are evacuating people and bringing them into a safe place. So, there needs to be coordination between the police, between the rescue workers, between the doctors and between the infrastructure teams to ensure that people are evacuated safely, transported safely, medically treated and then given appropriate shelter.

This is possible only if there is a very intensive level of coordination between the different teams. For a multi-team system to deliver its goals, it is very important that each and every member of the multi-team system have the superordinate goal in mind. It's very easy to get carried away or to be focused only on the short-term goals of each of their individual teams. However, each team member needs to know how his deadlines and how his targets are affecting the overall goals of the multi-team system.

Now let us see how multi-team systems affect team dynamics. It is very interesting to see team dynamics in these systems because now we are not only looking at dynamics within each component sub-team but we are also looking at the relationships between the teams which form the multi-team systems. So let us first look at coordination and communication. Multi-team systems rely very heavily on technical factors to help their team members and teams keep track of how each component is progressing on the task, whether there are any deadlines or bottlenecks and to take corrective action accordingly. It's very important to have clearly defined roles and processes to ensure that communication flows properly between the teams.

Now I would need to tell you that there is a hierarchy here. There will be team members who are working on multiple teams who have more or less the same hierarchy and they will be coordinating and communicating across their horizontal hierarchy. Then there will be team leaders who are in charge of each sub-component team and there will be project managers and so on above them. There has to be a coordination system and a communication system between team members, between team leaders and between team leaders and project leadership to be able to steer our multi-team system properly. And the clearly defined roles and processes have to be communicated to all the team members to ensure that these follow seamlessly.

Collaboration is also important on multi-team systems. It's very easy for team members to be focused only on their individual team's goals and forget about the multi-team system's goals. Therefore, it's very important that the leadership of the team and the project emphasize the superordinate goals repeatedly to all the team members, team leaders and project leaders. Because of resource constraints, because of constraints given by time and budget, there could be conflicts which arise between teams in a multi-team system. Clearly defined roles and processes can go a long way in conflict management in these systems. The final team process which we will discuss in multi-team systems is team boundary spanning.

Team boundary spanning is a critical function for multi-team systems. There have to be clearly defined boundary spanning roles and boundary spanning objects to help this process in multi-team systems. Boundary spanning roles are usually held by the team leaders and by the project leaders. That is, horizontal communication happens usually between team members of the same components of the sub-team, between team leaders who lead different teams and vertical communication will happen between team leaders and project leadership. Boundary spanning objects are shared documents, also clearly specified policies which help team leaders and project managers steer the work of the multi-team system.

Team dynamics are also affected because of multi-team systems. There is a question of team identity, wherein team members usually identify with the team with which they work. However, their focus should be on the superordinate goal of the multi-team system. Hence, as the team are fostering team identity, project leadership and team leadership have to keep the superordinate goals in mind and develop an organizational identity so that the work of the multi-team system does not suffer. Members of the multi-team system also have to put in a lot of effort to develop team cognition. The shared mental model in this situation not really is a shared understanding about the weaknesses and strengths of each team member in the team but also a shared understanding about the other teams in the multi-team system.

Therefore, at each team level, the team members will have an understanding about their team. Team leaders should have an understanding about other teams and the project leadership should have a holistic understanding for the whole system. Situational awareness is also a very important dynamic. That is, in multi-team systems which can be composed of more than 5 or 6 teams, it becomes very difficult to understand what other teams are doing. We do not know what is the latest update which will be very critical for us to take an action.

For example, think about our emergency team which is responding to a flood. At any point in time, for rescue workers to save victims and to transport them, they need to be updated by a ground surveillance team and ground surveillance team has to let them know which areas are under threat, which areas are now better off and where the survivors can come back and so on. So developing situational awareness is very important and critical for these teams and these teams rely heavily on communication and coordination mechanisms to do so. Trust is also a crucial part for ensuring the performance of multi-team systems. Each team leader has to keep in mind that the success of the multi-team system is dependent on the collaboration and trust which he or she expresses in other teams.

Finally, let us look at team performance. Team performance in multi-team systems is dependent on team processes to a great extent. But the team processes which contribute to team performance differs according to the phase of work. Now there are 3 main phases of work which keep repeating as the multi-team system goes through each task or activity. They are planning, action and transition. During the action phase of work, it is very important for coordination and communication which are horizontal.

That is team members of individual teams need to communicate and coordinate with each other. Team leaders of different teams need to coordinate and communicate with each other. It does not help if team members from team A and team members from team B coordinate and communicate with each other. It just increases the transaction cost. Therefore, according to the change in the phase of work, different processes contribute to team performance.

Finally, the performance of the team to a great extent depends on the focus on the super ordinate goal. That is, if the team members in individual teams are focused on short term goals and not on the long term goals, then the functioning of the multi-team system as a whole can be hampered. To summarize, team performance is dependent on different team processes and processes are dependent on the phase of work and the multi-team system really needs to emphasize and turn the focus of team members towards the super

ordinate goal to be able to succeed. So what are the challenges of multi-team systems and multiple team membership? First of all, both these situations have a tendency to create ambiguity in team membership.

That is, team members are not aware of who the team members are. In teams which have low boundedness, this can create huge coordination and communication problems. It also creates problems in knowledge sharing, knowledge creation. People also may indulge in knowledge hiding if they are not aware whether the allegiance of team members lies towards their team or some other team which they are part of. Coordinating teamwork and collaboration also can be challenged in a multi-team system and multiple team membership. The sheer size of teams and also the fragmentation of efforts on the part of people who are working in multiple teams simultaneously makes coordination difficult.

Collaboration on the other hand becomes difficult because of lack of trust. If you are working in multiple teams, you may not have the time to develop strong trusting relationship with members of all the teams. Therefore, this can cause problems to collaboration. Collaboration can also be hampered in multi-team systems when the component teams are too focused on their individual team goals. Finally, the last challenge which comes is creating team identity and making sure that the team identity does not override the identity of the organization. So what does the future hold for multi-team systems and multiple team membership? With the increasing complexity of work and with the increasing scale in work, organizations are likely to continue using multi-team systems and multiple team membership.

There is also currently scarcity of certain skills and competencies in organizations which forces them to allot members to multiple teams at the same time. Therefore, in the future also we are likely to see an increase in application of these kind of teams. And to help these team members work in such situations, we are likely to see an increase in application of technical factors and artificial intelligence to enable coordination, communication and collaboration. To summarize, in this lecture we have focused on two contemporary conditions of teamwork. The first is the multiple team membership where one or more team members work on multiple teams at the same time.

The second one that we focused on is multi-team systems which are systems consisting of teams as their components. We looked at the factors which we need to keep in mind when we are designing these teams. We looked at the team processes and team dynamics that get affected because of the structure and functioning of these teams. And we also looked at what are the insights that we have into team performance in these kind of teams.

Finally, I end this chapter by looking at the interesting topics that you may want to look up. There is a lot of research currently on the impact of multiple team membership on the team and on the organization and also a lot of research on multi-team systems and its impact on organizations. However, we need a lot more research on how functioning these two kinds of situations affects team members and team member well-being. Another question which has not been as of yet answered is the optimum level of multiple team membership. Is there a sweet spot, a number, that is the best number of teams in which a team member can work simultaneously at any given point in time? It will be very interesting to look at how contexts affect the working of multiple team membership and multi-team systems and then understanding that this number may change according to the context.

Team boundary spanning is also a very interesting topic that comes up in these two situations. Because of the changing membership in the teams and because of membership in multiple teams, it often becomes difficult to understand the boundary of the team. Team boundaries are very important in determining proper functioning, proper process and team performance. Therefore, this is another area that you may want to look up. Finally, project management is also an interesting topic that you may want to look up. With this, I come to the end of this lecture. Thank you for joining me.