

## **Working In Contemporary Teams**

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**Week – 03**

**Lecture - 10**

Introduction to IPO model in teams

Welcome to Module 3 of Working in Contemporary Teams. Over the next two modules, I will be introducing four different kinds of contemporary teams which are widely used in organisations today. Let us come to the introductory lecture of the third module. In this introductory lecture, I will be introducing you to the framework which is going to be used to structure the rest of the lectures. Before proceeding to any of the other lectures, I therefore suggest that you complete viewing and listening to this lecture before you proceed. The agenda for the first lecture is as follows.

First, I will be giving an introduction to teamwork. In this course, we have tried to give different perspectives for understanding team functioning. I will be using the input-process-output model to help us understand teamwork. Before proceeding to contemporary teams, we will look at one of the questions which are nagging both researchers and practitioners in organisations.

That is, what is a real team and what distinguishes a real team from a pseudo-team. Then we will look at some of the traditional formats with which we are familiar. And finally, we will wrap up this lecture by looking at contemporary teams and how they are different from traditional teams. Teams have been used by humankind ever since we evolved from the monkeys. One of the key factors which has led to the success of the human race is our ability to cooperate with each other towards achieving common goals.

Whether it be in our myths, whether it be in our stories of organisations, whether it be in stories about war or morale, we always see the use of teams. So, whether it be in the eastern context or western context, teams are nothing new to us. And in fact, the use of teams by organisations has also increased. There was a time when it was possible for a single person to be involved in a work from the beginning till the end. But now, given the complexity and scale of work, it is not possible for a single person to complete the

work.

And therefore, organisations have started relying on groups of people to get the work done. So, what is a team? A team is a group of people who are interdependent and interact with each other to achieve a goal. So, what are the key phrases that we need to keep in mind when we think about the definition of a team? The first factor is the interdependence among the team members. That is, members are dependent on each other for their input. The second factor is that they interact with each other through communication, coordination and collaboration.

They make sure that all of them have efforts which converge at the team goal. It is for this reason that you cannot call a group of commuters who are travelling in a bus as a team. Even though it might be the same group of people who are travelling for a relatively long period of time over a duration of time, they do not become a team because they are not interdependent on each other for reaching their individual destinations. They are not interacting with each other to help each other reach that destination and most often they do not have a common goal. However, on the other hand, if the bus were to break down and all the members in the bus got down and pushed the bus to make it move, then they would suddenly become a team.

They would be interdependent on each other to make the bus move. They would definitely have to interact with each other to coordinate their efforts and most importantly they would have a common goal of making the bus move. Like I said, the use of teams has increased. But given the fact that we have been using teams for a very long time now and we have also been researching what causes teams to improve their performance, teams today are still plagued by a lot of difficulties. There could be conflict, there could be conflict between team members as to what work has to be done and how that work has to be done.

Teams are also plagued by problems related to lack of creativity, lack of effectiveness and low efficiency and also issues like cohesion with low performance norms. So, organisations are continuously grappling with these issues and researchers are constantly trying to find ways in which they can help teams overcome these problems. So, the search for factors has led us to three levels at which we can find factors which affect team performance. And these factors operate at three different levels, organisational level, team level and individual level. Individual level factors can mean the personality of individual team members.

Team level factors can be the design of the team and so on. And organisational factors could be organisational policy. So, in this course, we will be focusing on team level

factors and how they impact team level processes and finally how it affects team level outcomes. Where important, we will also be looking at organisational and individual level factors which are important for good functioning of the team. Now, what is a model? So, a model is something which explains how different factors contribute to the functioning of a system.

For example, a model of the solar system can be used to explain what is a star, what are planets and what are satellites which move around the planets. In the same way, one of the models which explains how team functions is the IPO model, which is the input, process, output model. Now, many models have been proposed for explaining different factors like team development, team diversity, team functioning, team effectiveness and so on. This particular model which is the input, process, output model is a team effectiveness model and was proposed in 1986 by Hackman. It tells us that factors like inputs which include team design factors, individual personality and so on have an impact on the process and through the process have an impact on the output.

Now, let us see what we will be focusing on in the rest of the course. We will be focusing on team level factors and team level functioning. So, two very important input factors which affect team functioning are team design characteristics and task characteristics. Task characteristics are related to the work which the team does while team design factors are related to the composition and the structure of the team. Team processes include processes like collaboration, communication and coordination between the team members and finally, the most important output which has been measured in research and also which has been given most importance by the industry is the performance of the team.

Now that I have introduced the IPO model to you, is the IPO model the only model which explains team effectiveness? No. There are many other models which have come after the IPO model which explains team effectiveness. For example, the IMOI model. What are some of the major criticisms levelled against the IPO? Well, first of all, what some of the early researchers identified as processes are not even processes but states. For example, cohesion.

Team cohesion is the extent to which team members like working with each other and are committed to the team task. This state of mind evolves for the team members when the team members interact with each other and work on the team task. So, it is not a process but a state of mind that team members share over the course of working together as a team. Secondly, another problem which the IPO model has is the lack of a feedback loop. For example, it is very well known that cohesion can lead to performance but also teams which perform very well become more attached to their task and like working

with the team members more and therefore the cohesion improves.

Therefore, this becomes cyclical. Cohesion leads to performance, better performance leads to better cohesion. This can be an upward cycle or a downward cycle. For example, sometimes lack of cohesion can lead to low performance and low performance further deteriorates the relationships between team members and also reduces the commitment to the team's task and therefore lowers cohesion. One of the final criticisms against the IPO model is the fact that there is a non-linear progression between the relationships.

The IPO model suggests that there is a linear relationship between input, process and output. But research has shown that processes can in fact affect each other, outputs can affect each other and so on. Because of the criticisms which have been given for the IPO model, researchers have come out with different other models like the IMOI model about which I said before. The IMOI stands for input, mediator, output and input. Now, given that there are other models, why am I using the IPO model? The IPO model is very simple to understand and given the fact that contemporary teams and contemporary team research are still in their nascent stage, this IPO model can help us structure our understanding and knowledge about contemporary teams.

So, let us look at inputs, process and outputs in a little more detail. Inputs can operate at three different levels and of these, let us look at some of the important inputs at the individual team and organizational level. At the individual level, personality of team members and their experiences can have a great impact on team functioning. At the team level, it is the design of the team and the team's task which has the most important bearing on team functioning. Team design consists of two important factors, the composition of the team and the structure of the team.

Lastly, we have the organizational level factors. The policies and the practices of the organization and the work environment are all factors which can have a big impact on team functioning. Given the criticism which was leveled at the IPO, we will not only be looking at processes, but we will also be examining some important emergent states for better understanding team functioning. Processes which we will be focusing on include communication, coordination and collaboration between team members. Then we will look at sharing of knowledge and workload and some other processes like team boundary spanning which becomes very important for externally oriented team.

Now, early, say in the 1980s and so on, most of the research which used to happen in teams happened in laboratory settings where teams functioned as closed systems. But in organizations, teams do not work as closed systems. They have to interact with members from other departments, members from the customer side, members from the

government, members from the general public and so on. And therefore, teams in today's organizations are externally focused and hence we will be looking at team boundary spanning as one of the important processes in teams today. Now, emergent states are also important aspects of team functioning.

Emergent states are mental states which are shared by the team members and these evolve because of interaction between team members and also when the team works on the team task. So, some of the important emergent states with which we are familiar would be cohesion, efficacy, coordination and psychological safety. Very important, these are evolving and they evolve as the team members interact with each other and work on the team task. The last part of the IPO model looks at the team level outputs primarily performance and viability. Performance primarily looks at factors like effectiveness and efficiency and other important outcomes for the team today are viability.

Viability is the extent to which team members look forward to working with current team members on another project. It's very important for teams especially in project management side to have a certain level of viability. We will also be looking at outputs at the individual level which include the performance, the workload on the team members due to working in contemporary teams and team member satisfaction. Having seen the framework on which we will be structuring the rest of the lectures, let us look at one of the questions which are bothering both researchers as well as practitioners in team's research today. What is a real team? Now, when you walk into an organization, you might see groups of people who are sharing the same space and are often sharing the same space for a long period of time.

Can you call these people a team? That is, when do news groups of individuals who are co-acting in close physical proximity become a team? When do individuals constitute a team member? So, when this question was asked, many practitioners turned around and said, why worry? Potato, potato, what difference does it make? Well, let's take the potato itself. If you wanted, say, potato masala curry, then I cannot hand you a potato and an onion and say, here goes your masala curry. You would have certain expectations about how the curry should taste and how it should see and how it should smell. Same way, organizations have certain expectations about teams. They expect the team members to work with each other, to bring together their skills, competencies and knowledge and deliver certain results for the team.

Just putting together the ingredients will not help us achieve those teams' goals. So, researchers and practitioners have identified six criteria which helps us achieve real teams. And those six criteria are interdependence between the team members, that is, the

team members rely on each other for their inputs. Team members have a shared objective towards which all of them direct their energies. They have autonomy, that is, each member in the team has a certain level of authority to take information, process that information and act based on that information.

Team members should have reflexivity, that is, teams should regularly reflect upon the work that they have done, how they have done that work and take course correction where it is required. Teams also need to be bounded, that is, this deals with the fluidity of the team membership. If the team membership is continuously changing, members may not even know who are the real team members. So, the memberships in teams should be fixed enough so that team members know who they are working with.

And lastly, specified roles. Like any social unit, teams also can function properly only if roles are specified and each team member understands what their role is in the team. So, unless these six criteria are satisfied, we cannot call a loose group of individuals as a team. That is, if these six criteria are not present, what you have is a pseudo team and not a real team. Now, the traditional team formats with which we are familiar are functional teams, cross functional teams, taskforce. Functional teams usually are seen in departments and they all come from the same functional background.

Cross functional teams happen when people want to build a new product and require membership from different departments so that they propose realistic models for new products. Taskforces are when there is a short-term work that needs to be done by a group of people and so on. So, these traditional formats have changed. What has changed? If we take the IPO model, we would see that almost all elements of the IPO have changed. Task characteristics have undergone a great change.

The team design has undergone a great change. Team functioning and processes have also undergone a change because of the change in task characteristics and design and also because of the introduction of technology to facilitate a lot of the team processes. And because of the change in all these factors, we also see a change in the output. So, let us see what are some of the contemporary team formats that we will be exploring in the next two modules. In modules three and four, we will be covering human AI teams, multi-team systems, agile teams, remote work and hybrid work. If we go back to the IPO model, we would see that a team which has a very drastic change in human composition are human AI teams.

That is, with the introduction of artificial intelligence as an active team member into the team, we would get human AI teams. If we change the input in terms of team structure by giving people membership in multiple teams, what we get is multiple team

membership and multi-team systems. Multi-team systems are also heavily reliant on different technological factors which basically changes the way the team processes happen. Then we have agile teams. Agile teams are different not only in the team composition and team structure, but they also have a lot of new demands placed on them in terms of task characteristics.

And the final one is remote teams. So, you would see that we are going to examine four contemporary teams which are used in organizations today and the IPO framework becomes very relevant in helping us understanding team functioning. So, to summarize, we have seen the definition of teams. Teams consist of group of people who are interdependent, interact with each other and work towards the same goals. Even though researchers have been studying teamwork for many decades, we still haven't found solutions to problems which plague teamwork. Therefore, we have different models which help us understand team functioning and out of these models, we have selected the input-process-output model to help us break down team functioning into inputs, processes and states and outputs.

Finally, we looked at what are real teams and how we can differentiate real teams from pseudo-teams. Finally, I leave you with interesting topics that you may want to look up which I was not able to cover in the lecture. The first one that you may want to look at is what are the alternatives to the IPO model. I gave an example for the IMOI model, but there are many other team models which have been proposed to help us understand different aspects of team functioning. Another interesting topic that you may want to look at is multi-level models.

Like I said, one of the focuses of this course is to look at team level inputs, team level functioning and team level outputs. But that does not mean that individual level factors and organizational level factors do not have a bearing on team functioning. In fact, teams are embedded in organizations and they consist of individuals and therefore these factors also have a great bearing on team performance. So, you may want to look at multi-level models which look at how factors from different levels affect team performance. Two other teams which are traditional teams, but have not been covered in this lecture are top management teams and high-performance teams.

With this, we come to an end to lecture one. Thank you for joining me.