

Organizational Design Change and Transformation
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Module - 11
Lecture - 51
Innovation: Concept Types

Welcome to the sessions on Organizational Design Change and Transformation. We were in the sessions learning about organizational transformations. In module 10 of the lecture sessions, we have learned about organizational birth, growth, cycles and we have got introduced to the concept of organizational transformation, organizational inertia, organizational resilience and also like the OD techniques for introducing or like transformational changes.

Now, here in this module we are going to focus on innovations in the organization, what we understand by innovation and what we understand by creativity, what we understand by entrepreneurship also. Like as we know if the organization needs to transform itself it needs to think in a different way, think start doing things differently, look into the processes like how it can be done differently from what it was done before. So, that it can emerge with a newer identity.

So, for all these things innovation is a very ingrained component wherever we are talking of like organizational transformation or organizational turn arounds. So, with innovation only these things are possible. So, module 11 will be totally dedicated to understanding innovations in organizations, creativity, creative thinking, how creativity can be nurtured in organizations and what we understand by entrepreneurship.

So, let us begin. The first lecture session is an Innovation: Concepts and Types. So, let us see what are the concepts covered over here.


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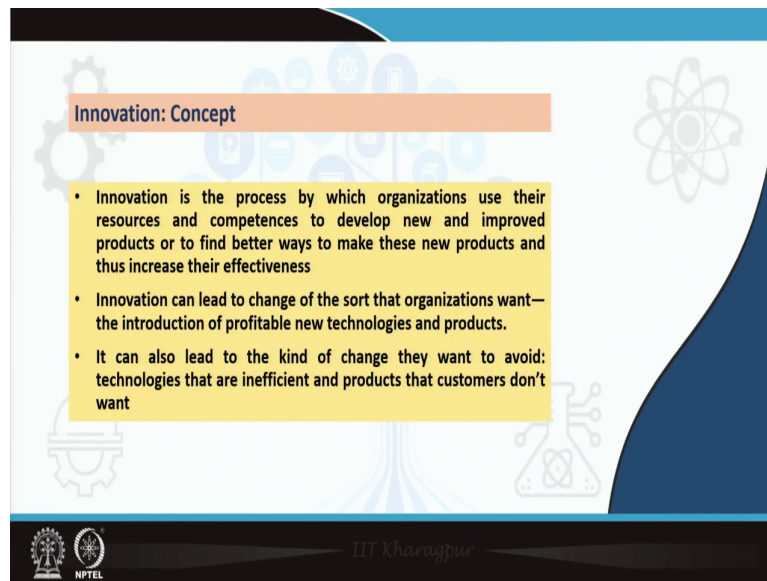
CONCEPTS COVERED

- Concept and types of innovation
- Innovation as cross functional activity,
- Innovation and team leadership, internal and external leadership actions, team leadership and its effectiveness,
- Leadership action and innovation,
- Innovation and disruption, skill of disruptive innovators
- Creating a culture of innovation, organizational culture for innovation, Innovation and IT.

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Here in this session, we are going to learn about concepts and types of innovation, innovation as cross-functional activity, innovation and team leadership, internal and external leadership actions, team leadership and its effectiveness. Leadership action and innovation; innovation and disruption, skill of disruptive innovators; creating a culture of innovation, organizational culture for innovation, innovation and IT. So, let us begin.

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The slide features a light blue background with faint icons of gears, a lightbulb, and a molecular structure. A dark blue curved shape is on the right side. The title 'Innovation: Concept' is in an orange box. The definition is in a yellow box. Logos for IIT Kharagpur and NPTEL are at the bottom.

Innovation: Concept

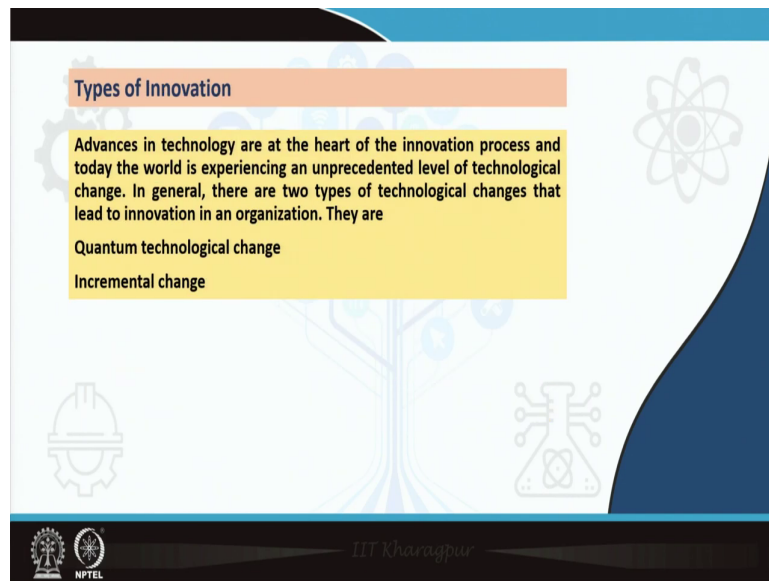
- Innovation is the process by which organizations use their resources and competences to develop new and improved products or to find better ways to make these new products and thus increase their effectiveness
- Innovation can lead to change of the sort that organizations want—the introduction of profitable new technologies and products.
- It can also lead to the kind of change they want to avoid: technologies that are inefficient and products that customers don't want

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Now, what is innovation? Innovation is the process by which organization use their resources and competencies to develop new and improved products or to find better ways to make these new products and thus increase their effectiveness. So, it is either finding these new products or some new products which is found out or find better ways to make these newer products and thus increase their effectiveness.

Innovations lead to the sort of change that the organization wants, the introduction of a profitable new technologies and products. It can also lead to the kind of change they want to avoid; technologies that are inefficient and products that customers do not want. So, this can be avoided by finding out newer things.

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Types of Innovation

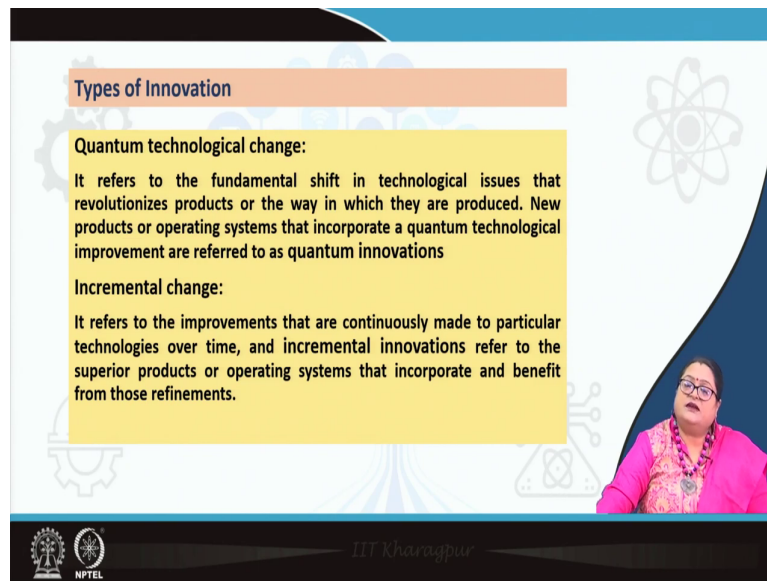
Advances in technology are at the heart of the innovation process and today the world is experiencing an unprecedented level of technological change. In general, there are two types of technological changes that lead to innovation in an organization. They are

- Quantum technological change
- Incremental change

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Types of innovation: Advances in technology we understand these are at the heart of innovation process and today the world is experiencing an unexpected level of technological change. In general, there are two types of technological changes that lead to innovation in an organization. Quantum technological change and incremental change.

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Types of Innovation

Quantum technological change:
It refers to the fundamental shift in technological issues that revolutionizes products or the way in which they are produced. New products or operating systems that incorporate a quantum technological improvement are referred to as quantum innovations

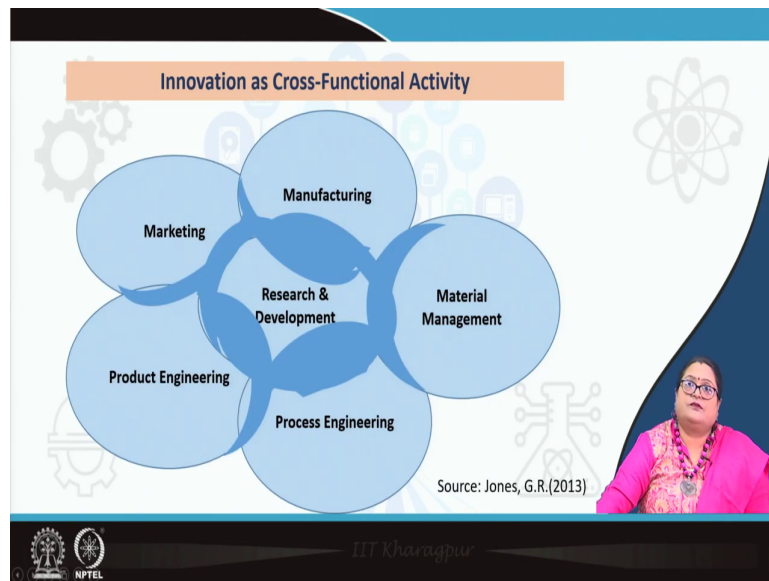
Incremental change:
It refers to the improvements that are continuously made to particular technologies over time, and incremental innovations refer to the superior products or operating systems that incorporate and benefit from those refinements.

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What we understand by the quantum technological change? It refers to the fundamental shift in technological issues that revolutionize the products or the way in which they are produced. New products or operating systems that incorporate a quantum technological improvement are referred to as quantum innovations.

Incremental changes - it refers to the improvements that is continuously made to a particular technology over time, and incremental innovations refers to the superior products or operating systems that incorporate and benefit from these refinements. Constantly some changes are going on and new things that emerge out of this continuous process.

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Now, we will see innovation as a cross-functional activity. We need to understand like research and development when we are talking of innovation. If it is not connected with the other main systems or the pillars of the organization like drug development then what happens? This innovation may not be like fruitful, may not be used like which can be used. So, this is where we find innovation as a cross-functional activity.

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Innovation as Cross-Functional Activity

In each organization, successful innovation depends on the coordination of the activities of the research and development unit with that of the other units

- Both R&D and engineering also need to coordinate with manufacturing to ensure the new product can be made cost effectively.
- A link with marketing will ensure the product possesses, the features and qualities that customers need and want.
- Core members refers to the small group of functional experts who bear primary responsibility for the product development effort.
- Selected members of marketing, R&D, engineering, and manufacturing must be assigned to be core members of successful new product development teams to promote successful new product development as well as innovations.

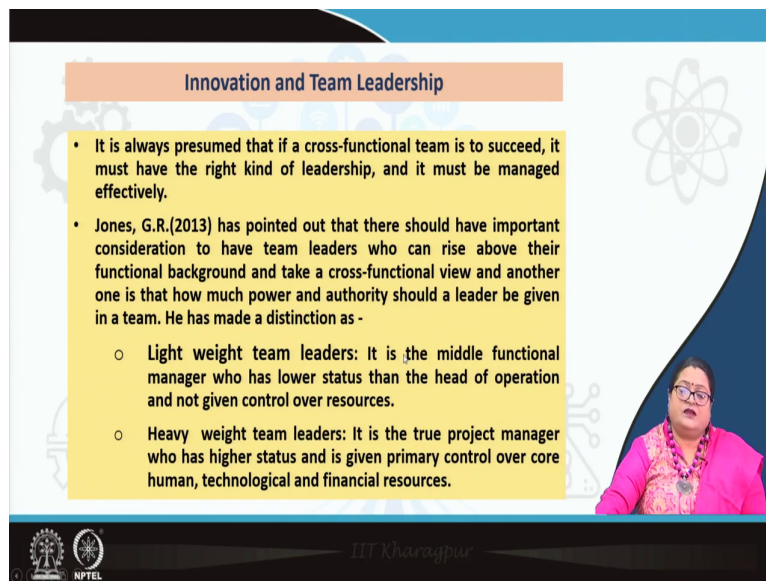
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So, it needs to be a very coordinated activity. So, let us see innovation as a cross-functional activity. In each organization successful innovation depends on the coordination of the activities of the research and development unit with that of the other units. Both R and D and engineering also need to coordinate with the manufacturing to ensure that the new products can be made cost effective.

A link with marketing will ensure that the product possesses the features and qualities the customers need and want. Core members refers to the small group of functional experts who bear the primary responsibility for the product development effort. Selected members of marketing, R and D, engineering and manufacturing must be assigned to be the core members of the successful new product development teams. So, that successful new product development and innovations may take place.

Because if it is a cross-functional team they can bring in their own perspectives and they can contribute, they can think about the product from different perspectives, judge about the pros and cons or think in a very synchronized way together to bring up the new product. So, for this reason it is very important like there is a cross-functional team.

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Innovation and Team Leadership

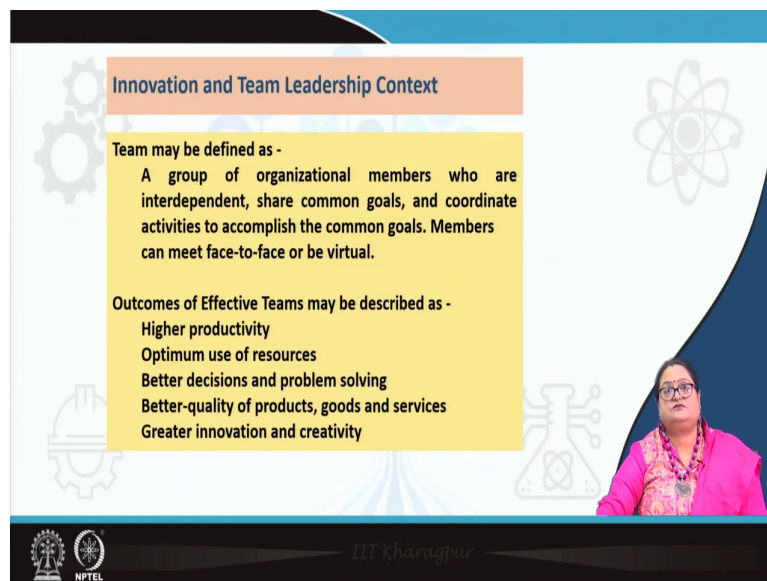
- It is always presumed that if a cross-functional team is to succeed, it must have the right kind of leadership, and it must be managed effectively.
- Jones, G.R.(2013) has pointed out that there should have important consideration to have team leaders who can rise above their functional background and take a cross-functional view and another one is that how much power and authority should a leader be given in a team. He has made a distinction as -
 - Light weight team leaders: It is the middle functional manager who has lower status than the head of operation and not given control over resources.
 - Heavy weight team leaders: It is the true project manager who has higher status and is given primary control over core human, technological and financial resources.

Innovation and team leadership. Now, if a cross-functional team has to succeed, it must be having the right kind of leadership which and it must be managed effectively. Jones in 2013 has pointed out that there should have important consideration to have team leaders who can rise above their functional background and take a cross-functional view and another one, of one another and the another thing is that how much power and authority should the leader be given in a this kind of team that also needs to be discussed.

So, because if the leader is not delegating responsibility, if the leader is not allowing autonomy for the people to function, then they may be less interested in sharing their ideas also so, I may not feel that engagement or the oneness with the crew. So, he has made, Jones has made a distinction between lightweight team leaders and heavy weight team leaders.

So, lightweight team leaders, it is the middle functional manager who has lower status than the head of operations and is not given control over resources. Heavy weight team leaders, it is the true project manager who has higher status and who has control over core human, technological and the financial resources.

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Innovation and Team Leadership Context

Team may be defined as -
A group of organizational members who are interdependent, share common goals, and coordinate activities to accomplish the common goals. Members can meet face-to-face or be virtual.

Outcomes of Effective Teams may be described as -
Higher productivity
Optimum use of resources
Better decisions and problem solving
Better-quality of products, goods and services
Greater innovation and creativity

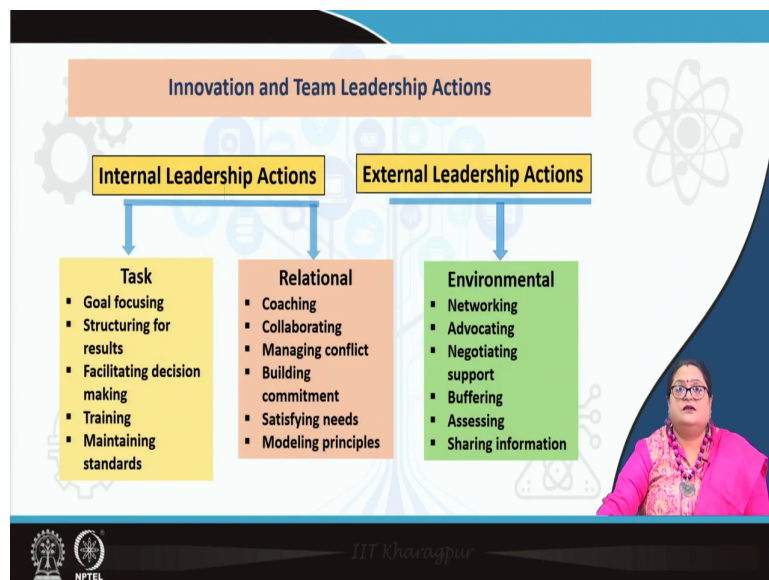
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Now, when we are talking of team, but it is very important like we get to know also what actually our team is. A group of organizational members who are interdependent, share common goals and coordinate the activities to accomplish the common goals, they can meet

face-to-face or virtual and mostly their skills or competencies are like complimentary in nature, then it is defined to be a team.

The outcomes of an effective team and in effective team we get to generate the we feeling that members get to know each other properly their strengths and weaknesses properly map themselves to likes develop a synergy and together they function towards a common goal. Now, when this happens the outcome of effective teams may be higher productivity, optimum use of resources, better decisions and problem solving, better quality of products, goods and services, greater innovation and creativity.

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So, the leadership actions in the teams can be like divided into three kinds one which is focused towards the task one which is relational in nature which is more concerned with coordinating and main with the team members maintaining a healthy team climate and

another is networking or like environmental where it is communicating with the outside world.

So, the task and relational functions are combined under like internal leadership actions and the external leadership actions focuses towards the environmental role. In the internal leadership actions whenever we are talking of the being task focused. So, the sub components or the sub functions under this are like goal focusing, structuring for results, facilitating decision making, training and maintaining standards.

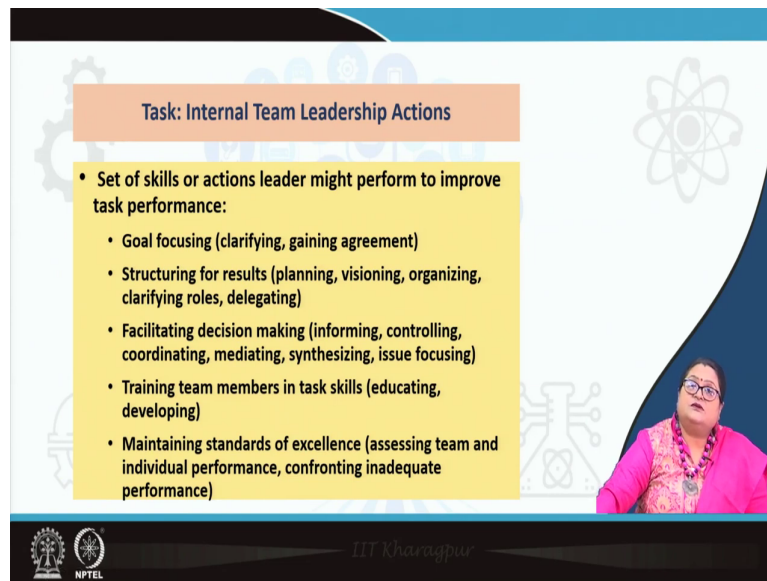
So, these are focused towards the task at hand and leaders need to be very particular about it like what could be the what is the goal how to state it properly, then how the organizational structure, the group structure needs to be defined. So, that results are properly met then you know like the how what is the climate required or what are the resources required for decision making, training people and maintaining standards.

Whenever we are talking of the relational role it consist of coaching, collaboration, managing conflict it is very important to manage conflict if where we talk of like do not encourage dysfunctional conflict, but encourage functional conflict which is task related conflict and where you when people may differ in their opinion about a; however, task can be solved and we emerge with a better solution.

Building commitment satisfying the needs and modeling the principles of maybe interaction in group, group behavior or like the distribution of work so, that we get to like maintain a cordial working environment. Whenever we are talking of environmental role it is like networking with other stakeholders acting as an advocate for the group the negotiating support, buffering and assessing or sharing information.

These are mostly like the boundary spanning roles where the leader is acting as a linking pin between the team per se the organization per se and the external like entities or the stakeholders and how they get to know in imbibe that knowledge from outside and bring it to the group how they are able to represent the group to the outside world.

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The slide features a title box at the top with the text "Task: Internal Team Leadership Actions". Below this, a yellow box contains a list of skills. To the right of the text is a small inset video of a woman in a pink jacket. The background includes a stylized atom symbol and gear icons. At the bottom, there are logos for IIT Kharagpur and NPTEL.

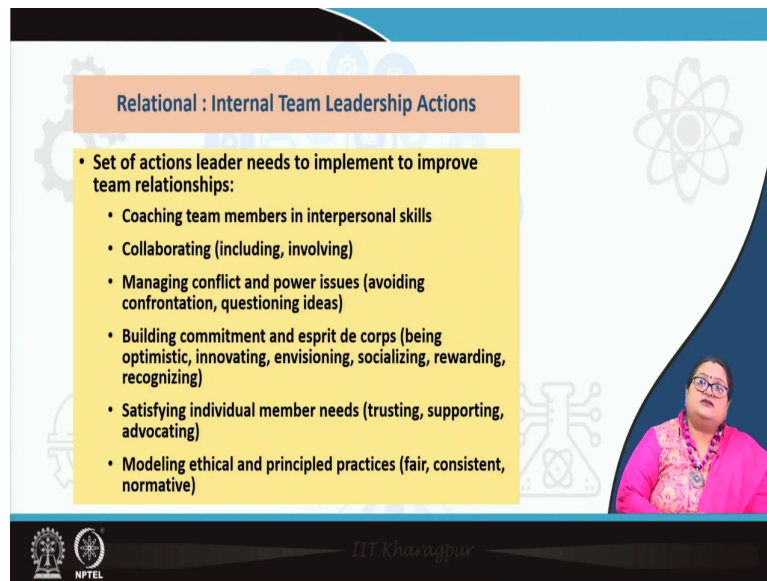
Task: Internal Team Leadership Actions

- Set of skills or actions leader might perform to improve task performance:
 - Goal focusing (clarifying, gaining agreement)
 - Structuring for results (planning, visioning, organizing, clarifying roles, delegating)
 - Facilitating decision making (informing, controlling, coordinating, mediating, synthesizing, issue focusing)
 - Training team members in task skills (educating, developing)
 - Maintaining standards of excellence (assessing team and individual performance, confronting inadequate performance)

So, we will elaborate on this a little bit. So, whenever we are talking of task focus in internal leadership actions it is a set of skills or actions either might perform to improve task performance like goal focusing it goes for clarifying and gaining agreement. Structuring for results as we told you visioning planning, visioning, organizing, clarifying roles and delegating facilitating decision making is informing controlling coordinating, mediating, synthesizing and issue focusing.

Training the team members in the task skills like educating them and developing them, maintaining standards of excellence is assessing team and individual performance confronting inadequate performance like understanding why inadequate performance is happening what could be the corrective measures also.

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Relational : Internal Team Leadership Actions

- Set of actions leader needs to implement to improve team relationships:
 - Coaching team members in interpersonal skills
 - Collaborating (including, involving)
 - Managing conflict and power issues (avoiding confrontation, questioning ideas)
 - Building commitment and esprit de corps (being optimistic, innovating, envisioning, socializing, rewarding, recognizing)
 - Satisfying individual member needs (trusting, supporting, advocating)
 - Modeling ethical and principled practices (fair, consistent, normative)

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Relational role; in the relational role so, what the focus of the leader's action is needs to the at certain set of actions, which leaders need to implement so, that to improve team relationships. So, the first one is coaching team members in interpersonal skills then collaborating which is including and involving managing conflict and power issues like avoiding confrontation, questioning ideas, building commitment and esprit de corps like being optimistic, innovating, envisioning, socializing, rewarding and recognizing.

Satisfying individual and individual member needs like the trusting by supporting by advocating for them. Modeling ethical and principled practices like fair, consistent, normative. So, these helps to develop a fair trust worthy relationship between the team members and the with the team members the leader and the organization.

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Environmental: External Team Leadership Actions

- Set of skills or behaviors leader needs to implement to improve environmental interface with team:
 - Networking and forming alliances in environment (gather information, increase influence)
 - Advocating and representing team to environment
 - Negotiating upward to secure necessary resources, support, and recognition for team
 - Buffering team members from environmental distractions
 - Assessing environmental indicators of team's effectiveness (surveys, evaluations, performance indicators)
 - Sharing relevant environmental information with team

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The external role external actions, which is environmental focused role is a set of skills and behaviors leaders need to implement to improve environmental interface with the team. Networking and forming alliances in environment like gather information and increase influence advocating and representing the team towards the outside world towards the environment. Negotiating upward to secure necessary resources, support and recognition for the team, buffering team members from environmental distractions.

Assessing environmental indicators of teams effectiveness through surveys, evaluations and performance indicators. Sharing relevant environmental information with the team. So, whatever like the team needs to know leader as a boundary spanner gets to know those things early and that needs to be communicated with the group.

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Team Leadership and its Effectiveness

Enabling conditions of Team Effectiveness	Characteristics of Team excellence
Compelling purpose	Clear, elevating goals, result-driven structure
Right people	Competent team members
Real team	Unified commitment, collaborative climate
Clear norms of conduct	Standards of excellence
Supportive organisational context	External support and recognition
Team focused coaching	Principled leadership

The slide features a blue header with the title 'Team Leadership and its Effectiveness'. Below the title is a table with two columns: 'Enabling conditions of Team Effectiveness' and 'Characteristics of Team excellence'. The table contains seven rows of corresponding pairs. In the bottom right corner, there is a small video inset of a woman with glasses and a pink top. The slide also includes logos for IIT Kharagpur and NPTEL at the bottom.

So, here we are going to learn about the enabling conditions of team effectiveness and the characteristics of team excellence. So, when it is talking of compelling purpose means characteristics of excellence is clear elevating goals, results, driven structure. Whenever we are talking of right people it is competent team members, real team is given by united unified like commitments, collaborative, climate.

Clear norms of conduct is standards of excellence. Whenever we are talking of supportive organizational context we are talking of external support and recognition and team focused coaching refers to principled leadership.

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The slide features a title 'Leadership Actions and Innovation' in a blue box. Below it, a yellow box contains the heading 'Set of actions a leader must do are:' followed by a bulleted list of seven items. The background includes a stylized atom symbol and a small inset video of a woman in a pink top. Logos for IIT Kharagpur and NPTEL are visible at the bottom.

Leadership Actions and Innovation

Set of actions a leader must do are:

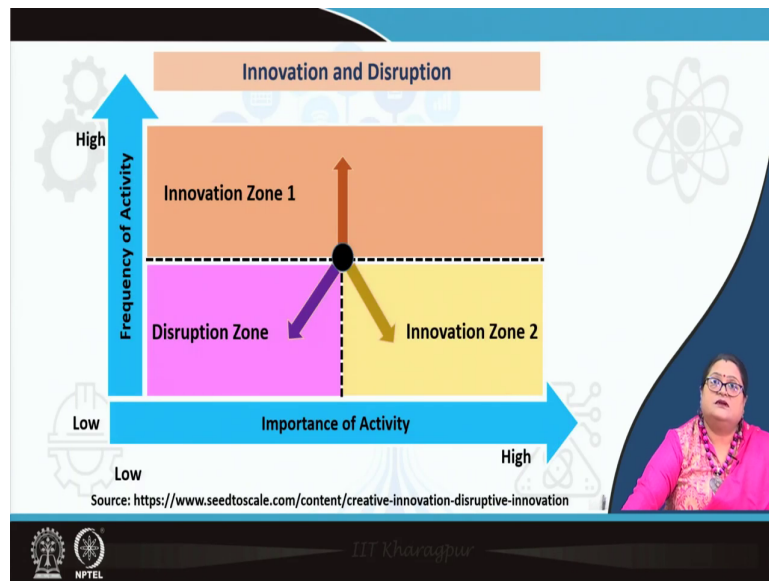
- Developing a culture that nurtures creativity and innovation.
- Establishing the strategic direction within which innovation should take place.
- Being involved with innovation
- Being open but skeptical
- Improving the idea-to-commercialization process
- Applying portfolio thinking
- Putting the right people in charge
- Creating an ambidextrous organization

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Now, we are looking into the functions of leadership actions which you which the leader requires to do for innovation. A set of actions that the leader must be doing are developing a culture that not just creativity and innovation. Establishing a strategic direction within which innovation should take place like it should be guided kind of thing like innovation you need to do innovation and this domain in this perspective.

Being involved with the innovation, improving the idea to commercialization process, applying the portfolio thinking and putting the right people in charge and creating an ambidextrous organization. So, these are some of the important qualities to be nurtured where we are talking of the innovation with innovation in focus. So, now we will look into the relationship of innovation and disruption.

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So, for real find that based on the frequency of activity and the importance of activity, the innovation can be divided into innovation zone 1, innovation zone 2 and disruption. So, let us see like how these zones get defined.

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Innovation and Disruption

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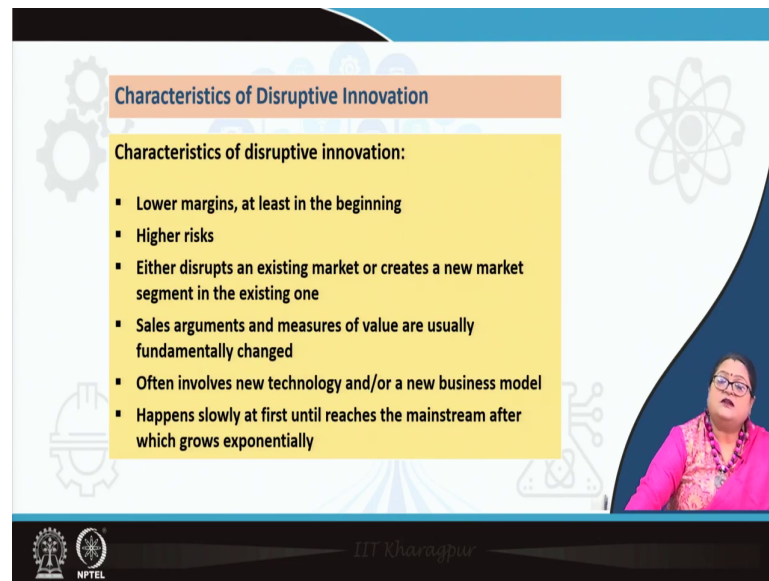
- Companies in Innovation Zone 1, i.e., frequency-led innovation create value by providing an easier and more convenient solution to a more frequent activity.
- Companies in Innovation Zone 2, i.e., importance-led innovation create value by providing a better solution to a problem and, thereby, increase the reliability and trust in the offerings.
- Companies in the Disruption Zone create value by providing a not-as-good solution to a problem at a lower price.

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The diagram shows like the even innovation zone 1 is like when it is frequency led innovation, create value by providing an easier and more convenient solution to a more frequent activity. Companies in innovation zone 2 which is importance led innovation create value by providing a better solution to a problem and, thereby, increase the reliability and trust in the offerings.

Companies in the disruptive zone create value by providing not-as-good solution to a problem at a lower price.

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Characteristics of Disruptive Innovation

Characteristics of disruptive innovation:

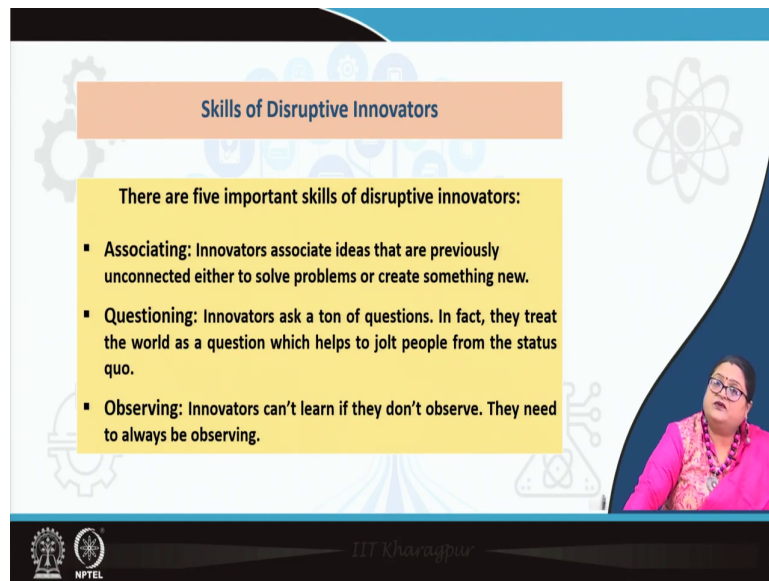
- Lower margins, at least in the beginning
- Higher risks
- Either disrupts an existing market or creates a new market segment in the existing one
- Sales arguments and measures of value are usually fundamentally changed
- Often involves new technology and/or a new business model
- Happens slowly at first until reaches the mainstream after which grows exponentially

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Now, what are the characteristics of disruptive innovation? Lower margins, at least in the beginning, higher risks, either disrupts an existing market or creates a new market segment in the existing one. Sales arguments and measures of value are usually fundamentally changed.

Often involves new technology and new business models. Happens slowly at first until it reaches the mainstream after, which it grows exponentially. So, these are the characteristics of disruptive innovation which like changes the whole perspective of looking into things like changing from the fundamental levels.

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Skills of Disruptive Innovators

There are five important skills of disruptive innovators:

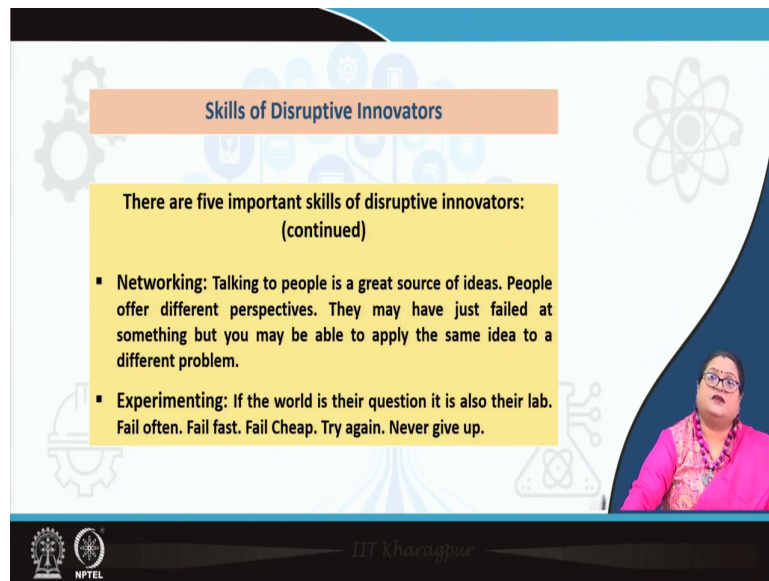
- **Associating:** Innovators associate ideas that are previously unconnected either to solve problems or create something new.
- **Questioning:** Innovators ask a ton of questions. In fact, they treat the world as a question which helps to jolt people from the status quo.
- **Observing:** Innovators can't learn if they don't observe. They need to always be observing.

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Now, there are five important skills of disruptive innovators: **Associating:** Innovators associate ideas that are previously unconnected either to solve problems or to create something new. **Questioning** this is very very important skill of a leader. Innovators ask a ton of questions. In fact, they treat the world as a question which helps to joint people from the status quo.

Observing: Innovators cannot learn if they do not observe, they need to always observing.

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The slide features a title bar at the top with the text "Skills of Disruptive Innovators". Below the title, a yellow box contains the text "There are five important skills of disruptive innovators: (continued)". A list of two skills follows: "Networking: Talking to people is a great source of ideas. People offer different perspectives. They may have just failed at something but you may be able to apply the same idea to a different problem." and "Experimenting: If the world is their question it is also their lab. Fail often. Fail fast. Fail Cheap. Try again. Never give up." In the bottom right corner, there is a small video feed of a woman in a pink top. The slide footer includes the IIT Kharagpur and NPTEL logos on the left and the text "IIT Kharagpur" in the center.

Skills of Disruptive Innovators

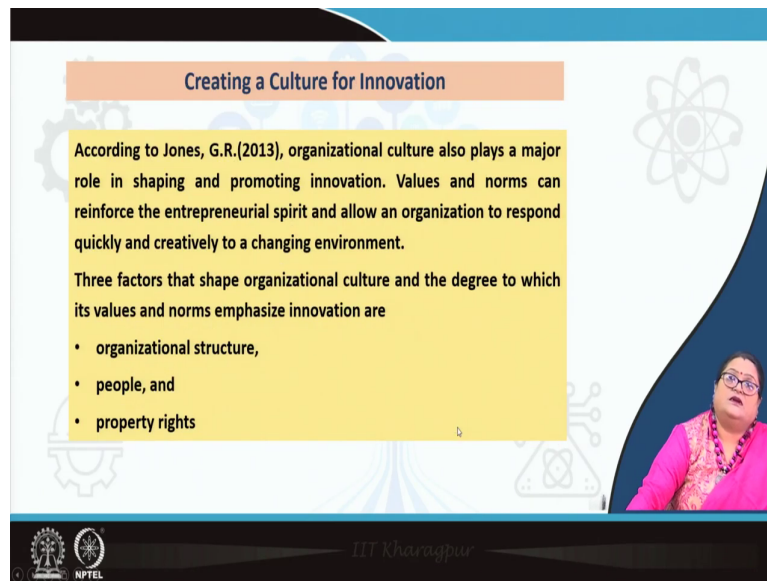
There are five important skills of disruptive innovators:
(continued)

- **Networking:** Talking to people is a great source of ideas. People offer different perspectives. They may have just failed at something but you may be able to apply the same idea to a different problem.
- **Experimenting:** If the world is their question it is also their lab. Fail often. Fail fast. Fail Cheap. Try again. Never give up.

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Networking: Talking to people is a great source of ideas. People offer different perspectives. They may have just failed at something, but you may be able to apply the same idea to a different problem. Experimenting: If the world is their question, it is also their lab. Like for fail often, fail fast, fail cheap, then try again and never give up.

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The slide features a title bar at the top with the text "Creating a Culture for Innovation". Below the title, a yellow text box contains the following content: "According to Jones, G.R.(2013), organizational culture also plays a major role in shaping and promoting innovation. Values and norms can reinforce the entrepreneurial spirit and allow an organization to respond quickly and creatively to a changing environment." Below this, it states "Three factors that shape organizational culture and the degree to which its values and norms emphasize innovation are" followed by a bulleted list: "• organizational structure," "• people, and" "• property rights". The slide also includes a small inset video of a woman in a pink top speaking. At the bottom, there are logos for IIT Kharagpur and NPTEL.

Creating a Culture for Innovation

According to Jones, G.R.(2013), organizational culture also plays a major role in shaping and promoting innovation. Values and norms can reinforce the entrepreneurial spirit and allow an organization to respond quickly and creatively to a changing environment.

Three factors that shape organizational culture and the degree to which its values and norms emphasize innovation are

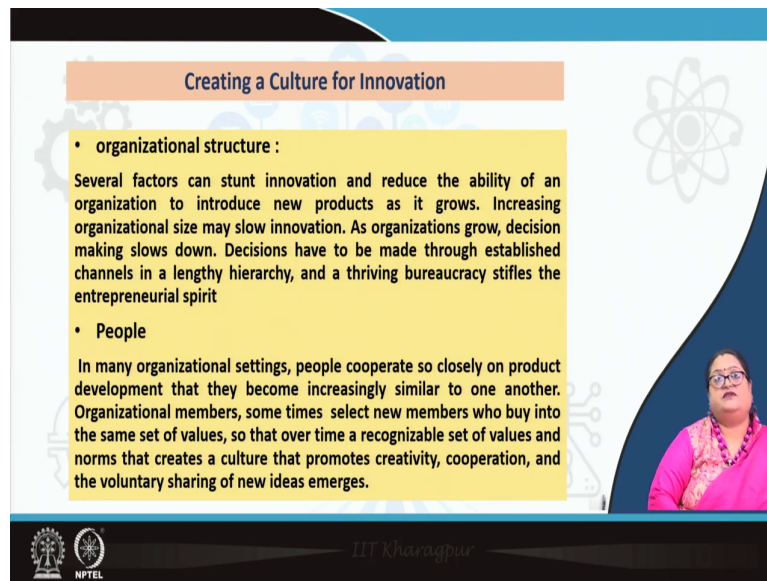
- organizational structure,
- people, and
- property rights

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Now, how to we create a culture of innovation? It is very important for the organization to understand how to create a culture of innovation. According to Jones, organizational culture also play a major role in promoting and shaping innovation. Values and norms can be reinforced to the like entrepreneurial spirit and allow an organization to respond quickly and creatively to a changing environment.

Three factors that shape organizational culture and the degree to which its values and norms like have an emphasis and innovation are the organizational structure, the people and the property rights.

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Creating a Culture for Innovation

- **organizational structure :**
Several factors can stunt innovation and reduce the ability of an organization to introduce new products as it grows. Increasing organizational size may slow innovation. As organizations grow, decision making slows down. Decisions have to be made through established channels in a lengthy hierarchy, and a thriving bureaucracy stifles the entrepreneurial spirit
- **People**
In many organizational settings, people cooperate so closely on product development that they become increasingly similar to one another. Organizational members, some times select new members who buy into the same set of values, so that over time a recognizable set of values and norms that creates a culture that promotes creativity, cooperation, and the voluntary sharing of new ideas emerges.

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Organizational structure: Several factors in the organizational structure can stunt innovation and reduce the ability of an organization to introduce new products as it grows.

Increasing organizational size means slow innovation as we were discussing in the first lecture itself when we started discussing with like module 10. As organization grow, decisions making slow down. Decisions have to be made through established channels in a lengthy hierarchy and thriving bureaucracy stifles the entrepreneurial spirit.

So, we understand like how much flexibility, how much standardization to be given based on our understanding like if there is too much of bureaucracy it can like stifle down the entrepreneurial spirit in the people. So, next after we have the structure there needs to be some proper people. So, let us understand the nature of people with respect to innovation.

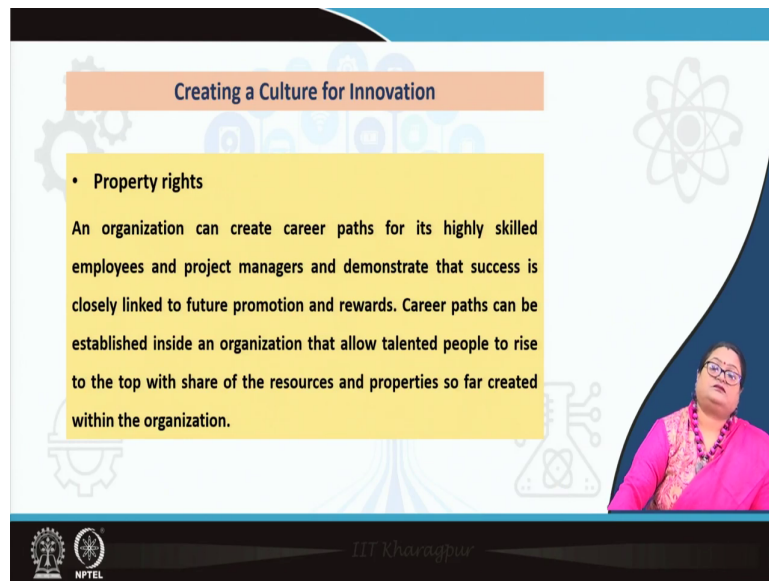
So, in many organizational settings people cooperate so, closely on product development that they increasingly become similar to one another. Organizational members can sometimes select new members who buy into the same set of values. So, that over a time a cognizable set of values and norms that creates a culture that promotes creative a culture which promotes creativity cooperation and the voluntary sharing of new idea emerges.

So, what happen when people start cooperating with each other, they share their ideas with each other, find their commonality respect their differences and then they come together. So, and while selecting a like my co-partner we always go for ideas for people who will be sharing our own like our own thoughts, values and principles.

So, organizational members select new members who buy into the same set of values over time. So, that what happens are recognizable you know like a set of values emerges which try to be defined as a culture of the organization and that culture is going to promote creativity cooperation and the voluntary sharing of new ideas emerges.

So, it is like a chain like process like the coordinator or the leader is going to like select new members or a originally present new members will select new members and like pass on the values to them. So, they also get learnt in the new system and they also can in future find out new employees who will be matching this cooperative cooperation creativity and voluntary sharing of the organization. So, this goes down through generation through generation because there have been a right mix of people.

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Creating a Culture for Innovation

- **Property rights**

An organization can create career paths for its highly skilled employees and project managers and demonstrate that success is closely linked to future promotion and rewards. Career paths can be established inside an organization that allow talented people to rise to the top with share of the resources and properties so far created within the organization.

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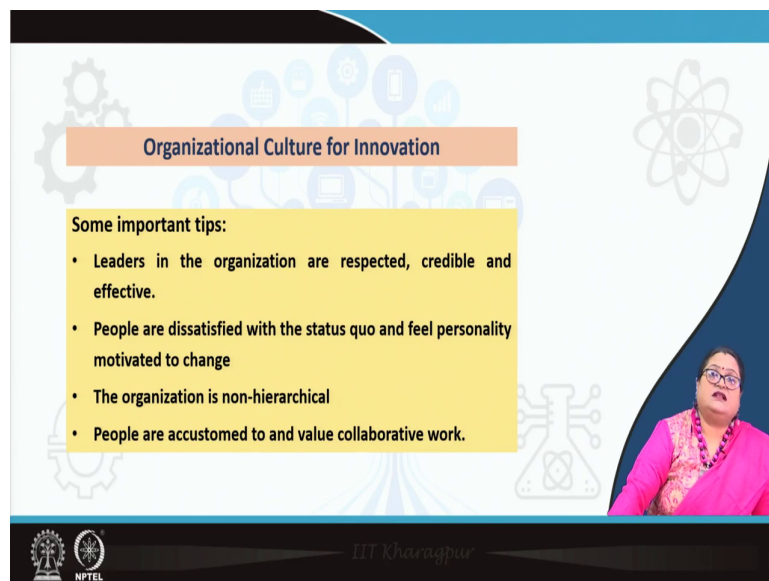
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Property rights an organization can create career paths for highly skilled employees and project managers and demonstrate that success is closely linked for to future promotion and rewards. Career paths can be established inside an organization and allow talented people to rise to the top with share of the resources and properties so far created within the organization. So, career mapping the career path of the employees so, that they are able to move to the top also is very important.

So, then because if talented people are not getting recognition, then why do they contribute, why do they invest their self and then what happens like why do they perform? These kind of questions will come in which are going to like have an impact on the other two or three stages of creating an organizational culture for innovation.

So, it is important like career path is established and which allows like the top talents to be like talented people to rise to the top and share the you know like resources and properties which has been used which has been created for till then towards the like the benefit of the organization towards within the organization itself. So, this is very important talent management is also an important part of organizational transformation.

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The slide features a title 'Organizational Culture for Innovation' in an orange box. Below it, a yellow box contains the text 'Some important tips:' followed by a bulleted list. The presenter, a woman in a pink sari, is visible in the bottom right corner. The slide also includes logos for IIT Kharagpur and NPTEL at the bottom.

Organizational Culture for Innovation

Some important tips:

- Leaders in the organization are respected, credible and effective.
- People are dissatisfied with the status quo and feel personality motivated to change
- The organization is non-hierarchical
- People are accustomed to and value collaborative work.

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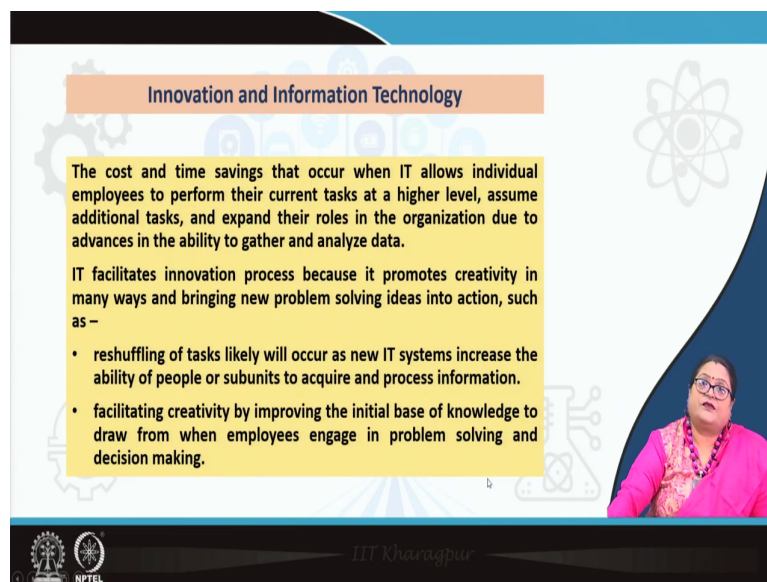
Now, some of the important tips for the cultures for innovation are leaders in the organization are respected, credible and effective. People are dissatisfied in the status quo and feel personality motivation motivated to change. The organization is non-hierarchal in nature there is no hierarchy and people are accustomed to and value collaborative works.

So, people love doing collaborative work and they are getting accustomed to this collaborative work also. So, people need to be accustom to and value with the collaborative

work because peer learning is the best learning. We get to know so many things from our peers so many perspectives about the same thing from the peers and it is a again mutually beneficial activity where the (Refer Time: 31:51)

The person who has known about the about which this is happening then you know like through this collaboration they can gain knowledge about others and develop their competencies and others also benefit from the knowledge of these people. So, collaboration is very important.

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Innovation and Information Technology

The cost and time savings that occur when IT allows individual employees to perform their current tasks at a higher level, assume additional tasks, and expand their roles in the organization due to advances in the ability to gather and analyze data.

IT facilitates innovation process because it promotes creativity in many ways and bringing new problem solving ideas into action, such as –

- reshuffling of tasks likely will occur as new IT systems increase the ability of people or subunits to acquire and process information.
- facilitating creativity by improving the initial base of knowledge to draw from when employees engage in problem solving and decision making.

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Now, we will discuss the importance of information technology. Now, the cost and time savings that occurs when IT allows individual employees to perform the current task at higher level, assume additional task and expand their roles in the organization due to advances in the ability to gather and analyze data.

So, (Refer Time: 32:52) like people are using like their this collection of the data analysis of the data these are very much connected with the roles and responsibilities. And when the roles in the organization are increasing people are given extra responsibilities and like collecting data about the employees collecting data about the use of the product collecting data about the feedback collecting data about the customers based on different initiatives taken.

So, we will be much saved if IT is used in this data collection and you know like mapping with the facts. IT facilitates innovation process because it promotes creativity in many ways and bringing new problem solving ideas to action such as reshuffling of tasks likely will occur as new IT systems increase the ability of people or subunits to acquire and process information.

Facilitating creativity by improving the initial base of knowledge to draw from when employees engage in problem solving and decision making. So, it is a facilitating creativity by improving the initial base of knowledge to draw from an employee's engage themselves in problem solving and creative decision making.

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The slide features a title bar 'Innovation and Information Technology' in an orange box. Below it, a yellow box contains the heading 'Information Synergies' and a bulleted list. The list includes: 'The knowledge building is created when two or more individuals or subunits pool their resources and cooperate and collaborate across roles or subunit boundaries which defines synergies.', 'IT, through knowledge management systems, allows employees to search their network for information.', 'IT allows researchers and planners to communicate more easily and less expensively across time and geographic location', and 'IT also allows for an increase in boundary-spanning activity—interacting with individuals and groups outside the organization to obtain valuable information and knowledge from the environment—that helps promote innovation.' A video inset in the bottom right shows a woman in a pink sari. The footer contains the IIT Kharagpur and NPTEL logos.

Innovation and Information Technology

Information Synergies

- The knowledge building is created when two or more individuals or subunits pool their resources and cooperate and collaborate across roles or subunit boundaries which defines synergies.
- IT, through knowledge management systems, allows employees to search their network for information.
- IT allows researchers and planners to communicate more easily and less expensively across time and geographic location
- IT also allows for an increase in boundary-spanning activity—interacting with individuals and groups outside the organization to obtain valuable information and knowledge from the environment—that helps promote innovation.

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Another important thing in this domain is information synergies. The knowledge building is created when two or more individuals the knowledge building is created when two or more individuals like submit their pool of resources and cooperate and collaborate across roles or subunit boundaries which defines the synergies.

So, people are coming together co-creating, collaborating so, but again with respect to what needs to be defined. So, with what respect to what their collaborating with respect to what they will find is synergies this needs to be like defined properly. IT through knowledge management systems allows employees to search their network for information.

So, employees need to search their networks and understand like how to control it how to define it when they are going for IT based like network knowledge management system. IT

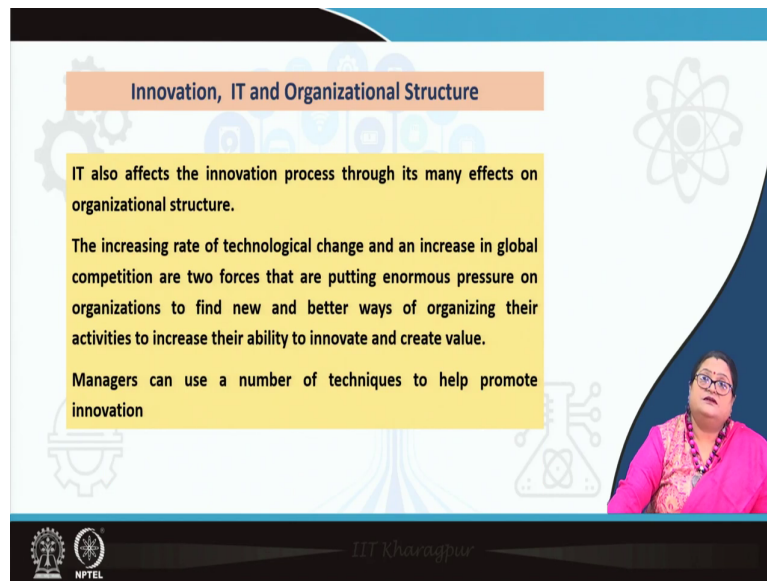
allows researchers and planners to communicate more easily and let us expensively across time and geography location.

So, the researchers and planners need to communicate with each other in the language which is understood by everyone. And like they can do it, if they can collaborate it will be less expensive across geographical locations and like more easily can collect data about it. It IT also allows for an increase in boundary spanning activity - interacting with individuals and groups outside the organization to obtain valuable information and knowledge from the environment that helps to promote innovation.

So, IT helps in more in spending time in boundary spanning activity where you are interacting with individuals and other groups and outside the organization to you are try to get some valuable information and the knowledge sharing from the environment. So, these helps to promote innovation because here gradually you become a good environmental scanner.

And you get to scan the environment properly, process the information properly, understood like start understanding like what these like what the external environment wants and how my organization can reply to it in a very different way within a quick span of time. So, this environmental scanning then promotes the innovation.

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Innovation, IT and Organizational Structure

IT also affects the innovation process through its many effects on organizational structure.

The increasing rate of technological change and an increase in global competition are two forces that are putting enormous pressure on organizations to find new and better ways of organizing their activities to increase their ability to innovate and create value.

Managers can use a number of techniques to help promote innovation

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Innovation, IT and organizational structure IT also affects innovation process through its many effects on the organizational structure. The increasing rate of technological change and an increase in global competition are the two forces that are putting enormous pressure on the organizations to find new and better way of organizing their activities to create their increase their ability to innovation and create value.



Managers can use a use a number of techniques to help promote innovation. So, how this can be done? Like we have already seen from the types of innovation we learn more in a techniques of how innovation can be promoted within the organization in the upcoming slides.

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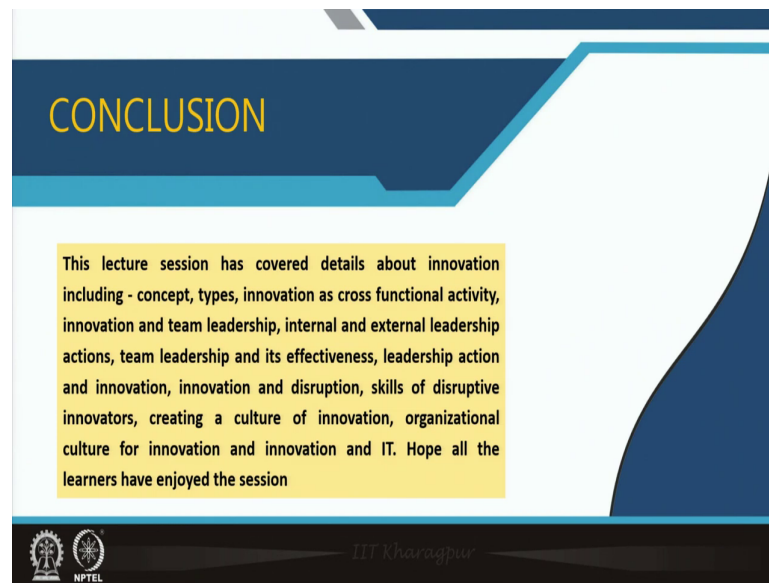
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These are the references that we have used.

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So, to conclude this lecture session has covered details about innovation including concepts, types, value, then innovation is a cross-functional activity, innovation and team leadership internal and external leadership actions, team leadership and effectiveness, leadership action and innovation, innovation and disruptions, skills of disruptive innovators then creating a culture of innovation, organizational culture for innovation and innovation and IT.

So, hope all of you have enjoyed this session in the future sessions. We will learn more and more about the innovation and how the organizational processes can facilitate innovation in the organization.

Thank you till then.