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NPTEL ONLINE CERTIFICATION COURSE

Course Name

Strategic Communication for Sustainable Development

by

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**Lecture 23: Challenges to the use of ICTs in
Sustainable Development Efforts**

Welcome back to the course titled strategic communication for sustainable development.

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My name is Aradhna Malik and I am helping you with this course. And in the previous lecture we discussed a very interesting and upcoming field called a community informatics.

(Refer Slide Time: 00:35)



Strategic Communication for
Sustainable Development

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244

And in this lecture.

(Refer Slide Time: 00:37)

Challenges to the implementation of ICTs in rural areas (Dagron, 2003)

- **The dream: Using the latest technology will facilitate solutions to age old problems**
- **The vision:**
 - "Going beyond connectivity
 - Promoting enabling environments
 - Minimizing threats & risks
 - Maximizing positive results"
- **The concern: Can the Internet really contribute to development? How do we know that it can and will contribute to development?**

We will discuss the challenges to the implementation of ICT's. So, you know we talked about what information communication technologies can do for the community, how they are used in community development especially in sustainable development. Now we will discuss some of the challenges and some of the issues that are there in dealing with the implementation of the ICT's and especially in rural areas where this development work is going on.

So the dream here is the first point here is the dream, what do we dream about, what do we talk about, what do we think about when we talk about work in rural areas, we talk about using the latest technology we say oh! Great this is the new technology that has come up and I am talking from the perspective of a teacher of a faculty member at the Indian Institute of Technology where newer technologies are coming up every day, that we are dealing we are learning newer things every single day where we are aware of all the great technological changes and advancements that are taking place in the rest of the world on a daily basis.

And so from the point of view of a teacher in IIT Kharagpur I am discussing these things and we have, you know great technology this is what this technology can do and my dream when I go into a rural area is and when I you know when I take all this knowledge.

(Refer Slide Time: 02:00)

Challenges to the implementation of ICTs in rural areas (Dagron, 2003)

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- | The vision:
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 - Promoting enabling environments
 - Minimizing threats & risks
 - Maximizing positive results"
- | The concern: Can the Internet really contribute to development? How do we know that it can and will contribute to development? ***

My dream is that using the latest technology will help me solve the age old problems in a flash like this that is not going to happen. So that is one big challenge, it is not that simple. The vision then I think about these things I need to go beyond connectivity, I need to go above and beyond whatever anyone has thought of before, I need to promote enabling environments, I need to minimize threats and risks, I need to maximize positive results, and the concern after all of this, it is nice to have dreams.

It is very, it is not only nice, it is essential to have these dreams and the vision of going above and beyond what anyone else has thought of till now, or what anyone has been able to do till now, unless we have those dreams, unless we have the vision we cannot progress this vision and these dreams give us the energy that is required to make changes in very, in existing structures. But then the concern that bring us back down to earth from these high-flown ideas is that can the internet really contribute to development, is the internet really the solution.

How do we know that the internet can and will contribute to development, why can it not be something else, the other thing that we forget about is do we start with the assumption that the community is not doing what it needs to do, that the community is not aware of the problems it

has, is it not trying to solve those problems our V as outsiders really equipped to understand how our technologies are going to help people solve their age old problems.

I know I am making a very, very strong statement here and some people who listen to this may not agree with it and some people may even feel offended, but then I am taking that risk to share my concerns in a public forum because I feel very strongly about public participation, about community participation. Unless we talk to the community, the community unless the community understands, you know unless we respect the efforts of the community we cannot make any sustained changes in the community.

However good our intention is unless we understand what the community is all about, unless we become part of the community, unless we see things as an insider, as insider sorry, we cannot bring about any changes in the community.


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Non-negotiable conditions for ICTs in development (Dagron, 2003)

Community ownership: Problems (FAO, 2001 in Dagron, 2003):

- Number & visibility of community-driven ICT initiatives
- Coherence between participatory needs assessments & implementation of ICTs in communities
- Emphasis seems to be more on access to ICTs than the implementation of ICTs to solve specific current problems
- "Priorities of ICT projects tend to be influenced more by the interests of external organizations rather than community based organizations"
- "Thematic sectors applied often reflect an economic, market-related focus"
- "There is a lack of local participation in the creation of content & selection of ICT tools"
- Availability of ICTs is not connected to awareness, skills to use those ICTs or technical literacy among beneficiaries

■ **Remedy: Community involvement & participation in design → community ownership → sustainability**



Okay, some non negotiable conditions and again this is from a paper by Mr. Gumucio Dagron and I mean amazing activist and, you know it is his papers are so focused and they are so on the dot and, you know you must read his work if you really want to get a sense of what activists feel

about how technologies and modern-day technologies can help the environment and how specially, how communication practices and communication strategies can help the environment I have become a big fan of Mr. Gumucio Dagron especially after getting his work in the course of developing this MOOC course.

So he says that there are few non-negotiable conditions for ICT's which means these are the things that we absolutely must pay attention to, but in paying attention to these ICT's we also come across a variety of problems. The first problem, the first non-negotiable condition for ICT's is community ownership. Community has to own the issue community has to own the development efforts, but some problems are here our number and visibility of community driven ICT's initiatives.

How many such initiatives exist, community has to own these initiatives, but how many of these initiatives actually exist in the community most of the times, the policy makers the people who are funding the efforts, the people who can who are equipped to go and do things in the community are the ones who go and take care of things in the community. The community in many cases does not own the initiatives it just tolerates them, it bears the impact many times these initiatives help the community sometimes they do not.

Coherence between participatory needs assessments and implementations of ICT's in communities. So we conduct participatory needs assessments, and then we go and implement ICTs. We go and, you know share what we have and the link between what we have found out about the community and what we are actually doing is missing in many cases.

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■ **Remedy: Community involvement & participation in ICT design → community ownership → sustainability** 244

Emphasis seems to be more on access to ICT's than the implementation of ICT's to solve problems, many times people will tell you, let them have access to these things, they learn how to use them, I differ I am sorry. But till we actually know how to use something we, just having access to something is not really going to solve our problem. Many times I gave you an example of or maybe I did this in class, you know of how computers are used in our offices, in many offices the computer is used or the excel program is used just as a means of tabulating data.

The programs within excel or within an excel spreadsheet are not really used to their full capacity people do not even know that they can even add things in the excel program, they do not want to or they do not learn how to do the same thing. Similarly the internet, how many of us use the internet to actually form connections and get information and use that information. Many of us just use it as a magazine, many of us using the Internet as a magazine, you know one information leads to another leads to another we read about it, we gossip about it, we forget about it.

So it is more of a, or maybe and, you know just I mean it is a newspaper for us what is happening in the rest of the world. And that is about it, the internet is capable of we can use the internet for

so many more things than just using it as a magazine or a newspaper. But most of us do that, so is the actual utility really there and especially in areas that cannot afford these technologies are we really, you know is it really necessary to put these technologies there without explaining the complete extent of these technologies or without explaining or without having the people accept what these technologies can do for them.

So that seems to be the problem here, the emphasis is let us go and give them computers, let us go and give them cell phones, how do you use cell phones, what all can you use these cell phones for do we tell them that maybe not.

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■ **Remedy: Community involvement & participation in ICT design → community ownership → sustainability** 246

And how can you use cell phones to solve your problems no.

(Refer Slide Time: 09:37)

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Priorities of ICT projects tend to be influenced more by the interest of external organizations rather than community based organizations, community based organizations should be the ones deciding how the efforts are going to pan out and I will share an example with you a personal story with you I was, I interned with an organization that is based in, you know above an organization based out of Norway, but that had projects running indifferent parts of Romania and this was in the year 2001, summer of 2001.

So I went with a group of six, you know we were a group of six students or five other ladies from different medical colleges, and I was not in a medical college, but I just, you know I became part of this group through an application that I submitted. And we went to an orphanage in a place called Iasi, I-A-S-I spelled as I-A-S-I in Romania. And the day before we went to this orphanage we had, the idea was to volunteer in this orphanage.

So we made our plans we will go there, we will do this, we will do that etc., and we went there and on the very first day this was a three week internship and on the very first day we sat down with the senior administrator of that orphanage and on the very first day we were told that a lot of people came and tried to implement things, and then so we were young and we were just

listening to the administrator and the administrator told us that all we need you to do is spend time with these children.

We do not want you to come in and try different things, we do not want you to teach these children something we will take care of all of that, we understand where these children are coming from. But these are children between the ages of, you know a few months to, I think they were there up to the age of 12 and then they were shifted to a different orphanage. So we were volunteering and they said all the only help from we need from you is to spend time with these kids because we do not have time to play with these kids, we do not have time to just sit and bond with the children.

And that is what the children seem to need at this point. We need to listen to the community, we need to do what they need us to do, we cannot go and force ourselves, you know or we cannot go and just, you know influence them with what we need from them, we need to give them what they need. So and I can understand people who fund these efforts have, you know they also need to see some output, but at the end of the data community has to benefit in whichever way it wants to be benefited from our efforts. It is not only the money, it is not only the food, it is also having an open mind sometimes just having a place to voice their opinion maybe even that will help.

So through our experience in Romania, you know everybody benefited, the children had smiles on their faces and we said okay we will do whatever you want us to do, and everybody was happy. So all we did was go and play with the children and then we would come back and say okay, this is what he found out, this is what we found out, but we were able to help the orphan in just by being there for three weeks, we took the children of their hand, so they could look after the administration, they could clean their beds, they could, you know they were they were short-staffed.

And they could take care of other things that would make the lives of these children comfortable. So that is what we are talking about here.

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Thematic sectors applied often reflect an economic market related focus. So we put in some input we want a measurable output. Sometimes that may not be possible, sometimes that may not be what is required. Once the community is comfortable it has learned something, it will become sustainable the reward lies in the community in the lives of the people becoming more comfortable. That is the reward it is not about money, but then again, you know I can understand things from the point of view of the people who put their time and money into such efforts.

The availability of ICT's is not connect to awareness, skills required to use those ICT's or to technical literacy among the beneficiary. So whatever the ICT's that are that are taken to these communities are not really connected to the awareness that is there, the two people knowing what these ICT's are to their skills, that they need to use these ICT's or to even basic technical literacy among the community.

The remedy for this is again community involvement and participation in the design, the adaptable part of the design of these ICT's community ownership this is my technology it is for my benefit, that will intern contribute to our vision of sustainable development.

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■ **Non-negotiable conditions for ICTs in development (Contd.)** (Dagron, 2003)

Local content: Problems

- Volume of information
- Lack of access to relevant information easily
- Generation of specific local content

■ **Remedies:**

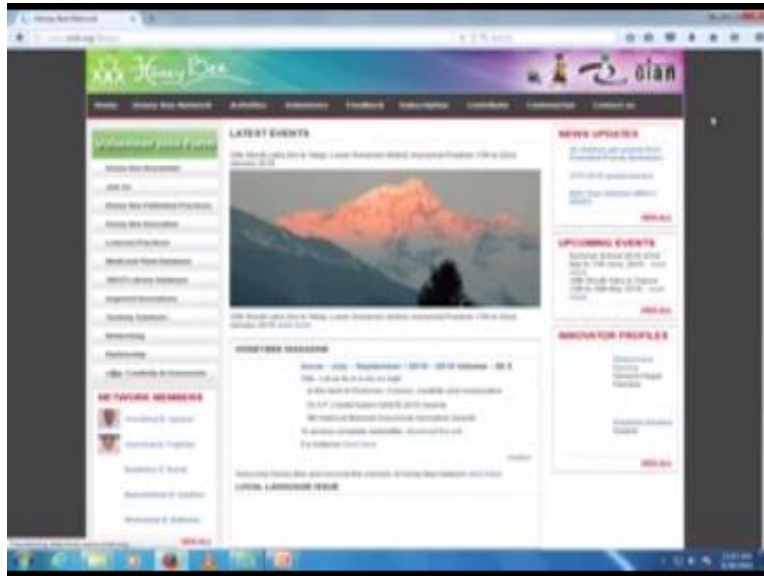
- Generation of local content. E.g. the Honeybee network in India - <http://www.sristi.org/hbnew/>; SRISTI - http://www.sristi.org/cms/en/our_net
- Use of appropriate channels acceptable to the community



The other local non-negotiable condition is the local content. We need local content, perfectly alright, but the problems are the volume of information available regarding the local problems. So not much information in most cases is available about the problems, that these communities are facing. Lack of access to relevant information easily, generation of specific local content is another problem. Remedies, we need to generate more local content and I want to show you a brilliant example of a national effort in India.

This is the honeybee network that has been I will just show you this website, this is really very nice. So this lecture is not going to be as short as I thought it would be okay. The honeybee network was started in the late 1990s. And by Professor Anil Gupta of the Indian Institute of Management Ahmadabad, and he was awarded the padmashri as far as I know.

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And so, you know it is an amazing network of practitioners, what they do in this network is they collect stories about solving problems in the field.

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And they share these stories in the local language with people in that region.

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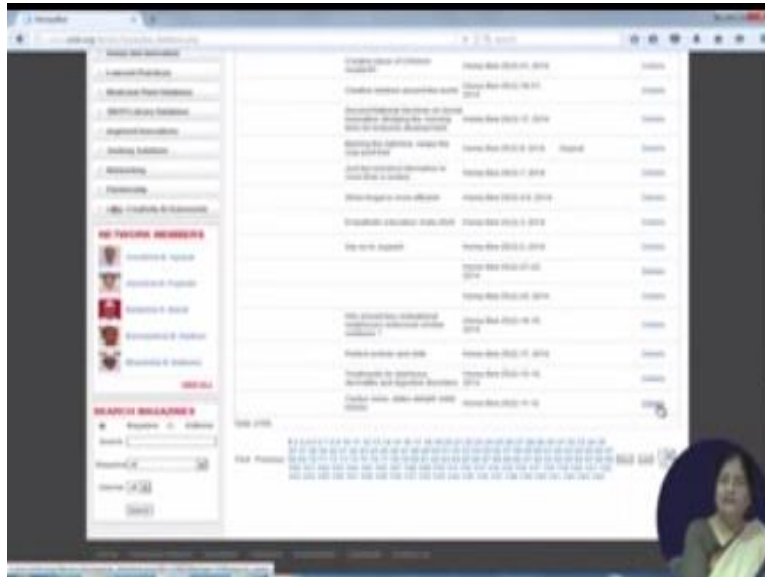


So for example, let me see what language this is, this is Gujarati okay I will just show become a member so there are local language issues are there here. So the honeybee published articles are there when you look at these articles they are published in local languages local problems are solved by local people.

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And these stories of these problems are then shared with people in that region in the local language that is the honeybee magazine you take stories about different problems and that used to be the format many years ago, but now of course you know so it is amazing how, you know we do not have to reinvent the wheel we take stories about how one say one farmer found a big stone in his field.

How did he deal with it, how did he take it out of the field, what kind of equipment did he use, what did he do with it or maybe a farmer suffered some loss of crop due to some local disease what did he do, what kind of local things that did he use, what medicines did he use. So all those stories are collected and they are shared through this magazine called the honeybee which is known by different names in different parts in different languages in the country.

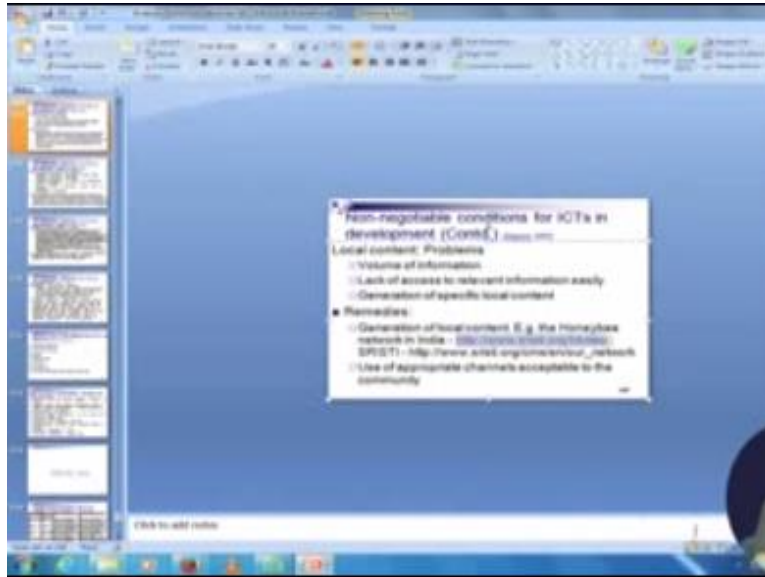
And then it is available at affordable prices took people in the community, they read the magazine they know what people in that region are doing and they solve their own problems.

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Amazing initiative you must go through this website and find out if you do not know about it already.

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That is what the SRISTI network is, so SRISTI network this is the V website. SRISTI in Sanskrit means creation and the name is so apt, this is the society for research and initiatives in sustainable technological innovations. So you must go through this is amazing, I am sorry the internet is taking a lot of time. So you can do this on your own the link will be available for you it is an amazing initiative okay, use of appropriate channels acceptable to the community give people information in the way in a way that they can accept it they can understand it.

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Non-negotiable conditions for ICTs in development (Contd.) (Dagron, 2003)

Appropriate technology: Problems:

- Installation/ provision of the 'latest' or most widely accepted (fashionable) technology
- Life-span of the current technology & its implications where it is installed
- Optimum utilization of technology in areas where it is installed
- Maintenance of equipment

Remedies: Community participation & training; respect for & use of local technology; integration of new technology into existing framework, including setting up a support system to deal with the above

248

Appropriate technology problems, we say we should have appropriate technology problems here are installation of provision of the latest or most widely accepted or most fashionable technology. Lifespan in the current technology and its implications where it is installed these things are expensive, problems power cuts, voltage fluctuations, etc. optimum utilization of technology in areas where it is installed is it being used properly or not and maintenance of equipment what happens if something goes wrong, you know what happens if, say one small plug needs to be repaired does anyone know how to do it.

So those things are their remedies again community participation and training respect for and use of local technology to the extent possible, integration of new technology into the existing framework including setting up a support system to deal with the above. So that is the way we deal with this okay. Language and culture pertinence the problems are language required by the community, but versus the language used by ICT's, I mean ICT's are not developed in the local languages India itself has so many languages.

We cannot develop ICT's in all local languages, but we can cater, we can modify them, we can adapt them to languages that most people understand. Cultural manifestations through the

language that is used and the content language class and culture that dominate the internet can have negative effects by generating a uniformity of ideas, preferences and world visions. Media has that role to play, whatever is propagated through the media becomes the norm of the society, becomes acceptable to the community, becomes acceptable to society.

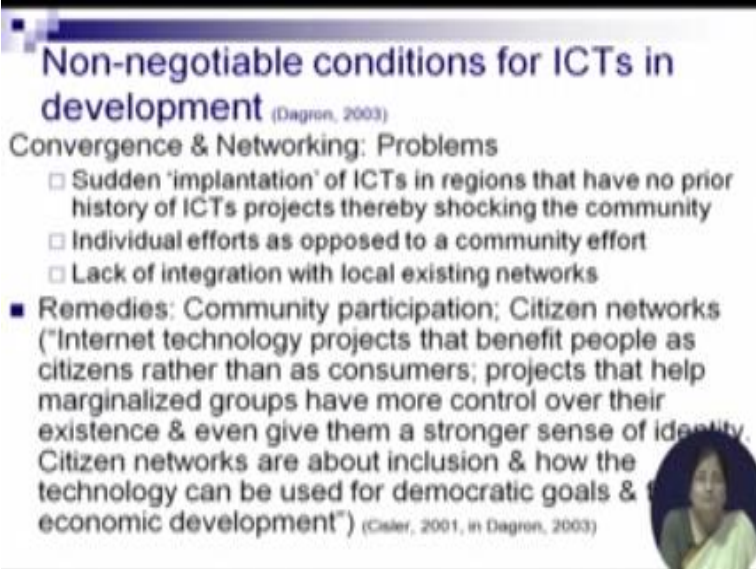
So, you know again I am not old-fashioned, I'm not a critique of the internet, I am a technophile, technophile sorry I am a technophile, I enjoy technology, I learn very fast, but then there are certain limitations we see, we use media, we become what the media wants us to become, because there is a slow of information there is so much there that our thinking process many times is likely to be shaped by what we see and hear on the internet.

So many times a uniformity of ideas is propagated the local variations the diversity is somehow hampered by the idea is propagated on the net. The illusion of increased democracy and plurality produced by the interactive capacity of the internet may be misleading if it in fact reinforces existing relationships of centralized control and domination in society. Democracy versus centralization, democracy versus control, democracy versus domination, who is more important, who should be heard etc.

So lack of cultural coherence between what is said and what is projected. For example, if the content deals with an Indian situation, but projects a western country we are talking about, you know implementing ICT's in India, but we are showing say, you know some western country over there we are showing people with blunt hair no it does not match. So that of that can happen on the ICT so one has to be very careful.

The remedies are balancing cultural diversity with cultural evolution through ICT's generation and promotion of culturally appropriate content and community participation the remedy go most of these problems is community participation.

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Non-negotiable conditions for ICTs in development (Dagron, 2003)

Convergence & Networking: Problems

- Sudden 'implantation' of ICTs in regions that have no prior history of ICTs projects thereby shocking the community
- Individual efforts as opposed to a community effort
- Lack of integration with local existing networks

■ Remedies: Community participation; Citizen networks ("Internet technology projects that benefit people as citizens rather than as consumers; projects that help marginalized groups have more control over their existence & even give them a stronger sense of identity. Citizen networks are about inclusion & how the technology can be used for democratic goals & economic development") (Cisler, 2001, in Dagron, 2003)



Convergence and networking the sudden implementation we want our ICT's to converge we want them to be a part of the social milieu, but the problems here are the sudden implementation and implantation of ICT's and regions that have no prior history of ICT projects thereby shocking the community we just put our tower there and people say what is this and then children are playing and they sort of, you know it says do not play danger and children do not listen and they go in and then

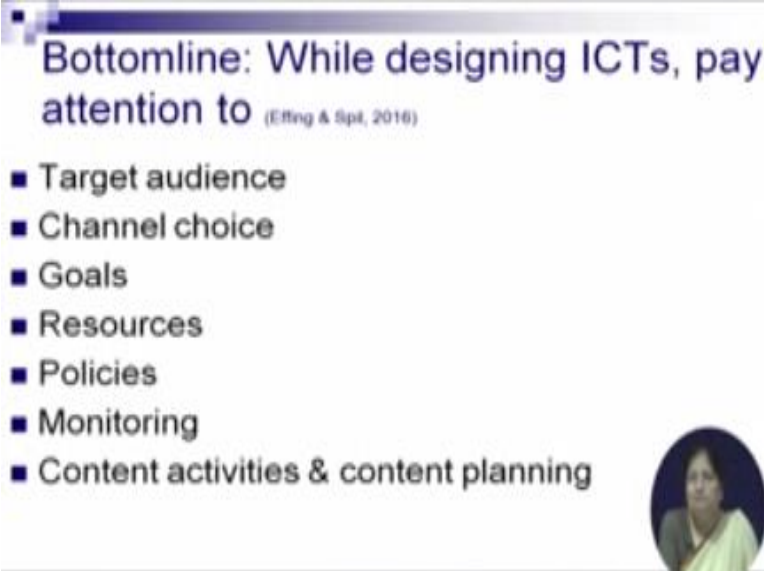
I mean so problems can happen, so we do our best and people say why, why do you have this huge tower in the middle of my field it is blocking the sunlight for my plants and, you know it is preventing my animals from grazing etc. So I mean all those things can happen so and then this okay, cell phone why do I need to have this and my electricity bill will go up with this small device. So I mean there are resistances, so if especially people are not used to new technologies they may not like to use them that much.

Individual efforts as opposed to a community effort people, you know do things in isolation that is one very big problem with the social work, we go, we help regions where that need help. So we do not go as a as a team and unless the community accepts whatever is being shared with it

the community effort will not be their individual efforts eventually will run of steam, lack of integration with local existing networks we have dealt with this in the previous lecture. So I will not dwell too much on this.

The remedies again community participation, community needs to know what is happening it needs to be involved, it needs to have a say in whatever is happening. Citizen networks, the internet citizen networks, you know the Internet technology projects that benefit people as citizens rather than as consumers. Projects that help marginalized groups have more control over their existence and even give them a stronger sense of identity. Citizen networks are about inclusion and how the technology can be used for democratic goals and for economic development. So these are the remedies for this.

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■ Bottomline: While designing ICTs, pay attention to (Effing & Sipt, 2016)

- Target audience
- Channel choice
- Goals
- Resources
- Policies
- Monitoring
- Content activities & content planning

Now the bottom line while designing ICT's we need to pay attention to a few things, we need to pay attention to the target audience, to the channel choice, to the goals, to the resources we have, to the policies we design for their use for, to the monitoring we do of these ICT's, to the content activities and, to the content planning only then will the ICT's be accepted by the community and will they become a part of the sustainable development efforts.

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Role of ICTs in Sustainable Development
(Nguyen & Mitchell, 2016)

- Promoting policies that facilitate adequate investment & funding
- Linkage between local/ regional development plans & broader UN goals, & participation of local organizations
- Multistakeholder participation
- Protecting freedom of expression & human rights online
- Closing the gender gap
- Participation from developing countries
- Building capacity to enable quality, localised content & services
- Addressing cybersecurity & trust
- Government collaboration beyond silos



Role of ICT's and sustainable development promoting policies that facilitate adequate investment and funding linkage between local and regional local and regional development plans and broader United Nations goals and participation of local organizations, United Nations has these sustainable development goals that I will share with you in the last lecture. I did not talk about them till now, because I wanted you to keep thinking about what this animal called sustainable development is, but we will be talking a little bit about the them in the last lecture.

Multi stakeholder participation, ICT's encourage facilitate participation by a number of stakeholders, because the shear power they have or the shear capacity they have to reach large number of and large variety of audiences. Protecting freedom of expression and human rights online, closing the gender gap, I mean, you know participation from developing countries building capacity to enable quality localized content and services, addressing cyber security and trust and government collaboration beyond silos efforts do not happen in silos ICT's have the capacity to take our efforts out of our little fields of work and share them with the rest of the community.

And eventually we can garner support from the government. So these are some of the roles that ICT's play in sustainable development, and the way we use, you know we need to strategize our use of ICT's, if you really want our efforts to go somewhere.

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Thank You



So that is all we have time for in this lecture and we will wrap up whatever we have done till now in the next lecture. So thank you very much for listening and I hope I have given you enough material to think about, to mull over, to explore on the internet on your own. I must leave you in a more confused state than you were when you started this because, I really need to leave you with a lot of food for thought if I have been able to do that and I have been successful in delivering the lecture that I was supposed to play. So thank you very much for listening.