### **NPTEL**

### NPTEL ONLINE CERTIFICATION COURSE

### **Course Name**

Strategic Communication for Sustainable Development

by Prof. Aradhna Malik Vinod Gupta School of Management IIT Kharagpur

Lecture 20: Media and Sustainability Communication

Welcome to the course titled strategic communication for sustainable development.

(Refer Slide Time: 00:23)



My name is Aradhna Malik and I am helping you with this course. And we have been discussing various things and, you know the point is that sustainable development is such a massive, such a beautiful, such a complex concept that, you know one does not know where to start from and

how to, you know how to prioritize different topics because every topic in this area is so very what every topic in the field of communication for sustainable development is so very important.

So today we are going to take up another topic that is an amazingly complex, amazingly classy, amazingly interesting idea and that is the topic of media in sustainable development. And how does media help sustainable development I mean idea has invaded our lives, media as taken over our entire lives when I was going up entertainment meant going out and starching your knees and playing with your buddies and playing with your siblings and that was entertainment for us.

Information meant the books that where at home or the library we had to physically go to the library at the time when the library was open and we had to go to the library and we had study there and we had, that was what information was. And nowadays information means Google, information means millions of hits at the click of button, information means 100 of channels at the click of bottom on the television, information means so many different kinds of things, so many kinds of connections and all of this is information.

So when we talk about media, media has exploded information it has lead to this slew of information in our literally, you know in our labs. And so that is what we will discuss as what do we do with all of this recourse I mean so much we can do with whatever we have and that is what we will talk about.

(Refer Slide Time: 02:38)



Media and sustainable development.

# Communication, media & sustainable development (40 WHI, 2011)

- "Communication is considered a means of anchoring the vision of sustainable development in society."
- "... successful communication involves [...] a mastery of language, a mutual ability & willingness to communicate & knowing which discourse the communication act is a part of. Furthermore, it involves accounting for the 'social structures of a communicative situation in order to be able to assess the allocation of roles in communication.'
  (Schmidt, 1983, in de WIR, 2011)
- 'Communication thread': Stephen Gray (1979): experiments on electric conduction - stretched hemp thread attached to a battery. Wet thread and electric signals - basis of modern day telephone and internet.

216

Now this is from a paper by Prof. Claudia David from this book that I showed you at some point you know right in the beginning.

(Refer Slide Time: 02:48)



Of the course I should you this book so in this book there is a paper by Prof. Claudia David.

(Refer Slide Time: 02:55)

### Communication, media & sustainable development (see WHT, 2011)

- "Communication is considered a means of anchoring the vision of sustainable development in society."
- "... successful communication involves [...] a mastery of language, a mutual ability & willingness to communicate & knowing which discourse the communication act is a part of. Furthermore, it involves accounting for the 'social structures of a communicative situation in order to be able to assess the allocation of roles in communication.'
  (Behmidt, 1993, in de Wift, 2011)
- 'Communication thread': Stephen Gray (1979): experiments on electric conduction - stretched hemp thread attached to a battery. Wet thread and electric signals - basis of modern day telephone and internet.

216

And I will share the details with you in the list of references, and she says, you know she tries to connect communication media and sustainable development and she says that communication is consider a means of anchoring the vision of sustainable development in society, but successful communication involves in mastery of the language, the language that we use to communicate to share our ides with the media, the language that we used to get in touch with community, a mutual ability and willingness to communicate.

It is not only the language we use it is also our ability to communicate, it is also our willingness to communicated, I should want to do something for the community, I cannot talk about development till I am engaged with the community, till I am committed to my community, till I know what the community is about. So it has to be, you know I have to in tune with the community. So willingness I should also have the ability to connect with the community I cannot go into a community and say yes I am willing I want to help, but we know the community does not understand what I am saying.

And I face that problem here in West Bengal because I do not speak the language I follow it quite a bit, but I try and do something I visited a couple of villages several times around the IIT

campus and I feel handicapped and, because, you know I am not able to reach, I am not able to connect to people. Even though I look them, I dress like them, but when I start talking and the willingness is there, they can see the passion, they can see my interest despite that my ability to connect with them and occasionally I will use a few sentences of broken Bengali.

And then, you know the language plays a role my ability to connect to them to so the kinds of examples I will use may be will not be the same as what they would be expecting. As opposed to somebody who has grown up in a village in West Bengal speaking to them. So, you know that person would know the local dialect, would know what people's problems are, what different things are called, who to talk to, and how etc. So it is a mixture of all these things.

(Refer Slide Time: 05:16)

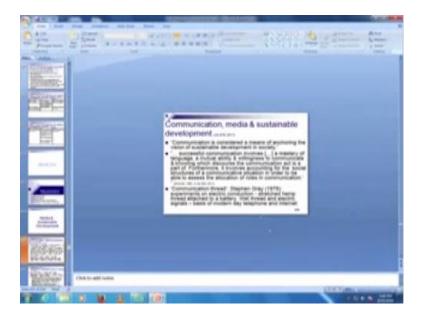


So knowing and knowing which discourse the communication act is a part of and then if I am going to combination act theory it is going to be very complicated. So further more it involves accounting for the social structures of a communicative situation in order to be able to access the allocation of roles in the communication. I need to be able to understand what the, who it is that I am talking to and why am I talking to him or her and how the social structure is shaped in and through communication.

And how should the communication that the style that I am adopting cater to the existing social structure and how should it help maintain or how should it facilitate the maintenance for of the social structure and how should I indicate respect for the social structure. If I am speaking to an elderly male for example, in a village in West Bengal the way I would do it, would communicate, would need to communicate my respect for this person's position, would need to communicate my understanding of what this person can do within the society, would need to indicate, you know what how important this person in the village.

If I am speaking to a child I would need to communicate through my tone, through the words that I use, that I am concerned about the child, that I am affectionate towards the child, that I am looking after the welfare of the child, that the child can look up to me as elder, the child come and talk to me as elder. So all of those who told have to be played in just a few sentences and that is what this is talking about. Communication thread so this is, you know so this is how these things are connected. Then the whole idea for communication thread this comes from the experiments by Stephen Gray in which he worked on electrical conduction using a physical hemp thread in it is not 1979 it is 1729 and sorry about the gab there and you know the date here should be 1729.

(Refer Slide Time: 07:13)



So this is not 1979 this year is 1729 any way, so this is based on his experiments on electrical conduction.

(Refer Slide Time: 07:25)

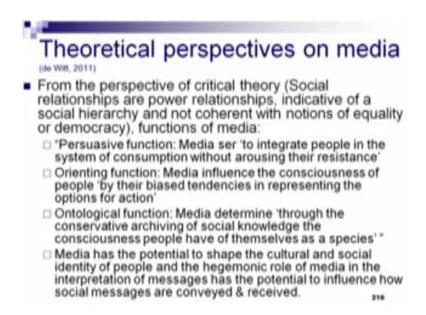
## Communication, media & sustainable development (de Will, 2011)

- "Communication is considered a means of anchoring the vision of sustainable development in society."
- "... successful communication involves [...] a mastery of language, a mutual ability & willingness to communicate & knowing which discourse the communication act is a part of. Furthermore, it involves accounting for the 'social structures of a communicative situation in order to be able to assess the allocation of roles in communication.'
  "(Echnist, 1993, in de Wis, 2011)
- 'Communication thread': Stephen Gray (1979): experiments on electric conduction - stretched hemp thread attached to a battery. Wet thread and electric signals - basis of modern day telephone and internet.

215

And that is where this whole idea of communication threads comes from and that has become the bases of modern day telephone and internet connection.

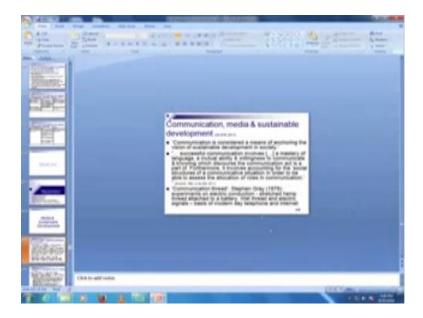
(Refer Slide Time: 07:34)



Okay some theatrical prospective on media from the prospective of critical theory, critical theory presumes that social relationships are power relationships, and they are indicative of a social hierarchy and coherent with notions of equality or democracy. So critical theory says that there is nothing as democracy, there is nothing as equality, there is nothing as, you know we do not get in touch with people because we think they appears we get in touch with reestablished relationships, reestablish connections with people to reinforce our position in the hierarchy within the society.

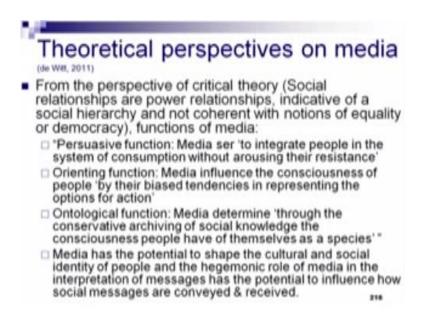
So that is what critical theory assumes and based on this critical theory say that the functions of media are one is the pervasive function the media trys to integrate people in the system of consumption without arousing there resistance. The serves to it should be serves to the word here should be serves to.

(Refer Slide Time: 08:32)



So media serves to integrate people in the system of consumption without arousing there residence. And so media tries to or when we talk about this.

(Refer Slide Time: 08:46)



You know media helps us become a part of the economics set up without really realizing that we are buying things, we do not need or we are it helps us contribute to the economy by influencing us to purchase things, or to consume things, or to consume information or to take what we are given without resisting, the taking of what we are giving that is the persuasive function. The orienting function is media influences the consciousness of people by their vast tendencies in representing the options for action.

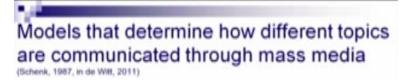
So not only does media helps us except what we are given it also helps us channel or direct our attention towards the options for actions. So here is a problem and then media will show us a bunch of actions, and then we say okay, we do not even want to think of possible alternatives because a bunch of alternatives has already been given to us by the media. So media helps us direct our attention to the preferred options for action, it gives us a direction in which our thought should proceed, that is the orientating function.

The ontological function media informs us, gives us knowledge and which knowledge, the knowledge that the connect writers, the people who decide the content in the media want us to have. So media also decides which knowledge we should have, there are certain topics about

which we will not find much information, we can try and we are really committed we look for it. But many topics do not really come up that much, so media serves this function. Media has the potential to shape the cultural and social identity of people and the hegemonic role of media in the interpretation of messages as the potential to influence how social messages are conveyed and received.

So and we will talk about how, you know of the different levels of media involvement in a little bit, how much which topics are put up there, how these topics are treated help us understand which topics we need to pay attention to, they also helps us shape our understanding of the culture of the world around us, you know we understand where we are in relation to the society. So media give us all of these ideas.

(Refer Slide Time: 11:16)



- "Cumulative model: An intensification of the reporting leads to a higher ranking of the topic on the audience agenda.
- Threshold model: A topic becomes part of the audience agenda when a minimum amount of reporting has taken place.
- Inertia model: When a topic has achieved a celevel of importance on the audience agenda increases in that importance through more intensive reporting are unlikely to occur."

Then models that determine how different topics are communicated through mass media. So various ways in which different topics are communicated through mass media are one is the cumulative model, the cumulative model talks about an intense an intensification of reporting leads to a higher ranking of the topic on the audience agenda. Various topics are in the news

these days for example, today the day when I am recording this video; you know we have had news about two earthquakes there was one earth quake yesterday.

You know in Myanmar and the previous night there was an earthquake in Italy. And so everybody is talking about these earthquakes everybody is so, you know media is full of these reports and repeated reports about these earthquakes help us understand that this is an important topic that needs to be discussed. The threshold model says that a topic becomes a part of the audience agenda when a minimum amount of reporting has taken place. So a minimum amount of reporting is required for a topic to become a topic of interest.

You know when some news vaguely mentioned in the media and it disappears we do not pay much attention to it. But if the same new is mentioned, is brought up in the media through various channels, it is brought up in the media, it is you know we, it is on television, it is on your social media, it is, you know you see it on your search engines. So it is popping up everywhere and you see it long enough and it has the potential to stay in your mind a lot longer. So that is how the topic becomes a part of the audience agenda.

What should the audience pay attention to is decided by how the media portrays it, how many times the media portrays it that is the threshold model. The inertia model says that when a topic has achieved a certain level of importance on the audience agenda then increases in that importance through more intensive reporting are unlikely to occur. So this means that once a topic become say priority number 2, or priority number 3, or priority number 10 and pushing it is to a higher priority becomes very difficult.

Initially, you know one can try as hard as one wants and then it goes up in the eyes of the audience, but after a while it stays there, and then pushing it any for, any to a higher position becomes difficult. For example, let us take the example of something that we see, you know on our news channels, in cinema halls everywhere we see this, you know the Indian government is discouraging smoking.

So Indian public health system is discouraging smoking, so everywhere we will see cigarette smoking is injuries to health and I personally believe that so I am quite happy that this is being done. And you will see skull and you will see smoke emanating and, you know you will see these advertisements where they show the lungs of the people are being squeezed out, show you how much tar accumulates and everything.

So these advertisements the number of such advertisement is the same, and they are put on a televisions routinely and anytime, you know the government has become very aggressive of about these days, so anytime we see any seen that the demands, or if we see anybody smoking in any scene in any television program a message pops up that, you know we do not endorse smoking it is injuries to health.

So it is in our television soaps, it is in our movies, it is in our cinema halls, it is in everywhere, and it is been going on from months and years I think now. So I do not remember the exact figures, but that is how aggressively the Indian government is trying to tackle this means, this public health means, and it is such a wonderful thing because everybody realize it, I do not know how much impact it has had on, you know chronic smokers, but occasional smokers definitely. People who are thinking about beginning to smoke because of their pressure are now discouraged.

So that is the kind of impact media has on our lives, I means it is there, it is right in front of you, and it has acquired an importance and these youngsters, teenagers go to cinema halls and they go to theaters and they watch movies and then they, they see this right in from of them and they say no, I am not going to smoke. So that is the impact it has.

(Refer Slide Time: 15:54)

### Involvement of viewers in selection of and attention to media content (MANUM, 2011)

- \*The uses-and-gratification approach describes people as recipients who look for the satisfaction of their needs in the media. [...] An individual intervenes, from this perspective, in the process of media communication by 'selecting, testing & rejecting media content' (Manuface, 1998, 1994, 2011)
- The accurate interpretation of written text is dependent upon the literacy level & level of familiarity of the reader with the language in which the text has been written.
- The television has been critiqued as more a source of entertainment than information
- Communication through computers is increasingly preferred because it requires literacy & gives the reader an opportunity to read all kinds of content, & even contribute to content via portals like wikipedia or blogs or personal websites

218

So that is the inertia model and in real life.

(Refer Slide Time: 15:58)

Models that determine how different topics are communicated through mass media

- "Cumulative model: An intensification of the reporting leads to a higher ranking of the topic on the audience agenda.
- Threshold model: A topic becomes part of the audience agenda when a minimum amount of reporting has taken place.
- Inertia model: When a topic has achieved a certain level of importance on the audience agenda then increases in that importance through more intensive reporting are unlikely to occur."

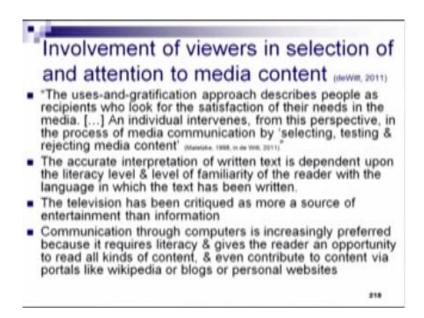
What happens is that different topics, you know all of these things, inertia model pushes a message to a certain point. The threshold model keeps it there, and the cumulative model makes it go on and on and on, and it is the combination of these models that we need to use for messages related to sustainable development.

We need to make sure that all messages related to sustainable development are seen in a light of some important, they are seen as important by the people in the community, by the people who can do something about them. Then we also need to remind them again and again so they realize that yes, it is important and it is priority number 1, priority number 2, priority number 3, hopefully not less than priority number 3.

So or not below priority number 3, but it has to be at a higher priority and it is cumulative, it is not today, it is not a random thing, it is not a you know a needs your reaction, it is ongoing it has to be done, it has to be done today, it will need to be done five years from now, it will need to be done ten years from now. So it is going to be important as long as the human beings are living on this earth, we need to work on sustainable development, we need to conserve our resources, we

need to live more for our future generation than we got or at least the same amount, so that they will not suffer.

(Refer Slide Time: 17:28)



So involvement of viewers in selection of and attention to media content, how can the viewers be involved, the users are the uses and gratification approach describes people as recipients who look for the satisfaction of their needs in the media. And individual intervenes from this perspective in the process of media communication by selecting, testing, and rejecting media content.

So for example, let us take the example of playing music when we are doing something important, playing music at work. Now most of us do not listen to music at least I do not, I will listen a lot of music at work, but the idea behind listening that music is to drawn out the surrounding sounds.

So I sit in a office, I am doing some work and I have, mild, you know low volume instrumental music playing in the background. And that helps me focus on my work and I will become more productive. So my need at that time for that music is to, it is not to enjoy the music, it is not to

enjoy the beautiful music that is playing in the back ground, my need is to have something pleasurable, something pleasant that can drawn out the unpleasant sounds in the back ground that distract me from my work, somebody shouting, somebody screaming, somebody banging the door, you know people coming, going students talking outside my office I do not want to hear all that.

So this music drown those sounds and it is pleasant, it is pleasurable, so it keeps me on track and there is a rhythm to it, so it helps me focus on my work, so that is the need. Now when I hear such music, you know somebody puts up such music and everybody have a different preference, everybody has a different kind of liking, so I like a certain kind of music and then when I hear this music and it is serves that purpose, then I keep it if it, does not serve that purpose if the music itself distracts me from my work and I will not listen it to.

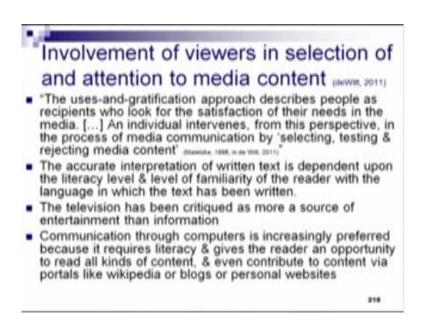
I have the, excuse me, a lot of different number of, different varieties of music are available online. But I select the music that helps me drown out these sounds. So I have the choice, I make the choice to select a particular type of music and or rejected.

(Refer Slide Time: 19:42)

Involvement of viewers in selection of and attention to media content (Marwitt, 2011) \*The uses-and-gratification approach describes people as recipients who look for the satisfaction of their needs in the media. [...] An individual intervenes, from this perspective, in the process of media communication by 'selecting, testing & rejecting media content' (Marketon, 1988, in de Well, 2011) The accurate interpretation of written text is dependent upon the literacy level & level of familiarity of the reader with the language in which the text has been written. The television has been critiqued as more a source of entertainment than information Communication through computers is increasingly preferred because it requires literacy & gives the reader an opportunity to read all kinds of content, & even contribute to content via portals like wikipedia or blogs or personal websites 215

Then so I intervene from this perspective in the process of media communication by selecting, I take a piece of music it seems okay, I test it, I sit with it for a period of time and I see if I am more productive at the end of this and, you know playing with music or working with the music, playing and not I am working with the music not playing and if I see an enhancement in my productivity then I first test it out and I evaluate it and then if it is serves the purpose I keep it, if it does not serve the purpose I throw it out.

(Refer Slide Time: 20:13)



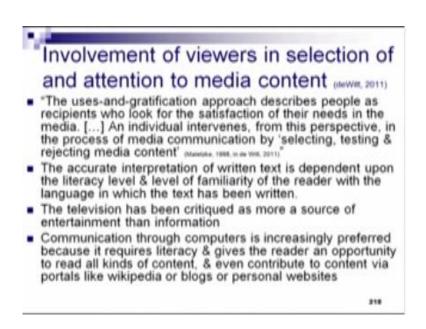
The accurate interpretation of written text is dependent upon the literacy level and level of familiarity of the reader with the language and which the text has been written. So for example, English is the second, third, fourth language for many people in India. Now English newspapers people read, you know we talk about sustainability, sustainable communication I put out pamphlets in English oh! You know it is a language that connects everybody.

People may understand it is school going people may understand, but they may not feel whatever is been said, because their familiarity with the language may not be so high especially in rural areas or we say Hindi is a national language everybody should learn it, everybody is learning it, people it is there in schools. But the local language of the people and this region is Bengali. So,

you know if writing something out in Hindi or sharing a play that is, you know that is the, that uses Hindi as its language or putting up posters that have Hindi in them it does not help people connect to the message then want is the point of using that language.

I mean, you know so we need people to understand whatever it is, what that we are trying to tell them. So we need people to understand the importance of sustainable development, we need people to understand the importance of their community, keeping their community save and healthy and so we need to talk to them in a language that they will not only understand that they will be able to relate to that they will have emotions for.

(Refer Slide Time: 21:50)

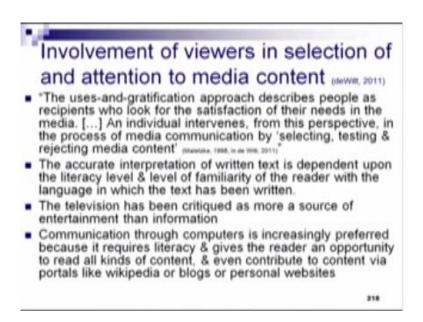


So that is and we may put out a message, but if they are not that familiar with the language then they may not interpret it in the right tone. The television has been critiqued as more a source of entertainment than information. Television is, you know entertains us, it gives us a pleasant feeling, but we at least the critiques has said that the television does not really inform you. So communication through computers is increasingly preferred because it requires literacy and gives the reader an opportunity to read all kinds of content.

Even contribute to the content via portals like Wikipedia or blogs or personal websites. Now we use computers, we used to use them for information, we use them, we use to use them for analysis of data, but, you know increasingly the internet has become so much more user friendly, so much more, you know participant friendly. So we can actually engage in participatory communication, we can change things on Wikipedia, we can go and modify content on Wikipedia there are, people monitoring the content that is put up.

But then we can post personal blogs, we can participate in the knowledge creation process, you know on international media by using computers and that is the one very big benefit of having computers or computer mediatory technology. So that is now becoming increasingly more acceptable.

(Refer Slide Time: 23:23)



And we need to be literate in whichever language you post our messages and we need to be literate in a language of our choice. So we learn something, we learn to read and write and we learn to use technology, and we get a chance to share our ideas and that what makes it so exciting.

(Refer Slide Time: 23:43)



Media and sustainability communication, knowledge about the effects and use of new media enhances participation in changing communication processes; make media communication must take into account both communication culture problems in local regional and national areas as well as new social ties across national borders.

So involving new communication culture opportunities as well as progress for human kind, we understand the local culture, we also understand, you know if you want to put up something online in order to use media properly. We must understand how our messages are going to affect other places, and other localities, and other countries. And we learn to be considered about other people and we have to do it. Global communication about new media opens opportunities for individuals to communication across national borders about how the ecological.

(Refer Slide Time: 24:42)

### Media & sustainability communication

- "knowledge about the effects & use of new media enhances participation in changing communication processes
- Media communication must take into account both communication culture problems in local, regional & national areas as well as new social ties across national borders, involving new communication culture opportunities as well as progress for humankind
- Global communication about new media opens opportunities for individuals to communication across national borders about how the ecological basis of human life or distributive justice across synchronous & asynchronous communication spaces can best be secured
- Media communication has become global communication"

Basis of human life or distributive justice across synchronous and asynchronous communications spaces can best be secured, media communication become global communication. So we understand how things are happening in other places. We also get a sense of that is we have in treated fairly or unfairly etc. So, you know we can compare ourselves to other places, to other people in the rest of the world. And that is what media does for us.

(Refer Slide Time: 25:09)

How do new media technologies facilitate
sustainable communication? (de Will, 2011)
new media enable infinite connections among
people, sources of information, topics & concepts; they produce information & communication networks."
<ul> <li>Properties of communication networks facilitated by new media (Siemens, 2006, in de Witt, 2011):</li> </ul>
□ Diversity
□ Autonomy
□ Interactivity
□ Openness
<ul> <li>Blogging – personal diary as well as a medium to share one's opinion with the rest of the world</li> </ul>
in a section of the district of substitution is the substitution of the contract of the contra
***

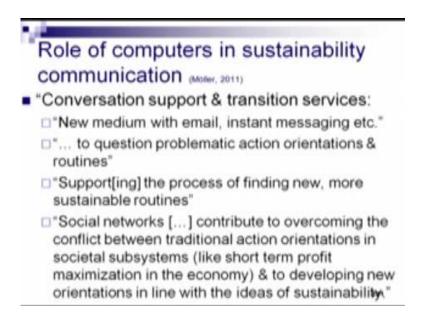
How do new media technologies facilities sustainable communication? New media enable infinite connections among people, sources of information topics and concepts they produce information and communication networks. Some properties of communication network facilitated by new media one is diversity, diversity means the range we of options we have to express our selves.

Autonomy the amount of control we have over the medium interactivity how much we can, you know how much we can participate in the media and openness. So interactivity is, you know how the creators and the recipients of the messages are in touch with each other, openness means the freedom of thought it gives you. Blogging, blogging refers to a personal blogging helps us maintain a personal diary. It is in addition to that it is a media that helps share our opinion with the rest of the world.

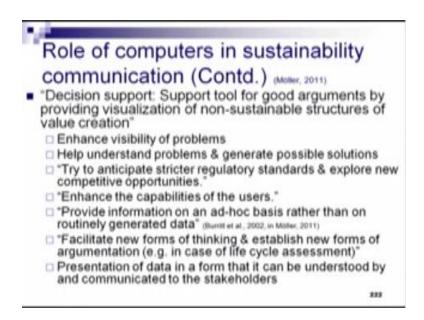
-	
"How do new media technol	logies facilitate
<ul> <li>sustainable communication</li> <li> new media enable infinite connepeople, sources of information, topic produce information &amp; communication</li> </ul>	ctions among s & concepts; they
■ Properties of communication network media (Siemens, 2006, in de Witt, 20 □ Diversity □ Autonomy □ Interactivity □ Openness	
<ul> <li>Blogging – personal diary as well as one's opinion with the rest of the wor</li> </ul>	a medium to share rld
•	
	230

So that will be blogging helps us do, okay.

(Refer Slide Time: 26:12)

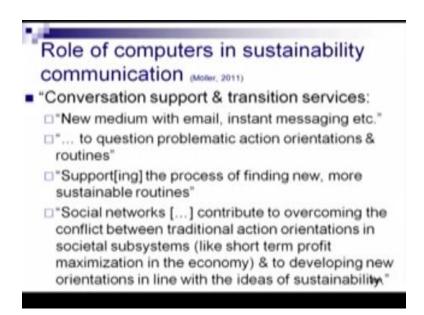


Role of computers, computers are increasingly becoming a very important tool of communication or a new, you know medium of communication no longer new actually. So computers help us in to two ways one, they give us conversations support and transition services.



The second is the decision support.

(Refer Slide Time: 26:33)



Conversation support we learn so much in and through conversation just talking it give us, you know we use e-mail, instant messaging etc for our conversation it gives us a chance to question problematic action, orientation and routines. It gives us a chance to support, it supports the process of finding new more sustainable routines. Social networks help us connect with our pears in different places for example, and contribute to overcoming the conflict between traditional action orientations in societal subsystems like short term profit maximization in the economy.

And to developing new orientation in line with the ideas of sustainability. So social networks help us with, you know whenever people from different areas come together there is bound to be some discontent, some difference in opinion and when we go on social networks and we just talk the pieces we do not question and we just talk to them a lot of the question we have, a lot of the confusions we have ask clarified.

We also get in touch with RPS. For example, this particular course I mean I had never imagined maybe six months ago that I would be offering a course called strategic communication for sustainable development. I had no idea and I started reading up and I had read this book on

sustainability communication, but did not know that I could actually, you know form this into a

proper course.

And I spoke to some people and we had a workshop on sustainable development and then I got

more interested and I spoke to some people, you know in the field and I have a friend in Kenya

who is working with orphans. And so, you know I spoke to her and we connected and then she

gave me some ideas and I spoke to some other friends who were working in the area of

sustainability development.

And it just in and through random aimless talk I came up on this idea of offering this course and

here I am. And this is the big huge benefit of having computers facilitate our conversations. So it

is amazing how we break traditional rules, I mean I could have tradition method of doing this,

what have been oh! Yes I have read this okay, now let me think about it, let me write a review

paper, let me right a concept paper float it and if I become an authority in sustainability

communications someday.

And maybe I will start lecturing about it ten years from. Now but, you know this portal said okay

you want to try something out you go ahead, and now you will give me feedback and based on

your feedback I will see how this progress of that is the benefit.

(Refer Slide Time: 29:12)

Role of computers in sustainability

communication (Contd.) (Moller, 2011)

"Decision support: Support tool for good arguments by providing visualization of non-sustainable structures of value creation"

□ Enhance visibility of problems

Help understand problems & generate possible solutions

"Try to anticipate stricter regulatory standards & explore new competitive opportunities.

"Enhance the capabilities of the users."

\*Provide information on an ad-hoc basis rather than on

routinely generated data" (Burritt et al., 2002, in Mother, 2011) "Facilitate new forms of thinking & establish new forms of

argumentation (e.g. in case of life cycle assessment)

Presentation of data in a form that it can be understood by

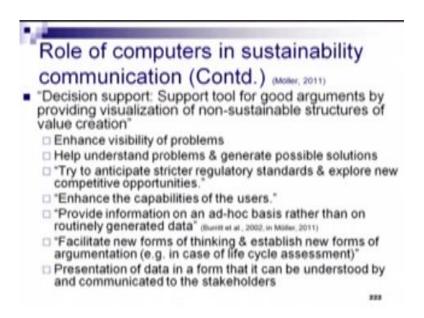
and communicated to the stakeholders

222

The second benefit is decision support, the way computers allow us to analyze information is amazing, you know we have all this data computers help us visualize the data it is all in front of arisen, then going to something that is written on a piece of paper, we have it in front of our screen we can look at different pockets of data, we can, you know compare things, we can analyze things within enhances the visibility of problems.

It helps us understand problems and generate alternative possible solutions to the problems, then we try to anticipate stricter regulatory standards.

(Refer Slide Time: 29:53)



And explore new competitive opportunities using the computer because we have all this data we say okay, what can we do, how will it affect something without actually implementing anything we can play around with things we can see they will work out. It enhances the capability of the user, you have to learn to use the software, you have to learn to use the programs that can help you analyze information.

It helps you provide information on an ad-hoc basis rather than on routinely generated data. So we have not you know routine, in the normal routine of things we would probably generate maybe daily reports, maybe weekly reports, maybe monthly reports, but with the help of computers we can generate a report whenever we want to, you come to know of a new way of doing things, you generate a report based on the data you have.

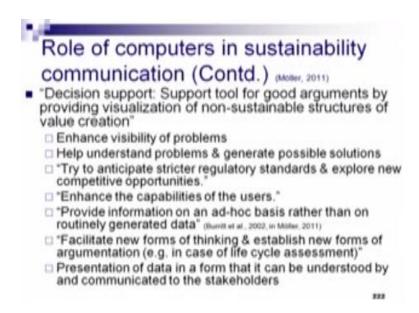
You take the data and then you share it with likeminded people get their opinions and, you know very soon one can have tentative solution and that is the big huge benefit.

(Refer Slide Time: 30:57)

Role of computers in sustainability communication (Contd.) (Moller, 2011) "Decision support: Support tool for good arguments by providing visualization of non-sustainable structures of value creation' □ Enhance visibility of problems ☐ Help understand problems & generate possible solutions □ "Try to anticipate stricter regulatory standards & explore new competitive opportunities. "Enhance the capabilities of the users." □ \*Provide information on an ad-hoc basis rather than on routinely generated data" (Burrit et al., 2002, in Moller, 2011) "Facilitate new forms of thinking & establish new forms of argumentation (e.g. in case of life cycle assessment) Presentation of data in a form that it can be understood by and communicated to the stakeholders 222

Then facilitate new forms of thinking and establish new forms of argumentation. So, you know we will come to know so many ways, we find out what other people in other countries are doing, how they are dealing with problems similar to ours. And I will show you very interesting example of this networking business in the upcoming sessions. And amazing, I mean and it has been done in India so I am keeping you in some of you may know what I am talking about. But it is a very nice surprise for all of you.

(Refer Slide Time: 31:27)

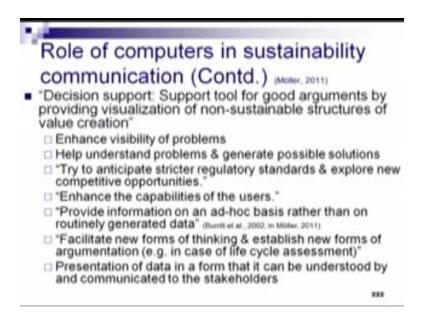


Then presentation of data in a form that it can be understood by and communicated to the stakeholders. So computers also help us prevent our data they also help us communicate our data to stakeholders who can understand it, who can make sense of it, and who can use it for the benefit of the people who are actually going to be, you know benefited by this presentation of data by the analyzes of data.

So if the computers help us take our data and I do not know Bengali for example, and I process all this information, I write up something in English or in Hindi and the translator will help me type it up in Bengali. I can get of course, you know this is not full proof. But then I can have a tentative thing ready that I can get verified by a colleague who is fluent in Bengali and then it says both of us sometime I just type it up in Hindi.

And, you know using one of the translation programs available online I translate whatever I have thought about into Bengali and just take it to somebody who speaks the local language. And then they can modified, so both of us are saving time because this dear machine is at work.

(Refer Slide Time: 32:36)



So amazing possibilities and we will discuss, you know who newer forms of how we can use computers for sustainable for communication sustainable development in the upcoming sessions. And then we will wrap up in the whole course very soon. So thank you very much for listening and keep thinking about it and keep mulling over whatever has been discussed, thank you.