

Inclusion and Technology Design
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Lecture - 01
Towards an Inclusive Digital Society: Shaping the Agenda for Technology Design

Thank you everyone for the introduction. So, what I am going to do is just to give you overview that where do we come, from why we even thought of this you know winter school, and what why we thought of this theme, and how we are going to think about all this themes that you know you various interest that you have in accessibility, in education, in gender, how do we think about them in a slightly different way than you have been maybe thinking so far.

So, the theme of the winter school is Inclusion and Technology. These are the 2 main words that you see there. So why we need to think about Inclusion and Technology together - let us start with that.

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So, the first is I am guessing everybody know about Sustainable Development Goals which was developed by UN and the member countries agreed to all these goals, and one of the sustainable development goals is that ICT should be fundamental in the way we think about achieving all these sustainable goals.

So access to ICT and how ICT access to ICT is sort of an underlying factor that would help us achieve many of the sustainable development goals that we have, and there are specific mention about education, the educational goal, goal of women empowerment and gender equality and also a goal to reach out to children and accessibility issues. These were 3 main points where ICT was thought to be a fundamental game changer.

So, that what is documented through the sustainable development goals document that you may access online, and one of the things that is important here that ICT was considered to be as important as something like physical infrastructures like energy or roads. So, as fundamental for development as these things; so, if this is the context in which we are looking at ICT towards inclusion and development of a large you know segment of a population, what's what are we doing about it in India.

So, just coming home what we are doing about it, I am guessing that most of you who are from India also know about the Digital India Program and one of the things that the Digital India program does is looking at again digital technologies for transforming you know, the way we are governed the way we live our life and many parts of our existence. The next part where I am going to get at is looking at this whole point of digital divide, I think which everybody is aware of and as I started with I will talk about sustainable development goals in a bit.

And how digital divide sort of is the buzz word to frame all these issues of technology and development, and we are slightly going to take a detour from digital divide. I am going to be slightly critical of this whole discourse of digital divide, and try to show you that how we what is the problem with this course of digital divide, and how do we move on to discourse which is more about digital inclusion, and how do we understand inclusion from in the context of digital technologies.

And of course, the last part of the presentation is about what is the agenda of the winter school and how do we go about think thinking about digital inclusion. Feel free to stop me at anytime when you have questions.

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Sustainable Development Goals (SDGs) and ICTs

"The 2030 Agenda for Sustainable Development recognizes that the spread of information and communication technology (ICTs) and global interconnectedness has great potential to accelerate human progress, to bridge the digital divide and to develop knowledge societies, as does scientific and technological innovation across areas as diverse as medicine and energy. In doing so, Members States have committed to harnessing the potential of ICTs to achieve the 2030 Agenda for Sustainable Development and other internationally agreed development goals, noting that they can accelerate progress across all 17 Sustainable Development Goals (SDGs). It also specifies specific targets for the use of ICTs for sustainable development in education (Goal 4), gender equality (Goal 5), infrastructure (Goal 9 - universal and affordable access to the internet) and Goal 17 - Partnerships and means of implementation."

Sustainable Development Goals. UN. <https://sustainabledevelopment.un.org/index.php?page=viewPage&page=2030&menu=578&menu=2927>

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Targets for the use of ICTs for sustainable development: 5) infrastructure (Goal 9 - universal and affordable access to the internet) and Goal 17 - Partnerships and means of implementation

Dr. P. W. 2017. Sustainable Development Goals and ICTs

The slide includes a small inset photograph of a woman in a blue top and patterned shawl, sitting in front of a screen displaying the same slide content.

So, as I already mention Sustainable Development Goal is something that is I think now we have about 15 main goals and they are now broken into many sub goals and all these sub goals will have indicators list. So, how do you achieve these goals? So, because today's theme is also about gender I will just give an example in the context of gender equality and sustainable goal.

So, that is goal number 5 and one of the so and that says that ICT should one of the sub-goal is to give access to Digital Technologies as a way of empowering women and also marginal section of women. So, women who usually would not have access to digital technologies and one of the indicators of how do we empower women through digital technologies is that a large number of women have mobile phones or any other digital devices to themselves.

Now, if this is the way we are thinking about it here the issue that they are addressing is access to digital devices or access to digital technologies. So, I want you to keep that in mind as we go forward sorry I think this how can we move further.

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Digital India

The Digital India programme is a formalised initiative by the Government of India launched on 2 July 2015. The campaign envisages a complete digital transformation of society and the development of a knowledge economy. The programme has been structured into three vision areas and nine pillars. After restructuring and refocussing, existing schemes and initiatives have been brought under each of these pillars.

- Digital infrastructure as a utility to every citizen
- Governance and services on demand
- Digital empowerment of citizens

Digital India Targeting Inclusive Growth - <https://www.pwri.in/assets/pdf/publication/2017/digital-india-targeting-inclusive-growth.pdf>

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Digital empowerment of citizens

The slide also features a small video inset of a woman in a blue and gold patterned sari speaking in front of a screen displaying the same slide content.

So, now coming home to India, so Digital India program which is also a follow up of the National E-Governance plan which was introduced 2006, this was formally introduced in 2015. It also draws on a lot of projects and the project a program goals that NEGP or the National E-Governance plan had in 2006 and the 3 pillars that it looks at is Digital Infrastructure, Governance and Services, and digital empowerment of citizen.

So, when we are talking about digital empowerment of citizens here also the address is whole issue digital divide, access to digital technologies, and how by accessing digital technologies we can feel empowered and also we can do a lot of things in terms of livelihood, in terms of participating in governance, in terms of accessibility and many of these issues that many of you are interested in here.

Now, again this also talks about digital divide in a way, so both sustainable goal and digital India program they have this one thing in common the digital technologies are very important for empowerment of marginalized sections, marginalized in different forms and also access to this technologies have the potential to transform their life for better. So, this is what this both this policy document I am referring to talk about.

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The slide is titled "Digital Divide Vs Digital Inclusion". It contains the following text:

What role can access to technology play in promoting social inclusion?

"Social Inclusion refers to the extent that individuals, families, and communities are able to fully participate in society and control their own destinies, taking into account a variety of factors related to economic resources, employment, health, education, housing, recreation, culture, and civic engagement. It overlaps with the concept of socioeconomic equality, but is not equivalent to it."

Resources

- Physical: Computers and Telecommunications
- Digital: Relevant Content
- Human: Literacy, Education
- Social: Community and Institutional Support

References: # 2002 Reconceptualizing the digital divide. First Monday, 3(3)

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Speaker: Literacy, Education, Social Community and Institutional Support

Speaker: # 2002 Reconceptualizing the digital divide. First Monday, 3(3)

The slide is presented by a woman in a blue and white sari, standing in front of a screen.

Now, what is the problem with that? So, digital divide has been as you know way of thinking about digital technologies have been there for very long time. It was I think 80s and 90s were the hay days of this course which has now been critically looked at and evaluated by many ICTD scholars. So, what are the 3 problems that I am going to talk about, first then when you talk about in this way about digital technologies and inclusion first thing that you are looking at only physical access to a particular device.

So, your focus is to give access to device and you believe there is a faith in an inherent virtue for the device that will change everybody's life. So, the device or the technology in itself holds the potential to change your life, so as soon as you have access to it. So, everybody should have access to it and as soon as you have access to it your life is going to change that is the first point and the second point so this is the first problem I will explain why it is a problem. The second point that it under plays that once you have access there are various degrees of access.

So, let us say the way many of you access technology, is it the same way that somebody sitting in a rural area in India who has access to mobile phones like I am talking about the device, will access that mobile phone in the same way, do you see your usage patterns are similar in terms of time and content no right. So, but both of you have access to the technology to the device. So, it does not capture when you look at digital divide you basically create a binary of population and say have and have not's.

So, your focus then completely on you completely invest your energy to bring the have not's onto to the haves. What you missed out in this degrees of uses, how you are able to engage with the technology is not the same in spite of the access and when you start asking this question that why in spite of having access the way we engage with the technology is not the same. That is when you slightly move away from this whole haves and have not's kind of a framing of digital technologies.

The third problem with that it is sort of try to see this digital divide debate is to try to capture a very causal relationship between technology and our lives. So, technology becomes a cause and if I have the technology with me it will have a certain impact or an effect and everything else that will help me to have their effect is sort of ignored. So, you all understand what I mean by a causal relationship if anybody does not understand please you know you can interrupt sorry.

Student: (Refer Time: 10:15) the last point.

So, you are trying to map a causal relationship between digital technologies or any technology for that matter and our lives, because if I am saying the digital technologies will empower me. So, I am saying empowerment is the effect and digital technologies are the reason for that effect.

So, when you map such a causal relationship between technology and any kind of impact it could be bad or you know and I am sure you heard very negative statement about technologies also in a similar fashion that you know Facebook leads to I do not know addiction among youth. As if that Facebook is the only problem that if that was if you take it out if you think of it this way. So, basically if you take Facebook out that addiction will with the internet will go away right.

So, there is a very straight forward simplified causal relationship that is being established which is a problem and why it is a problem is when you start thinking about what does it mean by what do we mean by Social Inclusion, that is the question that we need to ask before even thinking about what leads to Social Inclusion. So, if even if we say that technology leads to social inclusion we first need to understand what do we mean by social inclusion and what role then can access to technology play in bringing about the social inclusion. So, most of the time when we think about inclusion or improvement in

our life for development we only think about economic resources, that how we can improve our life in terms of some material needs that we have.

But and so if you have money then you can do a lot of things. In development economics from 1980s many of you who actually some of you actually study economics here Amartya Sen's concept of capability framework that just because you have access to economic resources does not mean that you have a better life. You might have lot of money in at village, but if there is no hospital there is no way you can have a better life right.

So, the this I am just telling you in a very you know catchy way what it means, but it is a much more deep in philosophical theory which I do not have the time to get into. But the point here drawing on those kind of literature what social inclusion is basically saying that the extent that individual families and communities able to fully participate in society and control their own lives. Taking into account of variety of factors which are economic resources it could be employment health education housing culture recreation like a whole host of things.

So, it is it overlaps with this whole concept of social and economic resources that we most of the time think about when we think about in you know empowerment, but it is not the same one of the keywords here is not just having access is having a meaningful way of engaging with things that you want to engage with. So, even if you have access to phone can you use it in the way that you want to use.

So, there is a question of agency that or the you know in simple what would be the question of choice, what choice I have and what are the resources I need to make use of the device that I have in my hand and that is what we mean by digital inclusion. That not just access, but do we have a choice in the way I access this technologies or do I have a choice to use this technologies with the range of possibilities that it they come with to do what I want to do. This is the key question that we want to sort of focus on during this 3 days and there have been literature of digital inclusion which looked at what other resources you need in order to engage with digital technologies.

And some of them are for example, physical infrastructures digital resources that you might have an access to your you know mobile phones are very cheap feature phones are very cheap now you can buy one. But can you also buy data can you have a continuous

access to internet the way many of us do and it is not just a question of whether you can afford it or not is a question of do you get data in a seamless manner in all parts of our country, you might not. Do we have telecommunication infrastructure which reaches out to even the remotest corner of our country and what is the quality of those telecommunication infrastructure that we are talking about. Digital content one of the examples could be which I think many of the a big take companies are working now to make available content in regional languages or your vernacular languages.

That even if I have the phone even if I have physical infrastructure to what extent I can understand what is going on if it is not all the content not just in terms of language. But whatever is available on that platform how much it is relevant for me and my life that is something that we talking about in terms of digital resources. Then of course, human resources in terms of literacy your education level and I am talking about digital literacy as well. Some of the times when we use in which the technology digital technologies also if we look at in last 10 years it has transformed like really fast.

But the way many of us are sort of coped with it seem like very seamless, but for many people it might not it might be very difficult for them to keep just at pace with the changes that are taking place and that is where the human resources come in handy. And of course, the social resources which is community and institutional supports for example, when we are talking about gender when we are talking about accessibility, when we are talking about low income groups this is also a very key factor in the way they are able to engage with this technology.

So, it is not just important to have access or be able to afford it, but how much support that we have like professor Sadagopan was talking about having a beautiful building, but you just cannot access it because of certain conditions that you have. So, what is the point of having a beautiful building when you have full access technically you can you know roam around, but does the you know community support you to access that building to roam around in the building as much it supports other people.

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So, this is what we sort of want to address going forward and the structure of the winter school is basically looking at digital technologies across 3 these 3 groups, not to say that these are the only 3 groups that you can think of when you think of digital inclusion. But this points I raised this you know 4 resources that I am talking about the physical the digital human and the social resources, how these resources become critical for these 3 groups of the population for them to actually get included in the digital society that we are all dreaming of. So, I will just end here if you have any questions you can free to ask.

So, just the agenda of the you know 3 days, so first day we are going to talk about the gender vertical, second day we are going to talk about the accessibility vertical and the third day we are going to talk about the class or the you know economic class vertical and see how we can sort of bring in digital technologies into each of these categories. At the end of the day everyday there will be designed jam session. So, basically you will here a lot of critical issues across throughout the day.

So, at the end of the day what we have is to hand hold you want to think about how do we map this on to when we think about designing a technology. So, I talked a lot about digital inclusion, but when you are designing for a particular group of people what does it actually mean in concrete terms how do you map all these understanding into thinking about technology design.

So, every day we will have first 2 days we will have those design design jam sessions, last day we expect we will divide you into groups that you can start working with from today onwards and the last day we expect you to come up with your ideas. So, we will discuss that more in details at the end of the day.