

Visual Communication Design for Digital Media
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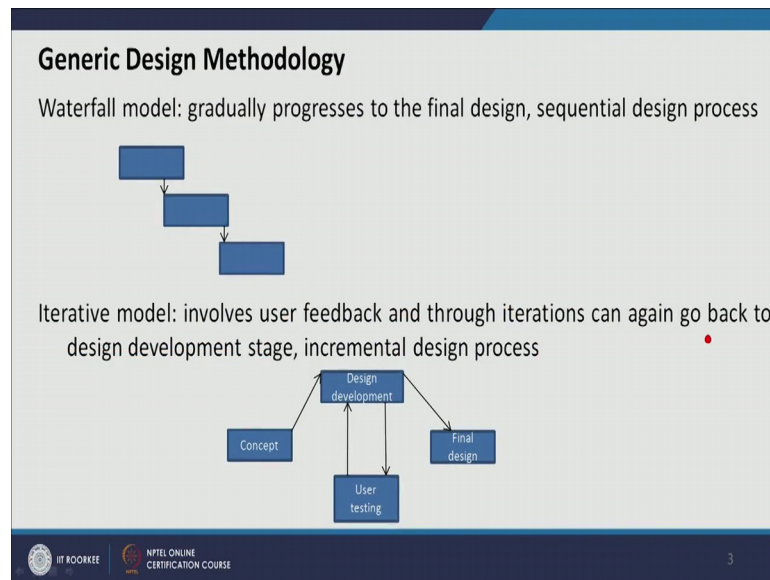
Lecture - 15
Visual Design Methodology Part-I

Welcome students to the on online NPTEL course Visual Communication Design for Digital Media. In this module we will start discussing visual communication design methodology.

So, in this module we will start with the generic design methodology which can be applied for the different visual new media paradigms, but there as there are different media paradigms for example, graphic design packaging design branding visuals of web design and animation or game design, each and every design process has its unique methodology, which will discuss in the from the next module onwards later, but here we are discussing a generic design methodology which we follow in today's time.

So, the most many of from the many generic methodology, which we will discuss in this module might be added in some a design platform some design paradigms. And in might be some other process might be added and some process might be omitted from this generic design methodology. But we will get a holistic view of the methodology, and we will start taking each and every design field like graphic design, branding, a visual sub wave, games and animations and we will discuss the methodology later on in the detail fashion. So, in generic design methodology mainly it is based on web and visual communication design of graphics, because animation and game design is with different from the field we will discuss it later.

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So, a generic design methodology which we will mainly follow in web design and graphic design and also in branding. So, this process initially there was a model which is called waterfall model. So, there was a gradual progression of one step to the other step. So, first there will be data gathering. Then there will be a design ideation, then design process and then the final production or final design. So, that was the waterfall model. So, in when the one stage is complete the next is starts, and from the next stage the step one the previous stage we cannot go back to the previous stage.

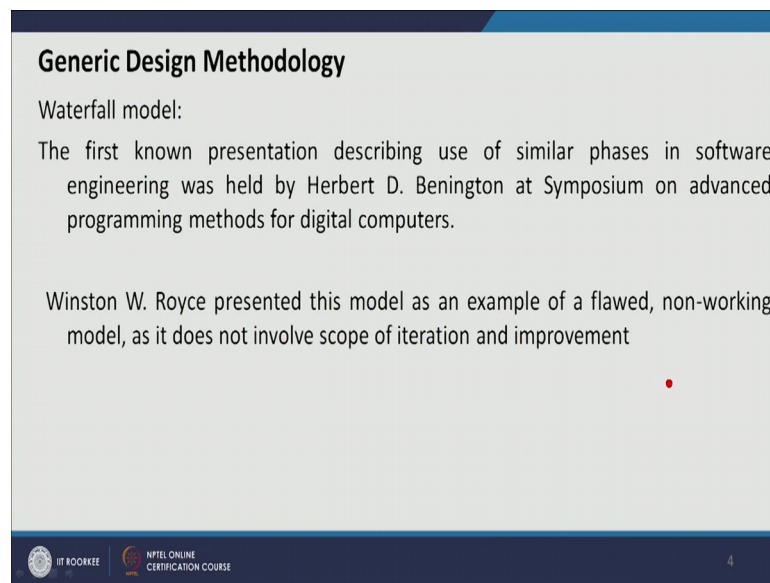
So, is there is a gradual linear progression in the waterfall model. So, this was actually a sequential model and this was an old model, but now we do not believe in the waterfall model because of many problems of waterfall model, and it does not incorporate feedback, and does not incorporate the provision of changing the product and making the product better, making the user interface better and making a visual communication better after taking a feedback from user and peer review.

So, the next a better model which evolve later after waterfall model is iterative model. So, there is a loop from concept generation to design development, we go back to the user we text the chalk talk about talk to them, and understand the feedback understand their take their feedback from ethnographic data collection, heuristic evaluation and then we again analyze our product and product or design, and then we iterate the design or discuss the design if the design is absolutely not acceptable. Then we are discuss the

design and start a new and then again go back to the user and iterate and then the final design comes, but when the final design comes its user proof, and user centric design.

So, acceptability of the final design is much higher than if we follow the water if we follow the iterative model, rather than waterfall model. So, we discuss waterfall model. So, waterfall model is first described by Herbert Bennington at a symposium in of web design software development.

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Generic Design Methodology

Waterfall model:

The first known presentation describing use of similar phases in software engineering was held by Herbert D. Benington at Symposium on advanced programming methods for digital computers.

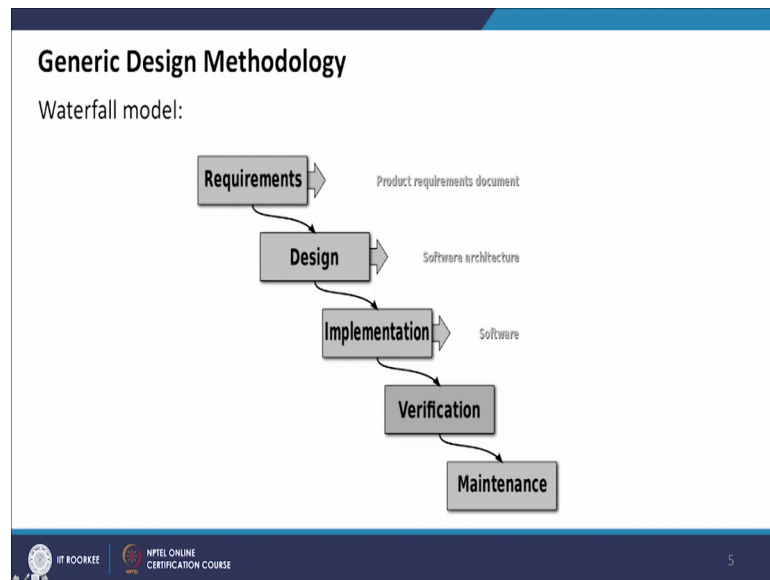
Winston W. Royce presented this model as an example of a flawed, non-working model, as it does not involve scope of iteration and improvement

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So, here he said in software development first we gathered data, design the software develop and then launch, but Winston Royce said that this model is flawed and this model does not work in many of the cases because it does not involve the scope of iteration. So, this is the typical waterfall model. So, first we are talk about the requirement then we start designing, then implementation happens and then we verify, but after verification we do not go back to the design and do not change the design or start implementing the new concepts, but we just after verification maintenance or the launch of the software happens.

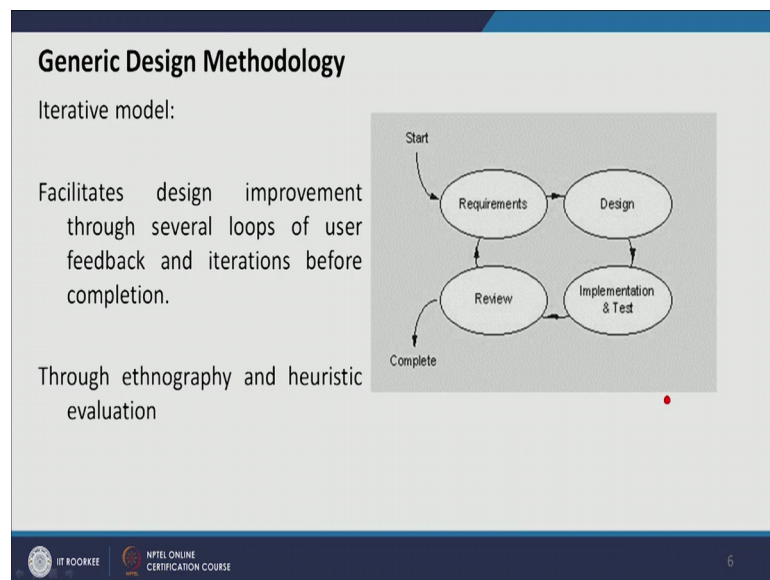
So, that is the waterfall traditional waterfall model, but when we talk about the iterative model the iterative model is like that.

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So, start then we find out the requirement, we design we start implementing and also we test with the user.

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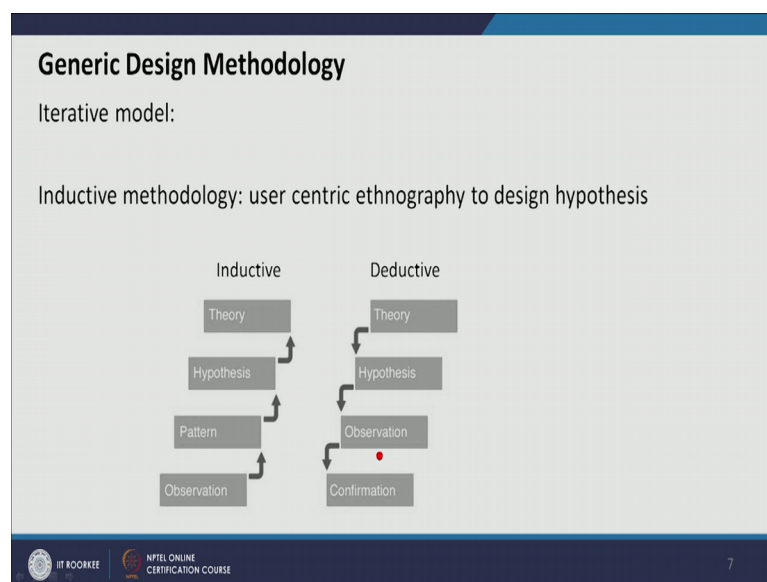
And then we take the users review and the based on the review we generate requirement again, and we validate the our design based on our requirement. So, this loop again feeds the requirement again and we start evaluating our design. And after the design evaluation if the design works properly within start implementing and then it come its complete, but if we need some tweaking or iterations in the design, then we again in change the design

implement and then test with the user if the review is right within finished the design and launched the product website or graphics or whatever we finished the design there.

But if it is not again we are going the do loop and that is why more we circle in this loop the better the product visibility is. So, facilities of this design are to improve it threw feedback of several loops, and the process is done through ethnographic survey and heuristic evaluation. Ethnographic survey is ethno means people and ethnography means the peoples behaviour in an environment. So, people's behaviour in a digital platform is an ethnographic survey in terms of new media design and heuristic evolution is as we already discussed is heuristic means the people how the people behave with environment. So, in this case its people's behaviour with a digital platform is a heuristic evaluation method which designers follow.

So, this actually leads to the provision of inductive methodology and which is users centering and again based of ethnography and ethnography and heuristic evaluation. So, ethnography comes first and the design hypothesis goes comes at the last that is the process of inductive method methodology in design.

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So, we start with the users we go and find out what the users need is, then we under try to understand the pattern what if there is a pattern in the users need. So, form that pattern we come to a hypothesis whether this is the particular need of the user, and based on that we generate a theory and that is in terms of theoretical research, but in terms of practical

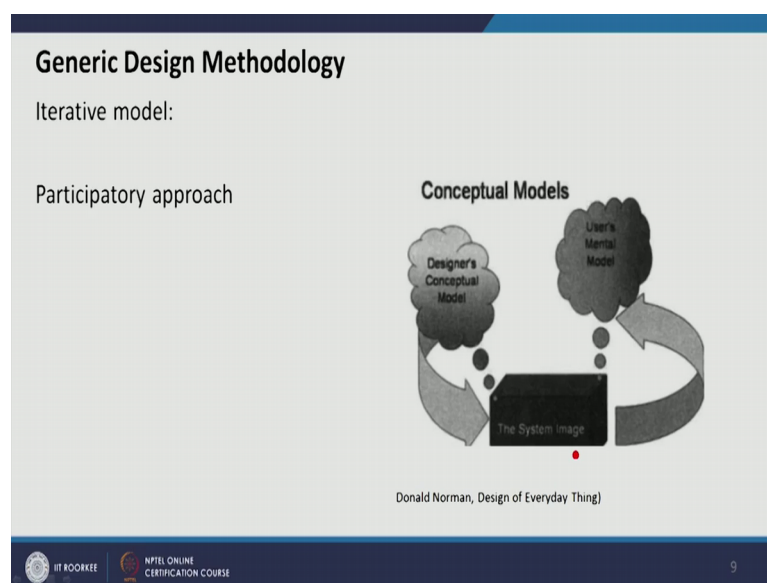
projects also we generate project from and hypothesis which we take from user, but this is an inductive design methodology is the opposite is deductive design methodology.

So, in design deductive design methodology we start with the theory. So, the theory comes first. So, the hypothesis will be we can take any hypothesis and theory which is already proved like just as principle or some already proved principle, which is which acts which acts and people accepted that. So, from theory we take a hypothesis case specific hypothesis the contextual hypothesis, we are try to module modulate the hypothesis in terms of particular user context, and then we start observing them in the how users are behaving with the design. And then we confirm the design.

So, is the directive design mythology which we do not follow, we follow the inductive design methodology in iterative model, because in iterative model we start with the user users observations and the. So, the user observation if you start with the user observation and users are actually a defining our designs, what we delivered in the final so, it is also user defined.

So, this is why the term participatory approaches there. So, users are participating all the stakeholders are participating in the design process. So, the term the similar term is also co design. So, users and designers they collaborate and design together, that is there is why the term is etymologically named co design.

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So, this is a model to follow this iterative process and to understand user to understand to a conductor ethnographic survey, Donald Norman the famous designer he wrote in this in his book design for day thing, this is the conceptual model he have provided. So, the system image or the final design should get a to the users mental model, but users are thinking in terms of what users perception is on the design that has to be get a to. And then designer's conceptual model should match with the users model, that is why designer should understand what users are thinking and that they should provide in the system image and from that also the system image again communicates some information to the user.

So, there is a visual communication happen into the users as well, and user also understand the re readjust with them in the model. For example, if you take apple I iPod, iPod was the first designed by apples Steve jobs, it was not there in the might market the concept was absolutely new. So, designer pursue something and the system was their first and then the user started perceiving what iPod is, and then many other company launched similar product and because user already created a mental model after seeing what iPod is after iPod launch in the market. So, there was the mental model after launching on iPod and other designer companies switch which apart from apple have perceive with the users model which is there from the system on an image of iPod, and then designers of other from conceptualized the similar product and designed something.


So, in this three there is a actually a triangle. So, design designers and user. So, any of this three can come first. The design should be precipitated by designers conceptual model, but users mental model and designers conceptual model in this two any of these two can come before other. So, heuristic evolution if you discuss it further it is a document and analyzing, the spontaneous interaction between user and the design.

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Generic Design Methodology

Iterative model:

Heuristic evaluation: documenting and analyzing the spontaneous interaction between user and the design (product/ new-media/ web application)



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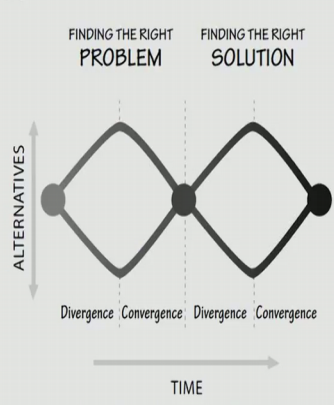
So, either user and in environment of design how they feel interacting, that is the process of heuristic evaluation the documentation of heuristic evaluation. So, another model double this is called double diamond model, this is also proposed by a Donald Norman and this is detailed in his the same book design for every day thing, but this model is first initially proposed by a British design council in 2005.

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Generic Design Methodology

Double Diamond method:
Initially proposed by the British Design Council, 2005.

Discover
Define
Develop
Deliver



FINDING THE RIGHT PROBLEM FINDING THE RIGHT SOLUTION

ALTERNATIVES

TIME

Divergence, Convergence, Divergence, Convergence

Donald Norman, Design of Everyday Thing

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So, and Donald Norman have iterated it and presented in a different way. So, this model actually the diagram looks like to diamonds that is why the name is double diamond. The

first phase the first diamond is finding the right problem, what you say is finding the right problem is actually solves half of the solution, then finding the right solution becomes much easy if you find the right problem because that is what we under should understand from ethnographic survey or user study. Then if we find the right problem we are create a week go to the next phase which is finding the right solution. So, in the finding the right problem again we have two different stages and finding the light problem, and here in this access it is the time is plotted in x axis in y axis alternative, design alternatives or the problems alternatives design is plotted.

So, in the first diamond we in the problem identification diamond, we have first divergence. So, the first divergence is called discovered; we start discovering what are the problems we what are the problems is the phase what are the different scenarios user users go through in the while interacting with the particular website or particular product; so we explo each and every possible thinks. So, that is why we go divergent. So, we think about all different possibilities of problem, but then we converge we actually define what is the problem. So, we eliminate the superficial problems and we start to pinpoint what is the actual and deputed problem.

So, we identify the particular problem here in the first diamond, and then we start developing in the next phase which is a solution development phase, we start developing the design and when while developing the design again we start thinking about different solutions, very different solution which are possible around that problem. We go broad and think about different alternatives in the solution that is why you again with we are going divergent, and then we start elimini start testing with the user.

So, while we are testing with the users many of the solutions might be redundant, many of the solutions even might not work for the users. So, we eliminate many solutions and we find out the best and optimum solution, and that is why there is how we reach the particular the best possible solution in the best in the particular scenario. So, that is how Donald Norman is describing the double diamond method of design process.

So, next phase will start about will discuss about design thinking, how the process of design thinking happens. We will go back to will talk about ethnography and user testing after user study and user testing after this, but we start with the design thinking the ideation process first. So, in the design thinking is the creative thinking process is skating

thinking ability to stretch beyond the ordinary or beyond the original and it has to be original and innovative and flexible to once thing flexible, while designers doing this process.

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Generic Design Methodology

Design Thinking

Creative thinking is the ability to stretch beyond the ordinary, to be original, innovative, and flexible in one's thinking. For example, creating a mnemonic device (a memory aid) is one way to think creatively, connecting unrelated things with a single visual in a design context.

- associative** thinking (recognizing commonalities, common attributes)
- metaphorical** thinking (identifying similarities between seemingly unrelated things)
- elaboration and modification** (working out details and being able to propose alterations)
- imaginative** thinking (forming images in one's mind and imagining the unlikely)

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For example creating mnemonic device which is it to memorize thing is one way of thinking creatively. So, connecting unrelated things with a single visual is also a process of design thinking. So, in the design thinking can be of different ways it can be associative, it can be meta metaphorical, it can be elaboration of one particular idea and it can be imaginative, and we go into a different dimension in imaginative thinking.

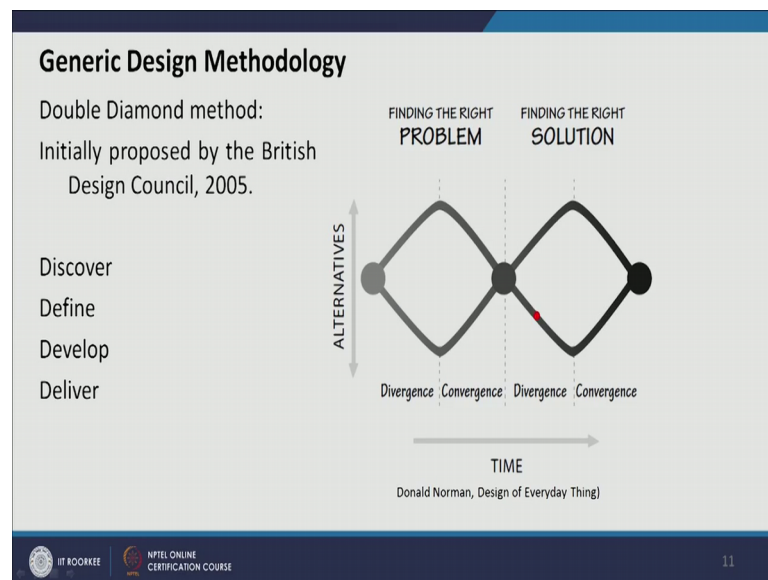
So, associative thinking is actually recognizing commonalities in different things for example, we say leave if is green, and we see color of a logo which is also green. So, we associate a logo which looks like a leave, and then we start generating a logo which gives the sense of leave by having a similar kind of color or similar kind of shape, but which essentially is not exactly a replica of a leave. That is how we associate and association again can be done in terms of elements and principles of design. So, elements of designs are again color texture shape and all this things we can about texture and color from different elements and we can associate them and principles of design like unity wear them we can associate a different elements like if they are composed in a rhythmic fashion if they are also in united in a composition.

Then it can be metaphorical thinking, metaphorical thinking like if we start thinking decipher a particular object metaphorically. For example, if you think about a term sand if you want to design some graphics which evokes sensation of sand, then we can think about the attributes of sand, it can be a dry its grainy its yellow. So, we start metaphorically from sand and we can go into dry, yellow grainy and all this kind of different adjectives. And elaborative at modification this is another way of thinking.

So, we start elaborating a particular objects suppose we start a any object which is designed by man for example, building. Which can we restart elaborating each and every function each and every element of a house or building like for example, window, door, brick we start from a brick and we again elaborate we start from each and every element like door fenestration space and we again start elaborating from space again we can connect with the space of ecstatic space and again we can go imaginative from that.

So, design think thinking is actually a process of taking one thing and going thinking about all the associated adjectives and products associated to that.

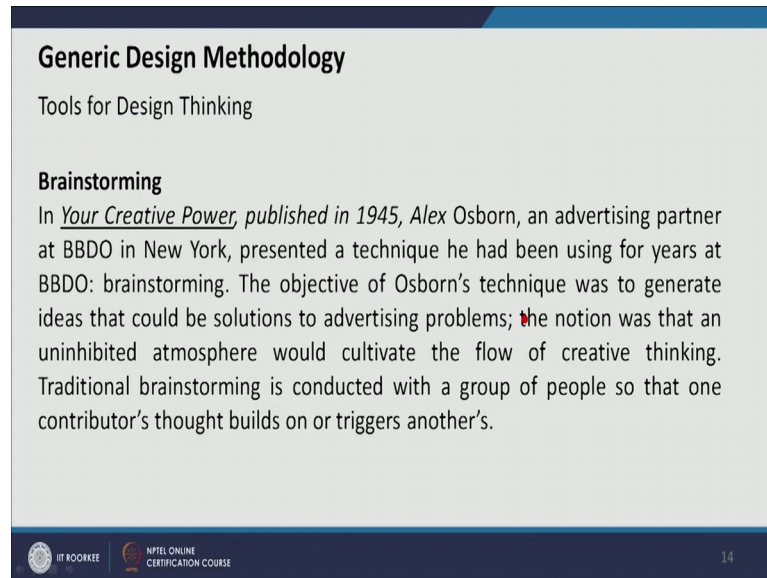
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So, this is actually a catalyst to help in the double diamond method methods design solution finding, when we have to find out lot of different alternative, lot of different solutions, lot of different variance for coming up to multivariate design solutions, then we this process of design imaginative elaborative design thinking helps. It can also imaginative we can jump from one thing to absolutely different think very intuitively. So,

the tools of design thinking's will discuss. So, the one tool is brainstorming this is the very popular tool and work this is first described by Alex Osborn.

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Generic Design Methodology

Tools for Design Thinking

Brainstorming

In *Your Creative Power*, published in 1945, Alex Osborn, an advertising partner at BBDO in New York, presented a technique he had been using for years at BBDO: brainstorming. The objective of Osborn's technique was to generate ideas that could be solutions to advertising problems; the notion was that an uninhibited atmosphere would cultivate the flow of creative thinking. Traditional brainstorming is conducted with a group of people so that one contributor's thought builds on or triggers another's.


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So, in the brainstorming session what happens is all the designer sit together and start discussing about particular design process and in the brainstorming, we start with one particular thing and each and every people participates. So, this is the group design thinking process there also individual design thinking process. So, in brainstorming it is essentially as a group design thinking process. So, one person takes from the others persons design initiation, and things add his own imagination.

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Generic Design Methodology
Tools for Design Thinking

Brainstorming
"It struck me that instead of thinking what a sculpture is going to be and how you're going to do it compositionally, what if you just enacted those verbs in relation to a material, and didn't worry about the results?"
—Richard Serra



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So, brainstorming as described Richard Serra he is a famous installation designer, while he was discussing about a particular sculpture, he was saying that why we should think about the how to manifest, how to design the sculpture why not to a think in terms of verbs and adjectives about the materials and the sensation of the structure.

For example this here we have the photograph of for installation of time and space which is their inside Guggenheim museum Bilbao, which is designed by frank Gehry. So, this installation is talking about space. So, here in this installation if we see this installation in one installation the space within that the cross section is fixed in one installation the base of this path is fixed, in one installation the top part of the part is fixed. So, what he is talking about here is the perception of people inside moving inside a movement space.

So, one people enters and perceive the space, he understands the relationship between the space and time frame. So, there is a correlation he wants to talk about the correlation between the space and time though through installation while designing this. So, he actually thought about not thought about the material and how to construct this, but he thought about the particular concept of space time correlation.

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Generic Design Methodology
Tools for Design Thinking

Brainstorming
"It struck me that instead of thinking what a sculpture is going to be and how you're going to do it compositionally, what if you just enacted those verbs in relation to a material, and didn't worry about the results?"
—Richard Serra

Thumb rules for brainstorming session

- Include every possibility
- Never judge an idea

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So, the thumbs a thumb rule from brainstorming is include every possible adjective every possible products which comes around this and never judge an idea. Because we will just the idea after when we discuss with the users and take users feedback then we start evaluating each and every alternative and users feedback can give different dimension in the possible alternatives. Another process of design thinking is mind mapping unlike brainstorming mind mapping is actually a individual process, while one designer starts doing the visual thinking.

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Generic Design Methodology
Tools for Design Thinking

Mind Mapping
mind map is a visual representation, diagram, or presentation of the various ways words, terms, images, thoughts, or ideas can be related to one another. A useful tool in understanding relationships and organizing thoughts, it leads to idea generation.

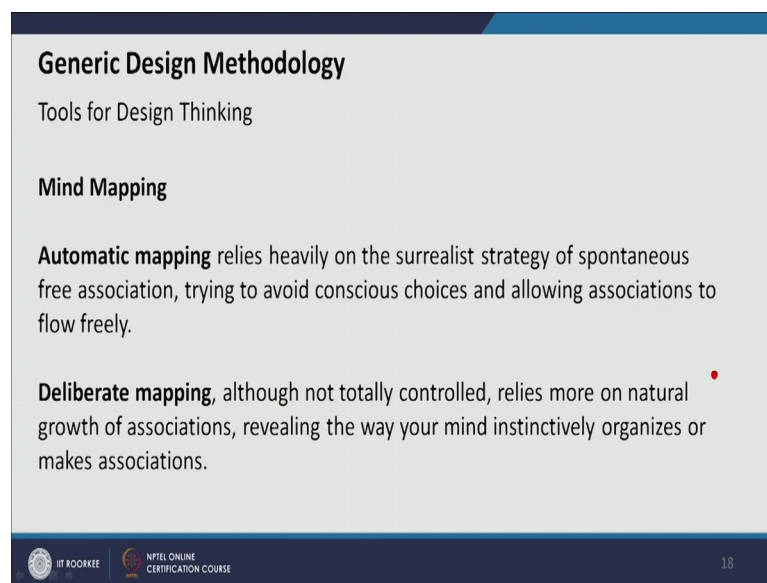
A resulting visual map is a diagram used to represent thoughts, words, information, tasks, or images in a specific diagrammatic arrangement. There is a central key word or thought, and all other words, thoughts, or visuals stem from and are linked to the central one in a radius around that central focal point.

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So, mind mapping is a process where it can start from a word, it can start from a particular image for example, for logo design client might need to a for our in case of a coffee shop client might need a have a logo which evokes a sense sensation of a coffee. So, in mind mapping the central word will be coffee, from coffee people can go around it can people design I can think about the colour of a coffee, and think about the colours scheme and also it can design I can think about the liquidity of the coffee, and think in a different dimension, and also you can the design as can think about the experience of having a coffee and the logo can evolve from that as well.

So, mind mapping can also be its automatic mind mapping. So, we start with any word and we just go imaginative and start writing what comes into our mind and absolutely not influenced by anything's.

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Generic Design Methodology

Tools for Design Thinking

Mind Mapping

Automatic mapping relies heavily on the surrealist strategy of spontaneous free association, trying to avoid conscious choices and allowing associations to flow freely.

Deliberate mapping, although not totally controlled, relies more on natural growth of associations, revealing the way your mind instinctively organizes or makes associations.

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But deliberate mind mapping can be we some we start thinking and deliberately we again come back and branch out from the same.

For example we take the same example of coffee. So, automatic in autocratic mind mapping it will be if we take the color of coffee, we start from the color and we go into the direction of color itself. You do not come back to the liquidity or the experience of having coffee and in deliberate mind mapping we go into the direction of color and then again we come back to the again the base war which is coffee, and then again we start thinking about the liquidity of the coffee, and go imaginative again we come back to the

coffee and we can also think about the experience of having coffee, and then again we start mind mapping.

So, this is actually a process.

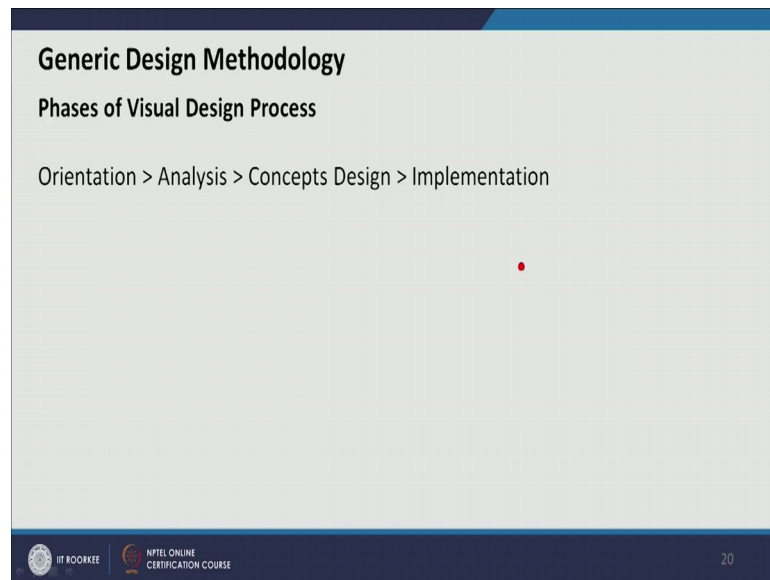
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The slide is titled 'Generic Design Methodology' and 'Tools for Design Thinking'. Under the sub-heading 'Mind Mapping', there are two hand-drawn mind maps. The first mind map on the left has a central yellow node that says 'WE ARE THE TIDE'. It branches out into various terms like 'CREATION', 'COOPERATION', 'CHANGE', 'DESTRUCTION', 'REBUILD', 'ADAPT', 'HUMANITY', 'TECHNICAL', 'FORCED', 'NEW LIFE', 'HUMAN REGENERATION', 'HELP', 'CHANGE', 'NEW BEAT', 'LIFE', 'TURN OF THE TIDE', 'NEW BEAT', 'CHANGE', 'NEW BEAT', 'LIFE', 'TURN OF THE TIDE', 'NEW BEAT', 'CHANGE', 'NEW BEAT', 'LIFE', 'TURN OF THE TIDE', 'NEW BEAT', 'CHANGE', 'NEW BEAT', 'LIFE'. The second mind map on the right is more colorful and includes words like 'COMICS', 'OPERATIONAL DESIGN', 'WORDS', 'PICTURES', 'WORDS', 'PICTURES', 'WORDS', 'PICTURES', 'WORDS', 'PICTURES', 'WORDS', 'PICTURES', 'WORDS', 'PICTURES', 'WORDS', 'PICTURES'. The slide footer contains logos for 'IIT ROORKEE' and 'NPTEL ONLINE CERTIFICATION COURSE' along with the number '19'.

So, in an automatic mind mapping we will start from one and we just branch out and go and we do not come back to the world. So, this yellow part is actually what automatic mind mapping, but in deliberate mind mapping we start branch out from one side and then again we come back, then we start branching out from this main word again. So, that is a process of deliberate mind mapping where this word gives a higher emphasis in the mind mapping.

So, after this, what we get from mind mapping is number of different words and different adjectives that actually helps us to ideate to create alternative design solutions. For example, we can have different colour schemes different objects different elements for example, pictures and from this I think pictures and words it comes to comic it. So, comes into infographics, and many other things it can in some path it follows and it goes to mars again. So, there are lot of different it again goes to college and many other. So, what we get as a or inspiration board, is lot of different (Refer Time: 27:13) of words defined adjectives, which actually helps us to ideate to different design concepts.

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So, in the next class we will discuss about the phases of visual design process, which are orientation analysis concept design and implementation, where we will apply mind mapping brainstorming as a design thinking process.

Thank you.