

Role of Craft and Technology in Interior-Architecture

Prof. Ar. Smriti Saraswat

Department of Architecture and Planning

Indian Institute of Technology, Roorkee

Lecture – 32

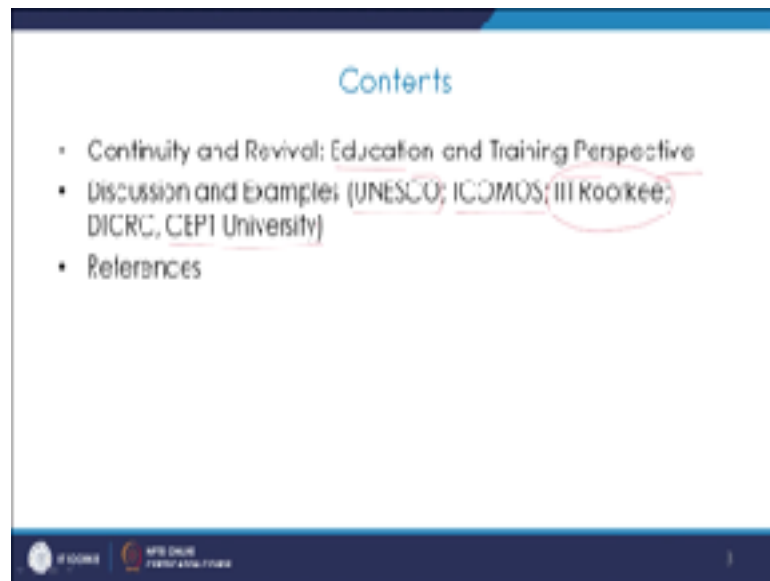
Continuity and Revival: Education and Training Perspective

Namaste! Hello everyone, welcome back to the NPTEL course Role of Craft and Technology in Interior Architecture, today we are going to discuss module 32. And it discusses the Continuity and Revival of crafts with the focus on the Education and Training component. Now in one of the previous modules we were discussing the craft scenario in varied countries and we saw how China you know it emphasises on the education and training component of the artisans and the craft persons and within that also it identifies varied categories.

So, young artisans and craft persons, the ones who are already practicing, the ones who are completely unemployed and you know there were lot of different ways, they were incorporating the education component within the art making and skill development programmes.

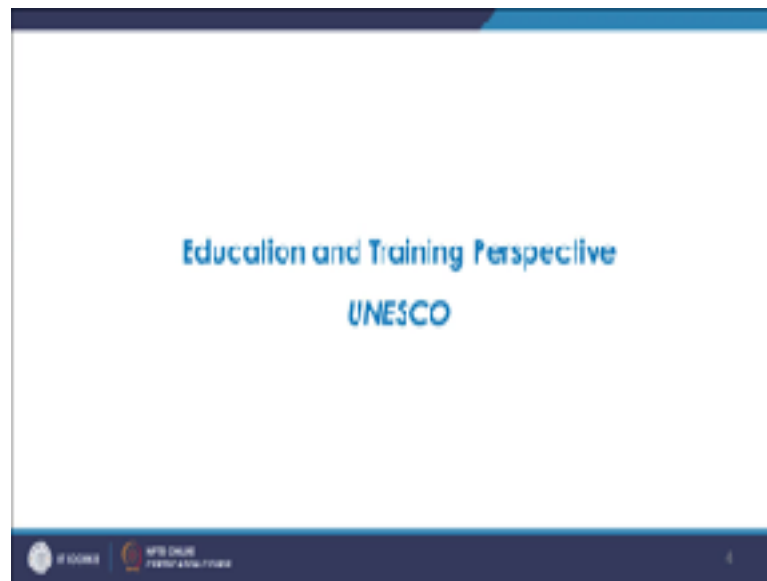
So, it is very important that the education and training component is emphasised and all the countries, their governments, they are also trying to make such schemes and policies, where its not just about product making and marketing, but also at the grass root level trying to incorporate the component of education and training and not just you know how designer comes and tells the artisan what to do, but the artisans themselves getting trained and they deciding what products to make and how to revive the craft. So, thats what we are going to discuss today and we will also see few examples.

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So, today in this module we will talk about of course the education and training perspective and with the help of that how to talk about the continuity and revival of the craft forms. And there would be some examples you know like UNESCO, the kind of framework they suggest which highlights on this component, when we have some guidelines from ICOMOS and then we have some examples from IIT Roorkee and again the DICRC at CEPT University where they have tried to explore you know through certain workshops this component and enhance the skills of the craft persons and empower them.

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So, UNESCO we have been really discussing a lot about the UNESCO guidelines and the cultural and creative industries. So, I am not really getting into the details I'll just discuss pictorially one framework which emphasises on the education and training component.

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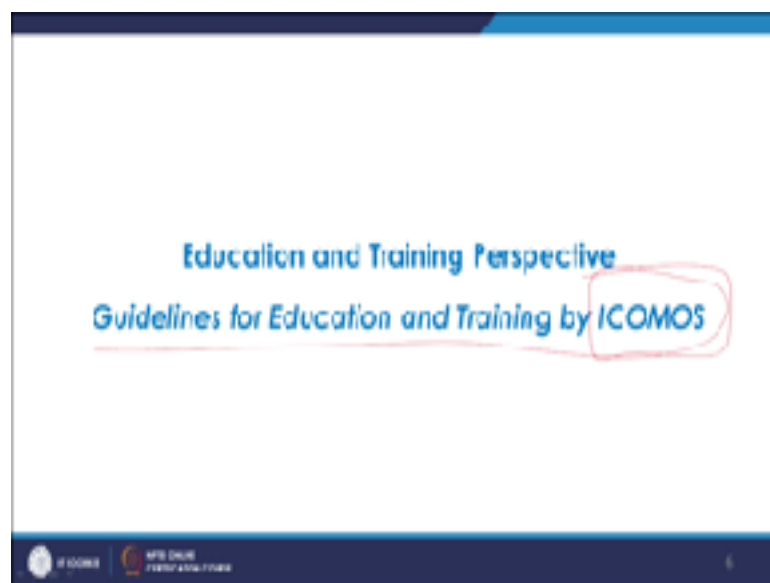
So, here what we see is the framework for cultural statistics domains and if we see here the cultural domains, that have been identified here the 6 of these, and then the related

domains over here. So, here we see visual arts and crafts as one of the cultural domains that have been identified by UNESCO, within that they highlight the importance of intangible cultural heritage and then further there is a lot of importance to education and training component, archiving and preserving component that we saw on the previous module where we were talking about the research and documentation perspective, importance of archiving, and then the equipment and supporting materials

So, here the education and training again is like a paramount consideration and that's what we are going to discuss today and we have also touched upon it already several times in the previous modules and how it is very important to really you know give stability to the artisans, to the craft persons, to the young design professionals and how it can really boost up the craft sector which is already a very important and crucial employment generation sector for our nation plus also how it has been involved in ritualistic and utilitarian activities.

So, this is one framework by UNESCO where they extensively highlight the importance of education and training and through which how to empower the artisans, the crafts persons and to really continue and revive these art and craft form some of which are literally languishing.

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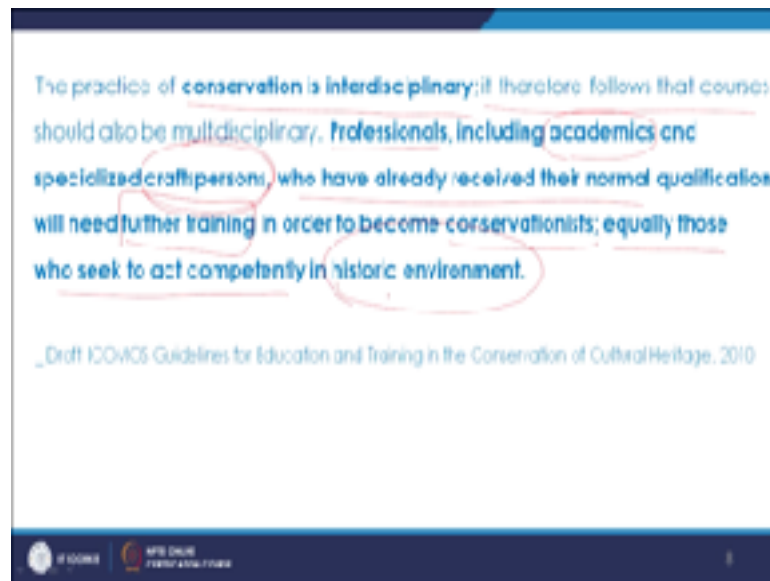
Now, talking about the guidelines for education and training by ICOMOS, they are also quite significant and these guidelines they emphasise on the crafts, they identify craft as a cultural resource and then they focus on the education and the training component.

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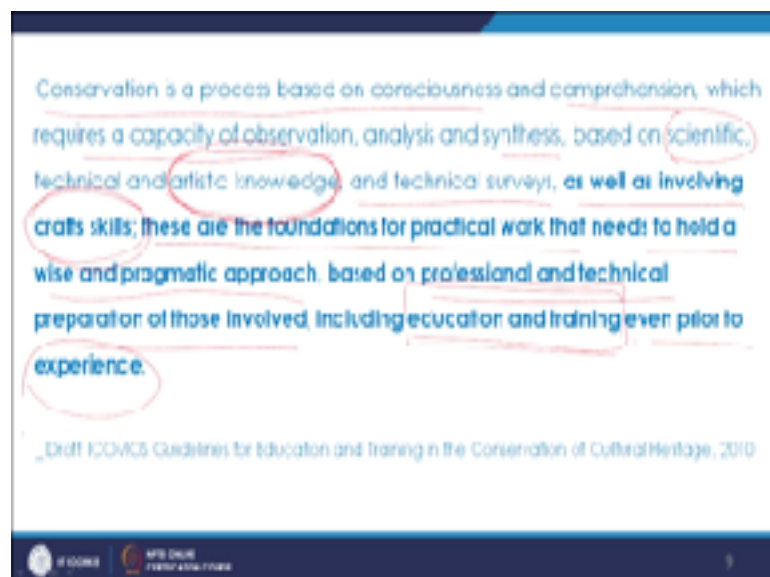
So, the aim of the ICOMOS guidelines for education and training in the conservation of cultural heritage is to promote the adoption of standards for education and training in line with the current requirements of conservation of the cultural heritage. The report suggests that conservation is a cultural, artistic, technical and craft activity. So, there is a lot of focus on culture craft, based on humanistic and scientific studies and systematic research. So, they have identified craft as an important cultural resources like I said, and accordingly they have come up with certain guidelines.

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The practice of conservation is interdisciplinary; it therefore follows that courses should also be multidisciplinary, professionals including academics specialised craft persons so, here also we see the mention of craft persons, who have already received their normal qualification will need further training. In order to become conservationists; equally those who seek to act competently in historic environment. So, they are establishing the importance and need of further training, even if some of the individuals, craft persons, professionals are already equipped with basic qualifications, continuing this.

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Conservation is a process based on consciousness and comprehension, which requires a capacity of observation analysis and synthesis, based on scientific, technical and artistic knowledge.

So, we see the mention of artistic knowledge, craft skills, craft persons and technical service as well as involving craft skills; so, here the mention of craft skills and the artistic knowledge and how it contributes to creating a culture a repository and also contributing to the field of conservation.

These are the foundations for practical work that needs to hold a wise and pragmatic approach, based on professional and technical preparation of those involved including education and training. So, highlight is the education and training component again even prior to experience. So, we see that this is the focus of the guidelines and they are repeatedly mentioning about the importance of education and training.

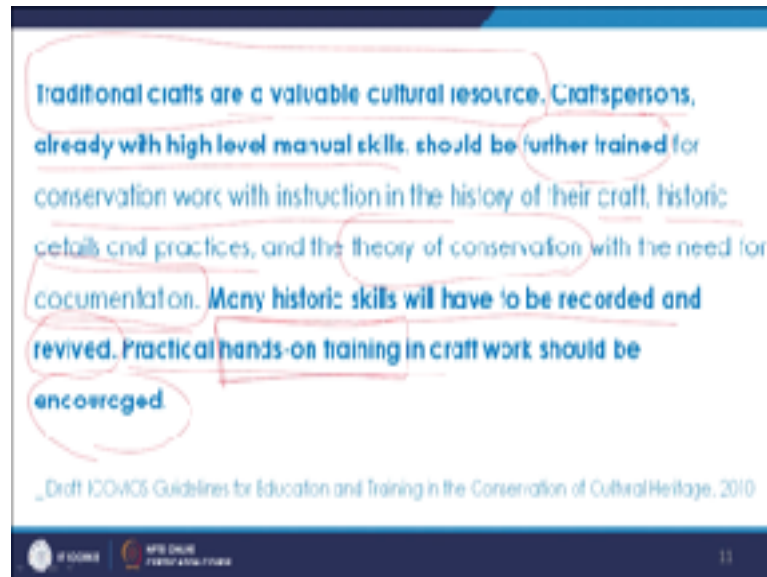
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Conservation requires professional technical and social education and training, again of a full spectrum of individuals, who are directly involved and concerned, and these individuals could be architects, engineers, landscape architects, urban planners, archaeologist of course the restorers, conservators, foreman and here we see the mention of craftspeople again and the entrepreneurs.

So, there are varied individuals there are lot of stakeholders involved and the education and training component also tries to create a link between them, and sort of establish a network where people can work hand in hand and really contribute.

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Traditional crafts are of valuable cultural resource. Craftspersons or craftspeople as it is mentioned in different ways, already with high level manual skills should be further trained, for conservation work with instruction in the history of their craft historic details and practices and the theory of conservation, with the need for documentation. So, again the research and documentation perspective is also there

Where we are archiving all the details and, then there is education and perspective the education and training perspective the component which further strengthens this entire mission to empower the craft persons to really create a repository and to see the art and craft sector as something which can also be linked to our schooling and education.

Many historic skills will have to be recorded and revived. So, there are already lot of skills which are dying because the knowledge transfer is not there, the recordings are not there, lot of the current generation are not generations are not practicing those skills. So, right from archiving and recording to dissemination all of these a very important steps

that need to be taken, practical hands on training in craft work should be encouraged. So, here again we see hands on training.

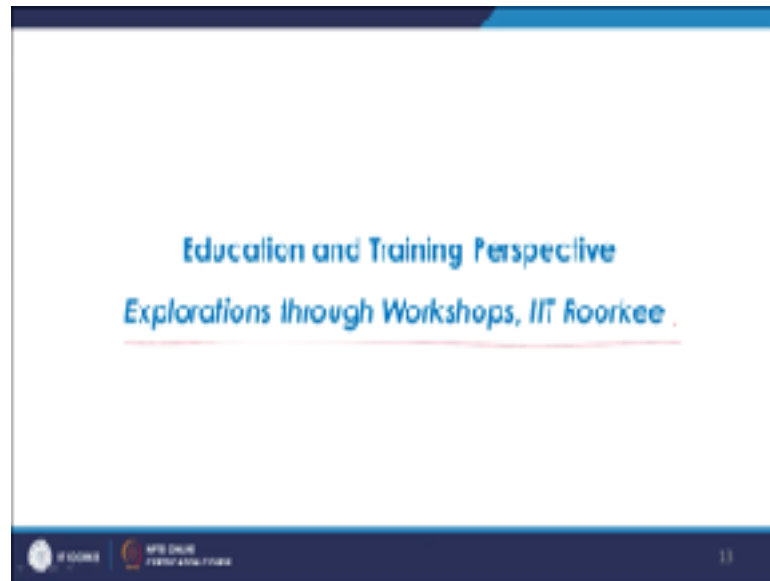
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Now, talking about the general scope of education and training programmes given by the ICOMOS, they emphasise a lot on the practical training to allow persons in associated crafts and trades to master technical execution in conservation based on knowledge of traditional techniques and materials on the specificity and the characteristics of their craft as well as learning about compatible innovative techniques.

So, we will also talk about innovation in one of the modules. Knowledge of conservation history and theory and the capacity to recognise what and how to document the heritage and the work carried out. So, this is just one set of guidelines which is given by ICOMOS and we see all these points of focus, which we have been discussing throughout the course and, which is very relevant at least for today's module and how they are trying to establish the importance of varied components like education and training, research and documentation, innovation, resource, building, repository creation and so, on.

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Now, I would like to discuss some of the explorations through workshops done at IIT Roorkee and these workshops have been done at the department of architecture and planning and I have either coordinated or organised them myself conducted them myself, or we have invited an expert.

So, we will see how through these workshops, it has been emphasised that the hands on training is very important and how we see the craft skills you know, how they reach the students, how it is also a part of academia and then through workshops we also try to see how they could be explored in different ways through different prototypes. So, we will just try to see very visually these workshops and what were the sort of outputs and the processes involved.

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- **Workshop Title** - Explorations in Papier Mache, Applications in Interior Architecture
- **Expert** - Mr. Shyam Pahapalkar (Mumbai University, Tulsi Kula Academy, IITD, CEPT)
- **Focus** - The workshop focuses on Material Explorations in Interior Architecture, and Applications in Construction Industry; taking Papier Mache as a medium.
- **Workshop Module** -
 - a) Awareness Through Expert Lecture
 - b) Hands-On Exposure
 - c) Conceptual Development Through Brainstorming
 - d) Prototype Development
- **Description** - This workshop is an introduction to the process, materials, tools, techniques and methods of Papier Mache craft in India. Hands on training in making of the medium and its various stages will complement with the discussion about its cultural significance in India. The primitive process of recycling waste paper to smooth malleable pulp will be practiced thoroughly to produce a sturdy surface. The same will be translated into exploratory ideas & forms. Techniques introduced will cover the sculptural processes of armature construction, layering, carving, modelling, painting and lacquering.

So, generally a workshop module it covers these four important aspects. So, there is awareness through the expert lecture, of course there is hands on exposure and training, then there is conceptual development through the brainstorming and then there is prototype development..

So, one such workshop was explorations in Papier Mache and applications in interior architecture. And we had Mr. Shyam Pahapalkar, who is a very good friend and he is an expert in Papier Mache and he is an artist and with the help of him we discussed these explorations and we conducted this workshop.

So, this workshop basically it introduced the students at the very first year level you know, the different material explorations, the processes involved in the making and what are the applications in the interior architecture, how to understand a material which is not very commonly used which is sustainable, which can be easily you know abundantly procured and we sensitised the students about all these aspects and we also tried to explain them the power of making and the hands on training and how it can really enhance their skills.

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So, here we see again the awareness component where an expert talks about that particular art or craft form or the skill of making and they really make the students aware of what is the state of the art scenario in that particular form of art or craft and that particular material which is involved, what the material is technically, how is it made, what is the process of making it decomposition of material and so, on.

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So, here we see the hands on exposure and, how you know the Papier Mache is made, what are the processes involved and how it is done step by step.

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Again continuing what are the different materials which are added. So, there is gum Arabic there is *Mulani Mitti* and then there are lot of other ingredients that go while making the Papier Mache from the pieces of newspaper cuttings or different kinds of papers and then how the pulp is made.

So, all of these are taught to the students its a part of the module called creative workshops which is subject enlisted in the curriculum and thats how we really you know take care of the education and training component and try to develop the hands on skills of the students and try to call also artisans and craftspersons so that there is an interaction, there is brainstorming and something new also comes up towards the end.

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Then conceptual development, very important; so, a design brief is given to them and they are told you know what sort of direction they have to take and then they come up with lot of concepts and then the concepts are discussed whether it is feasible to really have such concepts in place are not and then finally they come up with some prototypes.

So, this was an interesting explanation, where we were trying to make bricks out of Papier Mache and then see how it is you know also used today in the construction industry. And there are different techniques which were told to them. So, there is armature technique over here and there is mould technique, there is also mural technique which was told to them, here.

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Here this is again an armature techniques. So, this is an earning that was made and it is structural it has a wire mesh framework inside it. So, and this is again the bricks made out of Papier Mache plus some objects of use, the pen stand, bookshelf. So, these prototypes are scale down and few of them could actually be made you know on the life size.

So, these explorations really give lot of ideas to the students and they can just go do some market research and also you know combine these explorations and their knowledge that they have gained and come up with different kinds of design solutions for different projects.

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So, again they also make these concepts through drawings and like proper working dimensions, just to see whether the conceptual development is feasible, whether this could be actually made or not.

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Some other prototypes so, again this workshop.

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And of course also for creating repository and dissemination and exhibition is put up and panels like these are also put up, which explain the entire you know process for the entire duration in which the workshop is conducted.

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- Workshop Title - Terracotta: Transformation Through Time and Technology
- Expert - Ar. Priyanka Mangaonkar (CIPT, CARSE TBI, BRICK, Independent) and Shruti Jaiswal
- Focus - The workshop focuses on different stages of transformation of terracotta as a material, and establishes its relevance as a construction material in current scenario with the help of innovative prototypes.
- Workshop Module - a) Awareness Through Expert Lecture
b) Hands-On Exposure
c) Conceptual Development Through Brainstorming
d) Prototype Development
- Description - Terracotta as a material till now has taken different influences to reach to the urban scene. Term a material predominantly used for household & domestic use, it has been slowly shifting to building & construction industry. The use of terracotta hollow blocks is useful for efficient construction and ease of handling. Since half a century, research and development has proved the potential of terracotta as a material for construction.

Another one we focused on terracotta as a material and we already saw in of the modules where we were talking about transformation through time and technology and we also saw the works of architect Priyanka Mangaonkar, who has done elaborate research on

this area and it was very nice that we called her and then again all the research that she has been doing on the transformation of this materials she explain through the entire process and the prototypes that were developed.

So, again it had these four aspects which its basically the framework which is followed largely, you know in all the workshops in the sort of a system that we have created. So, this framework gives direction and then we try to follow these important components and yeah so, different examples were given to them how terracotta is a material is used, we have already seen it in the module.

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All that was explained and this was the awareness and the lecture aspect of the framework where it was completely explained we saw the slides in the module which was focusing on terracotta.

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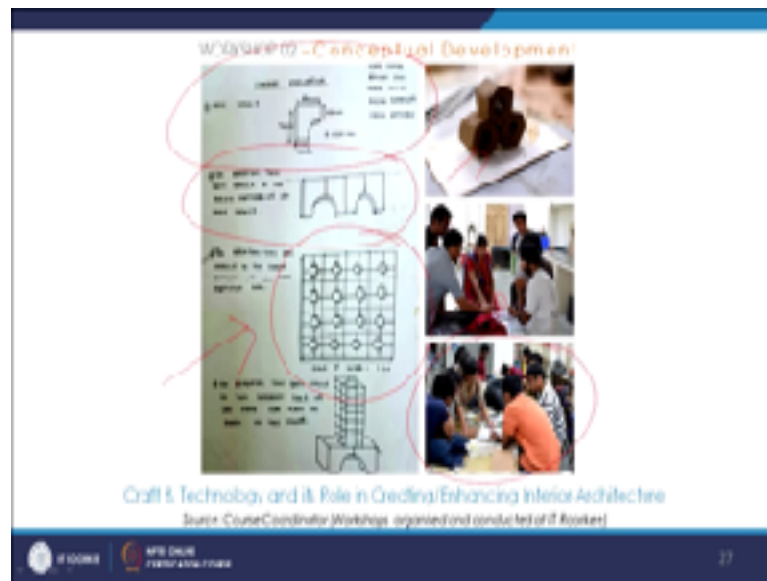
Again the hands on exposure, what are the tools, what is the plasticity test and you know how to interact with the material, how to know the material, how to really work hands on again.

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Different ways of working on it creating different explorations, working on a small scale trying to understand the material and, then there were conceptual developments.

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Like this, where the students were also working on you know what is the ideal module how long, or how big or small it could be, where would the clay crack because the plasticity doesn't allow the module to be, you know larger than this particular dimension and things like that and then how do we explore it in the interior architecture applications and its not just an artistic object.

So, they were both kinds explorations actually, artistic as well as the interior architecture applications but largely we focus on the interior architecture part because, we are in architecture department. And they were also very nice and interesting explorations where they came up with wall tiles which could later be actually you know worked upon in the kiln and then they could be put on the wall, we have one such wall in a department where another senior professor has also done one workshop and these tiles could be you know just baked and put on the wall.

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So, here different modules, different you know discussions and explorations. Again so, the tiles that I was mentioning some interior architecture partitions screen prototype, some other module making exercises all that was done.

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So, here the space making or the building craft applications; the staircase, the partition screen, this is a seating arrangement and all these kinds of explorations are done by the students in different workshops.

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This is again a furniture.

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Some more examples, modular different modules.

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And, then how they are really arranged in permutation and combination to get different prototypes.

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And yeah towards the end again the exhibition and the dissemination part.


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- Workshop Title – Origami and Kirigami
- Expert – Shilpi Sureshwar
- Focus - Workshop focuses on Material Explorations and Applications in Interior-Architecture, taking Origami and Kirigami techniques as media.
- Workshop Module - a) Awareness Through Expert Lecture
b) Conceptual Development Through Brainstorming
c) Prototype Development
- Description - This workshop is an introduction to the techniques of Origami and Kirigami. The main aim for such an exposure is to develop a thought process for exploring varied innovations and applications in Interior-Architecture, and to develop prototypes using different techniques.

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We had another workshop Origami and Kirigami.

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Craft & Technology and its Role in Creating/Enhancing Interior Architecture
Source: Course Coordinator Workshop, organised and conducted at WUOLAH

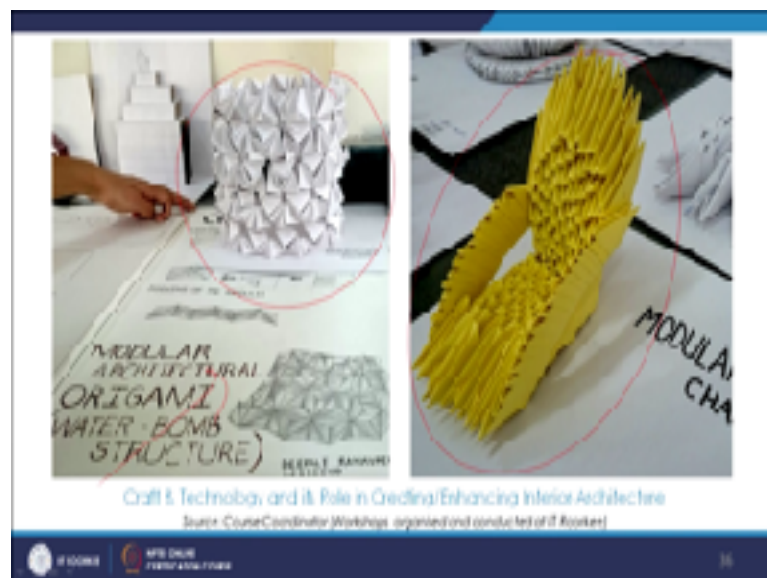
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And, again here they were just explain the entire process the paper as a material, what are its properties and what is dry origami, what is wet origami and different kinds of folds; mountain fold, valley fold, what is a tessellation, how do these configuration happen and what are these partial applications, what are the different buildings you know, the examples of origami and kirigami seen with an interior architecture, whether it

is the Disney Epcot centre or similar other examples. And, also the structural applications, where we see the circular origami pleating applications in different interior architecture and built form examples. So, all the discussion is done and they are shown different examples and then they have to come up with these prototypes along with the concept that they develop.

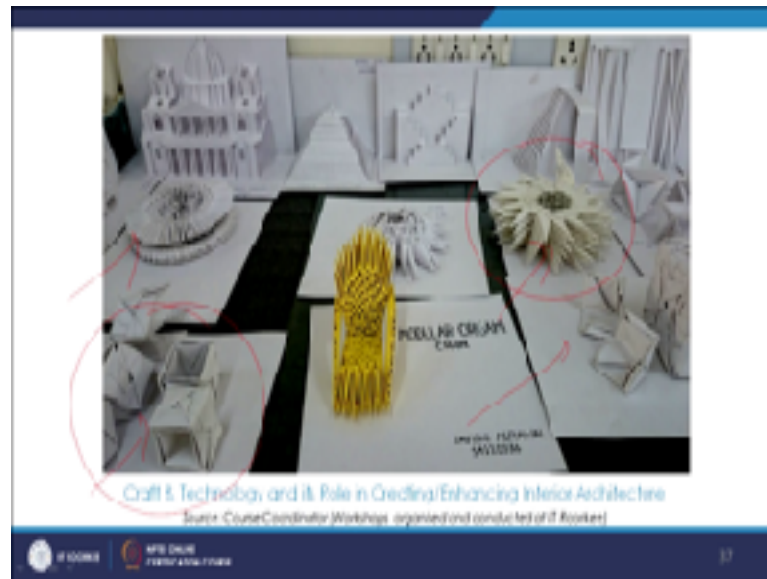
So, there was some concepts, some furniture pieces, some kirigami explorations, this is a stackable furniture through all of this goes inside and this get is packed. So, all of these explorations were done by students and this is all first year work that I am showing.

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So, here modular architecture and then of course, some furniture examples.

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This is again locking folding furniture, some structural applications.

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- Workshop Title - Cardboard/Edge Board Explorations -
- Expert - Smriti Saxena
- Focus - The workshop focuses on utilizing low cost and recyclable materials like cardboard/ edge board for interior-architecture applications.
- Workshop Module - a) Awareness Through Expert Lecture
b) Hands-On Exposure
c) Conceptual Development Through Brainstorming
d) Prototype Development
- Description - This workshop is introduced to expose the students to the concepts of sustainability; recyclable materials; low cost materials; low tech. practices; and, innovative prototypes for interior architecture.

We had another one which is cardboard and edge board explorations.

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And they were prototypes like these made. So, these are all done by the cardboard and the edge board and largely it is the joinery detail that was in focus and not so much of course the adhesive part. So, they had to come up with a different components and, how they are fixed together and how the furniture comes up and what is the design behind it, there were also some load testings done, you know keeping the weight and here testing with the child sitting on it.

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- Workshop Title – Creative Workshop on Weaving
- Facilitator – Smriti Karawat and Iram Kumar
- Focus – This workshop was done for first year architecture students and aimed at exposing them to the indigenous materials and skills. They were also exposed to concepts like - 'architectural skin'; textiles in 'interior-Architecture'; Inter-disciplinarity in Interior-Architecture; and, 'craftmanship and community spirit'.
- Workshop Module - a) Awareness through expert lecture
b) understanding NCS as a tool for Colour Communication
c) Creating story boards
d) Developing Colour Palettes
e) Application on a 2D or a 3D surface
- Description - This workshop was conducted by Navjyoti Haship Vikas Sansthan, an organisation based in Uttarakhand, during 18th to 19th October 2015. The workshop was a hands-on exposure under the guidance of master craftsmen, where the students could work with looms; understand the process of weaving; raw materials; tools and techniques involved. They also participated in a discourse focusing on importance of skill development, and further explored the applications of textiles in interior-architecture.

Another one was on the weaving, so we also focus not just on the product or furniture, but also different art and craft forms.

And how the boundaries are blurring and we talk about the textiles in architecture and we tell them that its the warp and weft and the structural detailing which also goes on building these days we have the architectural skin you know in different projects, different examples where the learning from the textiles is employed and applied in interior architecture. So, all those discussions also happened in a very interesting way. So, we had somebody coming from the weaving background.

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And they really we were lucky that we could also have a handloom in our workshop which these people, the organisation arranged for us. So, we are very grateful for that and they explain the entire process how it is done to all the students.

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We had one national workshop in 2015-16, where we focused on 5 art and craft forms and we had like 30 craftsmen, from all over Uttarakhand and then almost 100 participants and more than 10 experts coming in. It was for three days and, then all these art craft forms were explored they were talked about there was awareness component, there was training component, there was innovation component and there was also dissemination component involved, we had this huge exhibition and there was lot of interaction and lot of learning during that process.

And there again the focus was how these art and craft forms, contribute to space making as well and what are the connections, what are the larger linkages when we talk about creative industries and cultural industries and how do these different forms and architecture and design they all just sort of come together.

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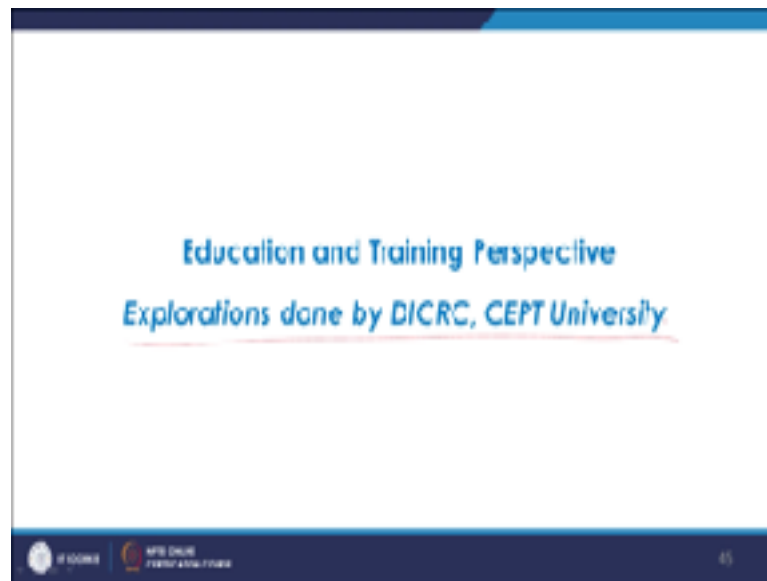
So, these were the workshop that were done, some other important highlights.

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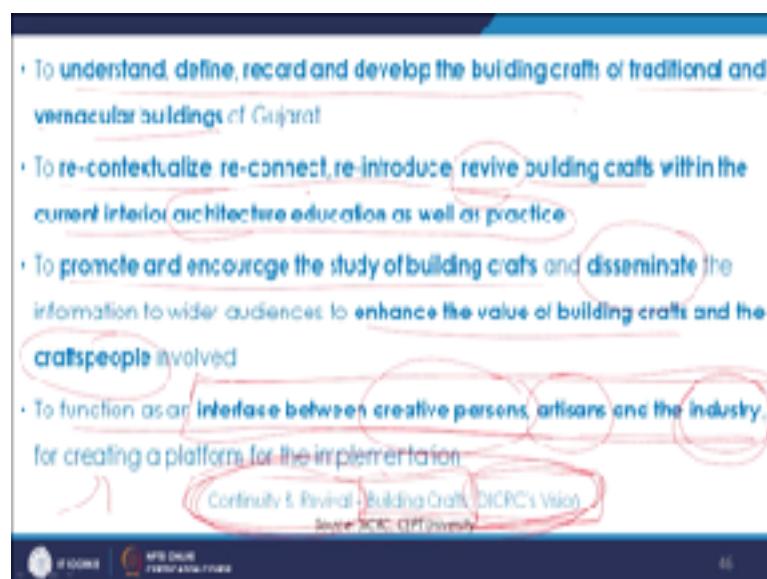
So, many craft persons in participants.

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Now, talking about some of the explorations done by DICRC and of course there are also largely workshops and how all the students there at CEPT along with the you know invited artisans and craft persons and entrepreneurs and different stakeholders, different people, they come together and as part of you know the academia, the curriculum and the teaching. These workshops sort of plug in and you know the dovetail in the existing system and, they just create this component of training and hands-on practical skill development.

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So, before seeing the workshop let's see what are the important emphasis, focal points and the vision of DICRC when it talks about the continuity and revival, specifically about the building crafts. To understand define record and develop the building crafts of traditional and vernacular buildings of Gujarat specially, to re-contextualize, re-connect, re-introduce, revive building crafts within the current interior architecture education as well as practice. To promote and encourage the study of building crafts of course, to disseminate it and enhance the value of building crafts and, the craft persons involved also to function as an interface between creative persons, artisans and the industry.

Now, the workshop that we have done at IIT Roorkee also function largely as an interface where we have creative persons there are lot of students young people with you know, different ideas, curiosity and experimental urge.

We have lot of experts, artisans and craft persons coming and we also tried to involve industry. So, we had during the national workshop that I talked about some people coming in from you know the professional fields from industries like Alaya Design Studio and then we try to work hand in hand and really you know, develop the ideation part of the students and different concepts that they developed.

So, DICRC has always been the you know strong point of reference and we have been really talking about it throughout this course. So, it was very important to also highlight you know there vision when it comes to the continuity and revival specially focusing on the building craft sector.

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So, I will just quickly go through some of the workshops again that they have done and, they focus on different materials.

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So, here different materials that they focus, different people involved, again the expert and the awareness part and the artisan and the craft persons who are the biggest experts

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because they know it all different explorations again, so this is bamboo.

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All the you know techniques, tools, what are the different ways, how is it split, what is hot bending, cold bending different properties of bamboo, how to tie the knot how to join two pieces and different details.

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So, I have myself been a part of few of these workshops both as a participant and also in the organising team so it was a very enriching experience. And then again final exhibition and the dissemination.

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Education & Training - DRCPC Workshops

Source: DRCPC, CPTI University

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The different kinds of you know plate's, conceptual development, the prototypes that come up they are also created and then exhibited.

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The teams the craft design groups the teams that work together.

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Prototypes, the scale down models, there is also the scale up model which is already installed the particular prototype that we see here is installed there.

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Another explorations in furniture.

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So, learning the skills from the artisans and the craft persons then working on an idea and then coming up with different concepts and prototypes. So, in this process they understand the skills they learn how to do it on their own and there is also a training component that gets fulfilled.

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Some more examples.

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Then design thinking module in one of the workshops, they were also very important modules like this, this was generated by professor M P Ranjan.

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Also site visits are involved sometimes to understand the context and you know to go to the artisan and the craft person cluster rather than calling them and understanding in their own workspaces, how are things done, what is this partial configuration of the space

where they work and what is their way of life and how the family interacts and what are the different family groups who do what particular work. So, all those details as well.

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And again they make these teams who work together on different concepts chosen.

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Exhibition and the dissemination part.

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The entire team celebrating the output together.

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Exhibition and prototypes.

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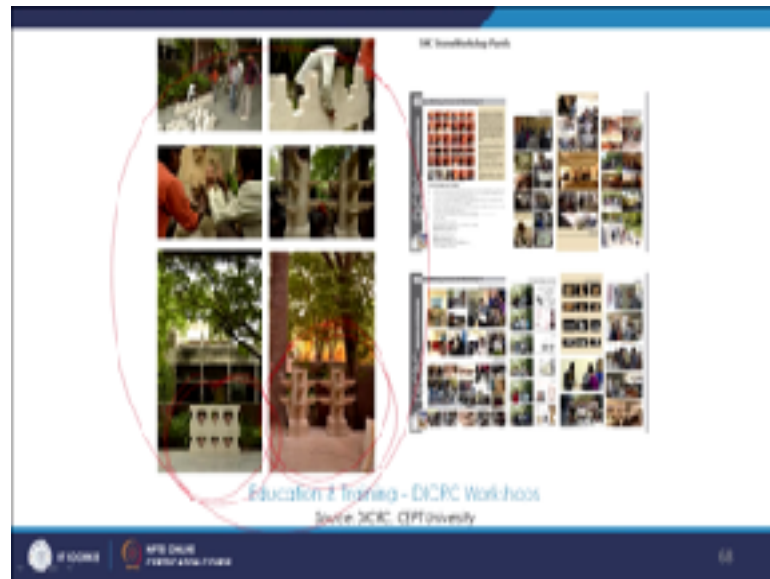
This is a part of repository and like I showed this for IIT Roorkee also you know the towards the end different plates and panels get generated and, their archived and this is a repository for the other batches to follow and for the you know professionals to follow, or to take used where while somebody is working on a project related to the subject.

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So, again repository creation, dissemination panels.

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Some more workshops this focus is on stone and different prototypes which were made by interacting with the industry and I worked on this particular workshop and all of this was done while working with industry. So, we saw lot of workshops, we saw the importance of education and training and we will continue in our next module with discussion on innovation and development perspective.

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Which is one step further of this education and training part, how does innovation come into picture.

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Some references we will see now.

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Thank you.