Design Practice
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Lecture - 06
Design prototyping

Hello and welcome to the Design Practice Module 6. This particular module I will be discussing about prototyping now whatever you have ideated so far from building up an idea rack through the various you know observations as well as empathy mapping skills that you have formulated so far. So, in this particular module, we will be defining a prototype or what is prototyping.

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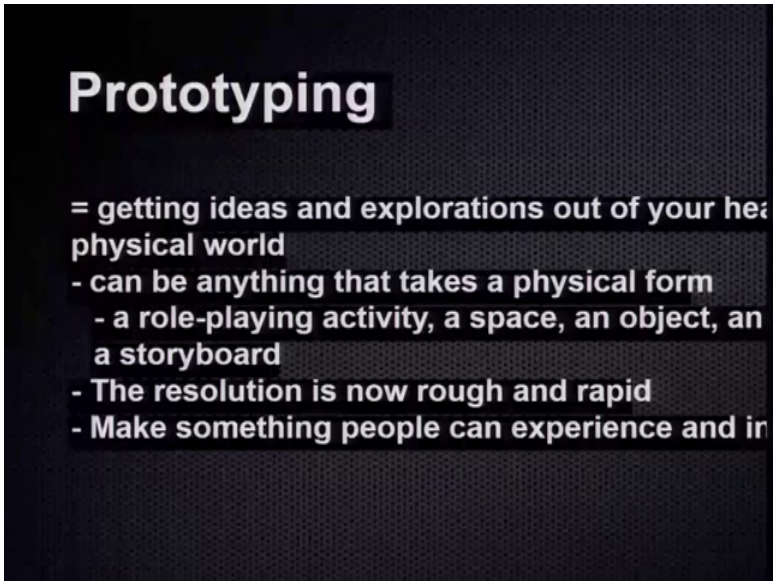

So, prototyping is about getting all the ideas and the explorations out of your head, and into the physical world. That is how you define. That means whatever you have planned and discussed and what kind of you know statements you have built in the previous many steps, you are going to now complete that through or explore that little further by means of a physical form, that you would like to built out of your ideas.

So, a prototype can be anything that takes some kind of a physical form. It could be role playing activity. For example, it could be a space that you wanted to redesign and object that you would like to use as a product may be an interface between a machine and the human being or even a storyboard. I mean a prototype can even be a storyboard. So,

anything that achieves a physical form out of whatever has been ideating in your head so far is known as a prototype, but there is an immense use of formulating a prototype because it gives you sort of a concept map. It gives you an idea you know by just looking into a real life object rather than imagining into an imaginary space.

So, here you could actually give form to your thinking you could say in terms of a prototype. So, the resolution may be rough, it may be rapid, of this particular prototype does not matter, but it has to have some form. That is the basic idea and typically prototype is something about making something people can experience, people can interact with and their concept stage can get more refined by having a look at the prototype and playing around with the prototype. It may be not doing or it may not be a complete functional prototype, it could just be simply a prototype related to the experience behind a product, but it has to be some kind of physical entity. So, there are many different kinds of prototypes which people do construct from time to time in product design activity. Some of them are being mentioned here.

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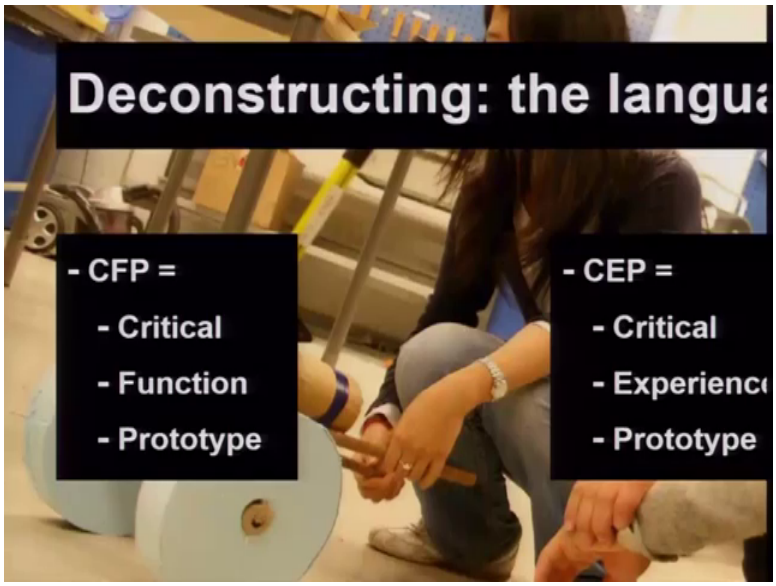

For example, there is a functional prototype. So, this is known as CFP, the Critical Functional Prototype which means really a prototype where whatever is the main idea or the theme has been constructed into with the functionality that is a vision for the particular product. Now, suppose if you are to construct or if you are to just map the dental experience in our country and then, try to look at among the various things that the

dentistry would need, what are the most important aspects or things where there could be a marked improvement in the dentistry. So, we have some kind of a study design, study in this respect in found out that the dental chair is the most important component where a little bit of production in the price of the dental chair may improve where the dentistry is done across the nation. So, once you have sort of the bulls eye view of what is the most important problem there, the question is about can I make a functional prototype behind.

So, the functional prototype in this case for example, if you are looking at a dentist chair is actually a chair which could be low cost ok, but apart from that the more important part is about how to manage with your design thinking and your innovation in the area of dentistry to come up with this view that what is the most important area and you know you could have something related to dentistry as a subject as an experience prototype.

For example, a very simple thing like a concave mirror, convex mirror which could give you a map of what is inside your oral cavity would be an experience that a person would have which will enable him to think about going to the dentist, ok. So, this could be a reasonably good critical experience prototype. So, something which is related to the experience that a person would when he envisions about this, you know a product or concept, the product here is really about improving the dentist.

So, something which will be giving you a experience about dentistry in the first place before even going to envision, what is need for a proper dental system or a proper you know a dental management within the countries. So, that is called an experience prototype, ok.

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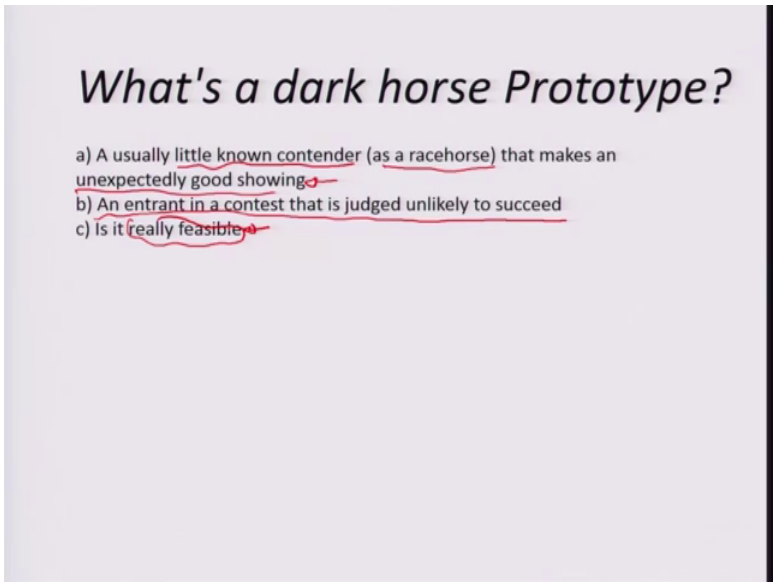

There can be dark horse prototype which means it may be a usually little known contender as a racehorse that makes an unexpectedly good showing. It may not be all together in the race at all. It is completely out of the box that some idea pops up which may replace the main product which something which is much more useful you know at appendage to the main product which makes itself, ok. So, this is an entrant in a contest that is sort of judged unlikely to succeed, but if we explore the feasibility of such dark horse prototype, it may turn out to be the innovative idea which may make differences in selling.

If you remember in our first we were talking about the stiffer which was a PNDVP and G product, where we were talking about a mop and how you know just putting a stick to the end of this mop and then, replacing the mop every time making into a use and throw cartridge and retaining the stick itself proved out to be one of the most innovative ideas which you know of or of the sales for P and G by almost thousand plus folds. So, in that case when we were looking up for a mop as the main product, somebody figured that the mop is the most inconvenient part of the product because it has to be washed and cleaned every time before the swiping.

So, why not make that product completely be a disposable unretained part of the product, whereas the stick which would be attached to it to be the retail part, the stick was never in per view before one thought like this to dry home the innovation. So, this could be

some kind of a dark horse prototype which may or may not work, but then there may be having an innovative idea which will make it sell. So, that is how you kind of look into the various different kind of prototypes.

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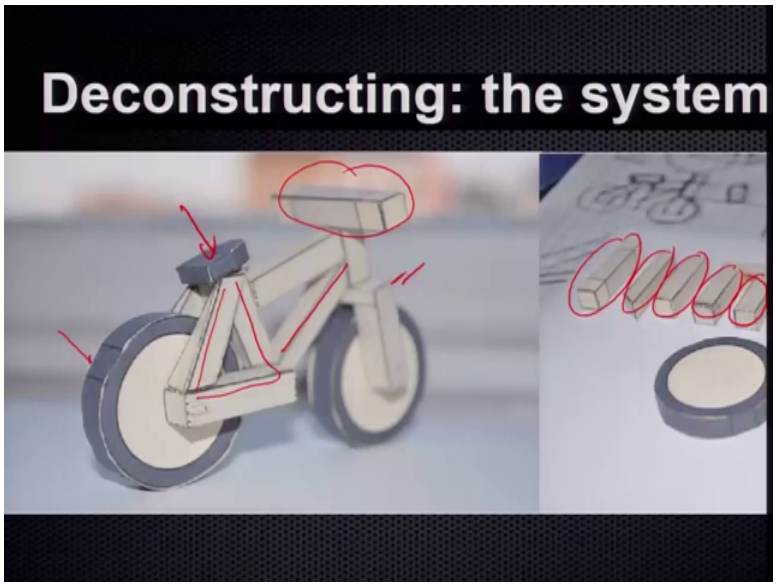

So, typically any prototyping would start with a sort of a deconstruction of the system particularly in terms of functions can be mapped what are the various parts related to a product. For example, if I am looking at a bike like this. I should be able to get a frame you know which is composed of different parts which are added together. There is a handle part. There is also this you know the support member, ok. Then, there are these wheels, there are seats

So, these are some of the parts that would come up to your mind the moment you start thinking of a bike. So, you have to somehow deconstruct the whole system into small you know subsystems, whenever we think about prototyping of something.

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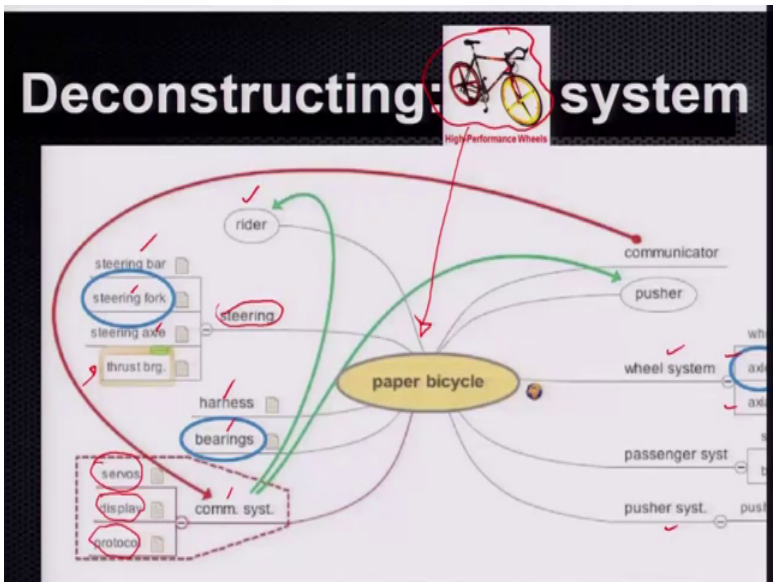

So, for example, in a bike you could think of different components. For example, there could be a harness, there could be bearings, there could be some communication system which is you know made up of again servers or some display units or some protocols, similarly steering system which would be made up of a bar steering fork, steering axle may be a thrust bearing, you know which helps the easy maneuverability of related to the system. Then, also there is a rider component for this bike or in fact, there is also sort of you can say a wheel system which would be comprised of an axle or let day an axial bearing and there could also be a pusher system.

So, in this manner you could kind of deconstruct whatever is there in a normal bike, and try to may be develop prototype of using a material which is not very conventional in biking may be use just paper to build up such a bike. So, this kind of whenever there is a prototyping activity deconstructing from whatever is existing and trying to do a functional mapping is very common place when we try to work or start working on prototypes.

So, I would like to sort of end this small module and prototyping here with the hope that you know in the next module, you would like to again look into a little more organized knowledge of about how to bring the design process through you know looking at the product architecture or product functionality or even the configuration aspects of a design.

So, for now thank you very much and goodbye.