Introduction to Biomimicry Shiva Subramaniam, Chief Innovation Officer Gopalakrishnan-Deshpande Centre for Innovation and Entrepreneurship Indian Institute of Technology - Madras

Lecture – 16 Recap of Week 2

Hi, we are on week 3 and what am I doing now? Now you must be familiar with what I am doing, right? I am doing what is called the recap of week 2. Now I know that you did important, rather we did important stuff in week 2. We did function and context and strategy. We did approaches to biomimicry. We looked at two types of approaches. One is nature-to-solution and problem-to-solution.

Nature approach is important because it helps you ask yourself how do I proceed with biomimicry, right? How do I, what do I do? So, an approach is like a direction, you get a direction to do something. And we learned through two approaches. One approach was nature-to-solution. What does it mean? It means that you look at nature and it gives you an idea, you know which is why one of the nice things about creativity is that you go to sleep with a problem in your head.

And when you go to sleep with a problem in your head and when you look at nature and something in nature strikes you light bulb sort of goes into your head and suddenly you say wait, the problem I was thinking of yesterday can be solved by this whatever I am seeing in nature. So, a nature solution means you have already got a problem somewhere in your head and when you look at nature, when you look at a lotus leaf or something like that, suddenly you get a solution.

So, the process of nature-to-solution starts with some observation, something in nature, and then it helps you solve a problem. So that is one direction for doing biomimicry for solving a problem. You also saw what is called problem-to-solution which is what most of our students, actually all our students have done- the problem-to-solution approach simply because of that brilliant thing you learned last time called the UN SDG.

Why is the UN SDG brilliant. It is brilliant simply because it gives you ready-made problems to solve. And why is that giving you readymade problems to solve nice? Because the problem with creativity and this is what is my experience in teaching and in doing creativity. The problem in creativity is not generating ideas, but in looking for problems. But when problems are given to you readymade, it helps you approach those problems, it helps you to start solving those problems.

We also learned that the emotional connect to a problem is important because emotional connect helps you be emotionally involved with the problem. Problems need that emotional involvement, otherwise you cannot solve the problem, right? We bring up our children because they are our children, right? We may want to care for neighbour's children and all that, but priority is our children because there is an emotional connection between us and the children. So, problems need that emotional connect. Why?

According to me the UN SDG is also important because it gives you a broader mindset. It helps you understand that you are part of this world and you can use the intelligence and experience and education to solve one of those problems. It is also useful for you to remember to put the UN SDG that you are solving into your CV. Why is that important? Because you see if I am interviewer if I am going to interview you and if in your CV you have told me that you are solving the gender equality problem.

I am going very impressed. Why? Because you know not every day do you meet a young person who is actually solving a world problem. And I am definitely going to employ you because what I want in my company is a problem solver. And what you have made me know about you is that you like to solve problems, you embrace problems, you do not run away from problems.

So, remember the UN SDG is a powerful way of expressing who you are and your attitude to problems. You also learned function, context, and strategy which is also important. When we do define we will learn how important it is to actually understand function, context, and strategy. So, these are all the things that you learned in week 2. You know this is important because now whatever you learn in week 3, you will be able to start to connect.