



**SNS COLLEGE OF TECHNOLOGY**

**(An Autonomous Institution)**

**Coimbatore – 35.**



**DEPARTMENT OF BIOMEDICAL ENGINEERING**

## **UNIT – 1**

### **DEFINE : EXAMINE AND REFLECT ON THE PROBLEM**

So, we are now going to be working on the Problem Discovery part. We start our journey of design thinking and people centered design and we begin with examining and reflecting on the problem. So, let us say you are given a particular problem to solve. What is the first that happens, that you do? Very common and very typical in a lot of situations, we tend to just jump into creating a solution and that solution is based on what we know, and what we think is the right solution, what we think is the problem and perhaps it is what we face as a problem in that situation.

So, in subpart 4 and 5, we are now going to be looking in to taking that problem and then examining and reflecting on it, reconsidering, looking at it from different directions, looking at it, you know, with a questioning mindset, with a wandering mindset and then,

after all that, arriving at the right problem to solve which may or may not be the problem that we began, with the problem that were perhaps given to solve.

# Examine the Problem

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What IS the problem?

Do we understand what the real problem is?

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So, first off is examining the problem. We look into what is the problem; do we understand what the real problem is, what is the deeper problem? Which is given to us sometimes maybe at a very surface level, very face value. Do we take it at face value and run with it or do we examine further and try and understand what the real problem is, what the deeper problem is?

## Reflect on the Problem

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What do we know about the problem?

What questions do we have about it?

And how could we be thinking about it?

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And then, we reflect on the problem, we try and introspect and look further out, what do we know about the problem, what questions do we have about it, what don't we understand, what are we wondering about and how could we be thinking about the problem? How could we perhaps broaden the whole thing, sometimes maybe perhaps narrow it, and then, think about the problem further. And through this reflection and this examination process, we come out perhaps, with a better problem statement. And by better problem statement, what I mean is, something that is perhaps closer to what the user needed. Aoweever, we doing this internally, we are doing this within the team.

## Example - What is the Real Problem?

Design a vase

I THINK this means.....

Design a  
container to put  
flowers?

Design an object  
that holds flowers  
together?

Design  
something that  
provides floral  
beauty?

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Vase  
example  
Marcelo  
Somes

So, let us look at an example of what is the real problem. So, let's say I ask you to design a vase, right. One of the first things and one of the most typical things is you will sit down with a pen and paper, perhaps draw an s shaped object, something that sits on a table and you will say here is my vase, right. Let us look at it a little differently now. Now if we examine this a little more, we say I think this means, perhaps I need to design a container to put flowers; a container could be anything, right. Then you think further and say, maybe perhaps it is about designing an object that holds flowers together, okay. Remember we're changing the perspective, the view a little bit every time. Perhaps we look at it some more, think about it some more and say maybe we should be designing something that provides floral beauty.

So, I am sure you can appreciate the difference that is happening as we go along this path, thinking about the vase and saying well, what does it really mean; that I need to design a container, an object that hold flowers together, design something that provides floral beauty. And then you might say, I wonder, now I wonder, I don't know whether maybe it could be something else.

## Example - What is the Real Problem?

I WONDER if it could mean.....

Design a way for  
people to enjoy  
flowers in their  
home?

Design a way for  
people to enjoy  
flowers?

Design a vase

Design a way for people to  
enjoy flowers in their home

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Vase  
example  
Marcelo  
Somers

So, this is the questioning kind of approach, the wondering, the thinking the deeper. the examining kind of approach that you go through. And now you say, how about maybe I should be designing a way for people to enjoy flowers in their home. I am sure you can see that starting with designing a vase, we have come to design a way for people to enjoy flowers in the home. If you take the second as the problem statement, it's very likely that it opens you up to think of very different possibilities for design, that it helps you think along a much broader prospective, perhaps come up with various solutions.

If you started out with designing a vase, probably it is limiting the solution, right. You might take this further and say, I wonder if could mean designing a way for people to enjoy flowers. It could be anywhere, it doesn't have to be their home, right. So, this is how we examine the problem, we introspect, we revisit it and we reflect on it and then try and figure out what is it that I should be designing, what is it that is the right thing to design, okay. So, this is how we go about this.

Reference:

<https://www.tasq.ai/glossary/weights/>