The Purpose of this essay is to compare and contrast “Design in Mind” and “Research in Design thinking”.

**Design in mind**

Design as a professional activity is a relatively recent trend. In everyday language ‘design’ refers to vast variety of activities; say electronic engineering to fashion and textiles. Design must not only express proper ideas and values but also be practical and workable. I am trying to understand design process through scientific investigation. Design requires having significant amounts of knowledge and it is a process that no one can be labeled as right or wrong.

There are various techniques to help us understand the design process:

1. Analyze task and propose logical structures and processes that we picture, should happen.
2. Observe designer at work
3. Make laboratory experiment on designers
4. Invite designers to express for us on what they do

In first approach many have projected design methods based on what they believe supposed to happen rather than any factual indication, and it was easily criticized as irreverent or unrealistic

Watching designers at work is not an admired technique; the reason is that designer external actions are not revealing their intellectual course of action.
It is also disgracefully complex to set up and manage without resorting to highly artificial laboratory atmosphere.

Reading what designer says about their design processes is also disappointing for several reasons. For instance they can communicate better through design, rather than explaining their designs. They also, have to sell their goods in the market and, consequently may not communicate their methods openly. Designers are also unexpectedly creative in imaging reasonable processes that led them to circumstances, when they like a solution.

So what should we do to investigate design process? We can discover through observation, that we might be able to get incite from experiments, and we are supposed to ask designers about their design methods any way.

Preceding writers on design processing intended to look at the process as a sequence of cognitive operations conducted entirely within one, brain.

Where do designers begin? What is their first step and why? If we ask this question from artists, they might find it odd and have no particular answer. It is now easy to see why sequential models of design have been unsuccessful. The design problems can be stated clearly but the solutions can be considered some how optimal. Large part of the business of designing involves finding problems and clarifying objectives then attempting to balance criteria for success, since they can not be stated broadly, they are not vulnerable to a method of through investigation.

The other question would be how do clients choose designers? To some extend they like the earlier designs. They have seen how some client have very clear vision about what they want the others may have no idea! So what is the relationship between architect and client? Is it like some one looking for help in a condition where many courses of actions are possible? Or it is infinite communication, certainly creative one.
Design is certainly an artistic production, but it is dangerous to mix it with art. Designers are artistic but not essentially as artists. Designing involves making something that must work in some way at the same time as expressing values and ideas.

**Research in design thinking**

Design is something that people do it and animals don’t do it. Some people are very good at design either, they are brilliant or they learned it through educational development. As a result a main part of design research should be on how do people Design?

Research methods

1. interview with designers
2. observations and case studies
3. protocol studies
4. reflection and theorizing

Therefore there are different methods of design, ranging from more conceptual to the more solid types of methodology.

Research results:

A. Problem Formulation

In designing the solution does not essentially coming from the problem, in fact the designer’s consideration of the two and understanding the two develops both problem and the solution. Or better say designers originate problems in terms of possible solutions and they use potential solutions to discover problems.

B. Solution Generation

Problem goals and constraints are not untouchable and designers exercise the freedom to adjust goals and constrains during solution creation as consideration of the problem develops.
C. Cognitive Strategies

The concerns are to formulate design problems in well-defined ways. It is intended to solve ill-defined problems. However designer’s cognitive strategies for problem solving are based upon their normal need to resolve ill-defined problems. In conclusion although there is a sensible history of research in design thinking at the moment we lack a successful simplifying pattern for design thinking.

“Design in mind” has been trying to explore design generally by looking at different designers and their patterns in design. However, “Research in Design thinking” has looked at design from different point of view, a designer as decision maker and problem solver or design, as finding problems and making decision to solve them. I think, to better understand design we should combine the two theories, and many more theories. Part of design is certainly finding problems and solving them but, that is not the entire story and by looking at work of various designers we would find another essentials in design thinking.

Finally I can say in both design types the disadvantage maybe, advantage was that you were not restricted to one answer. You would have different options and who would say which one is the best if there is any best after all. That may be why design thinking is so ambiguous, fascinating, complex, unordinary, artistic and, boundless. That may be why all the good designers are thinking ahead their time and make the novel designs and original concepts for living. That is how they happen to problem finder and decision maker: because they are not restricted to science, although they have great knowledge level; they break the science line and go beyond it. They see beyond time and science. They are up there on top of the universe; they are decision makers for our generation and the next generations to come.