**Week 3A &3B – Learning and its importance**

**Course Outcome**:

Apply various methods of learning and questioning including reversing technique for creativity and innovations.

**Reference Book**

“Zig Zag” book by Keith Sawyer (ISBN 978-1-118-2929770-4).

**Topics**

* Learning and its importance
* Sources of learning

**Learning Outcomes**

* Methods of learning by focused & relax modes
* You can learn anything by daily practice
* Internet sources for learning
* Importance of understanding oneself and being true to oneself during learning

**Week 3A Summary**

**Views of Education in India**

Current problems of school

1. Students lack motivation in school
2. Students have got habituated to memorize concepts by repeating them which is called Rote learning, so students are not emphasized on conceptual learning
3. The education system is completely exam oriented and hence students have less scope to showcase their creativity
4. Students are not trained to handle the failures and therefore they have the fear of failure.

**Creative Learning**

1. Creative learning uses the hierarchy of remembering, understanding, applying, analyzing, evaluating and creating the facts, rules, concepts, information and ideas.
2. Remembering: Describe, relate, tell, find
3. Understanding: Discuss, explain, outline, predict
4. Applying: Use, illustrate, complete, solve
5. Analyzing: Identify, compare, explain, categorize
6. Evaluating: Decide, prioritize, rate, justify
7. Creating: Create, imaging, design, plan

**Learning Practices**

1. To master the discipline of learning one should be interested in absorbing new information.
2. There are four learning practices:
   1. Practice deliberately
   2. Master your domain
   3. Learn forever
   4. Balance specialty with generality

**Practice Deliberately**

1. Gradually developing the skills from the beginning to become an expert: Concept of Flow
2. People who spend more time in flow are more creative
3. Creative learners always seek out new challenges and they work hard to improve their skills along the path to expertise
4. To solve a specific task its always better to break down a problem into smaller sub components and focus on each of them and finally fit the sub components into a larger context
5. Deliberate practice leads to greater creativity

**Master your domain**

1. For the one to become creative he has to learn awful lot about an area to get the knowledge
2. Formal schooling is required for creative mastery of a domain
3. Skilled teachers can keep the students in the flow zone
4. Creative learning results in deeper understanding which involves knowing how to think, reason, argue, how to explore further, asking questions and finding answers
5. Applying the knowledge to various different situations is important to build your adaptive expertise
6. Experts will know important domain related concepts and approaches. They can quickly access the knowledge for a creative solution

**Week 3B Summary**

**Learn forever**

Learning is a good practice to master any topic. For some people, few topics may be difficult to learn. However, by learning how to learn, this problem can be overcome. Barbara Oakley, in her video "Learning how to learn" video discusses this technique. She defines focused and diffused states of mind during learning to master any topic.

The more a person learns, there is an increased chance of making connections between topics. This leads to increased ability to solve problems of all kinds. The author of the book "Where Good Ideas Come From", Steven Johnson acknowledges this fact. He is of the opinion that "Chance favors the connected mind". Successful creators not only like knowledge, they thirst for it. It is advised to think beyond. Watch for ideas or approaches nobody is willing to touch. Always question the fundamental established truths. A learning approach always asking question "Why?" is needed.

Successful entrepreneurs worldwide, keep educating themselves. Successful people keep educating in their own way. Use every possible avenue to find knowledge. Some of the prominent ways to acquire knowledge is

* Do an internet search
* Read experts blogs and articles
* Surf through Wikipedia and search in MetaFilter
* Find an online education video or Ted Talk

MetaFilter is an online Question & Answer site and contains over a quarter million answers to questions in 20 categories. Members of this site ask questions, and other members of the site will answer. You can google MetaFilter to visit this site. Exceptional creators and learners will read books. Books can be read from library, internet or Google Books site. Successful people will make themselves aware of latest developments in their field. This can be achieved by scanning magazines, surfing web sites, attending local events or by asking questions to friends working in different fields. It is beneficial to get mentored by a senior whom you trust and respect.

**Balance specialty with generality**

In today's world filled with competition we see more and more specialization. It is necessary to be specialized in an area and also to balance specialty with generality. History has shown that, when people of different specializations work together, some notable innovations have been achieved. E.g. world's first surgical robot, AESOP came from a collaboration between a surgeon and a robotics expert. Successful creators are curious by nature.

To be successful creator branch out from your domain, to understand more about the problem you are solving. Spend some hour of day in learning something new. There are online free video lectures from leading institutes like Massachusetts Institute of Technology. Also you can take courses from Coursera(MIT Manipal has collaboration).