

## **“Research in Digital Age –Problems and Opportunities”**

by Mr. Dineshkumar Singh, Group leader –TCS Innovation lab-Mumbai  
on line lecture held on 10<sup>th</sup> October 2020, 11.00 Am

*During the webinar Mr. Dineshkumar Singh, shared his thoughts and experiences on “Research in Digital Age” In this talk Mr. Dineshkumar Singh explained the four key points of Research Journey . He also explained in detail how one should start his research journey. He further explained Problems and Opportunities in Research.*

### **Introduction**

Digital research is a rapidly growing area of development. Digital research, Internet research, online research, e-research and e-science are concepts often used interchangeably, although they are not identical. They all suggest the fast-developing and highly transformative role that information, communication and networking technologies plays in the conduct of scientific study and research. Mr. Dineshkumar Singh has given an insight on how one should start his research journey in today's digital era by giving the MANTRA of NEW ABCD theory. He also guided the audience with research areas, programs & opportunities. The talk was followed by engaging interactive Q & A Session. Some of the Key takeaways of the talk are as follow.

### **Five Digital Forces**

Five Digital forces which are changing the way companies operates and keeping the company relevant to its customers. le through **Mobility** –companies know a lot about their customers in real time. **Big Data helps** to make sense of both structured and unstructured stream of information. **Social Media**- provides insight into individual preferences without observer effect. **Cloud** puts formidable computing resources in hands of small companies with limited budget. **AI and Robotics**-foster automation with deep learning systems. It clearly indicates digital forces are eminent in research.

### **Research Journey**

There are four macro-level questions that need to be addressed during the research process: Where: Will the research have an impact? Who: might the research have an impact on? What: is the purpose of our research? What do we hope to achieve? How: is the research bounded by time and space? In the research journey four stages of research play an important role ie Define the problem, finding the team, field experiments and publish & Monetize. This stages are merged together with New theory of ABCD where A – Analyse, B- Buddy , C- Chalo Field and D – Document . Every new researcher must be aware of this new ABCD.

### **Areas, Problems, Opportunities and Funding in Research**

Research methods are tightly linked with the types, traits and analysis of collected data. Digital research revolves around the terms such as ‘digital data’, ‘social data’ and ‘big data’ interchangeably. So our research spans the analysis of data in its many forms such as Text, image, video, speech and sensors along with research challenges like security, privacy optimization and contextual recommendation. Few areas where we can focus our research are: Genome annotation, Disease analysis, Machine vision and graphics ,Embedded security and privacy, also COVID-19 problems , it has created opportunities for research in various domain like AR/VR production visits, Advance remote monitoring, Improving containment efforts, Expanding medical training opportunities etc.

To promote good quality research there are various funding agencies government. or Non-government body providing monitory grants for scientific research and Technology. These agencies conduct research schemes to promote the research in India. TCS, also understand the importance of helping in the research process and to increase the talent base of researchers in India by providing funds through Research Scholar Program.