

Foreword

Scientific communication is one of the strong pillars of scientific research. Effective communication is a hallmark for scientific writing. It helps us in presenting our complex ideas in simple language with clarity and concision. The cycle of scientific communication consists of various stages, viz, production, transmission and advancement. Through thinking, experimenting, and researching, we produce knowledge, which then is passed on from generation to generation. As famously said by Sir Isaac Newton, “If I have seen further, it is by standing on the shoulders of giants”. Since then, and even before that, the academic and scientific writing has metamorphosed greatly. From hand copying the text, to development of printing press and then arrival of computers and Internet has transformed the field all together.

The third decade of the 21st Century has witnessed two major revolutions impacting education and learning: the 4th Industrial Revolution and the 4th Education Revolution (highlighted by Sir Anthony Seldon in his book by the same name). These two revolutions have necessitated an important role for all stakeholders in any educational system where we need to be a lifelong learner. For a lifelong learner, the static learning has to change to dynamic learning. Around two decades ago, David Nunan proposed five levels of fostering learner autonomy: awareness, intervention, involvement, creation and transcendence. This calls for such systems which support autonomous learner. Scientific communication is the key to autonomous learning systems.

Technological developments like Artificial Intelligence, Swarm Intelligence, Machine Learning and Quantum Technologies are already transforming education. Self-learning is one of the most crucial skills for being future ready. As the knowledge is going inter-disciplinary and cross-disciplinary, it is important to ponder over how to organise knowledge. Knowledge representation and knowledge organisation become a determining force for scientific writings and communication. A successful scientific communication depends upon how the message is delivered. It must clearly convey what the author wants to pass on to the readers. This brings in certain skill: the writing skills, communication skill, argumentation, critiques, composition, and expression. These call upon a great focus on Precision, Simplicity, Concision and

Fluidity. Any great research will not be impactful, unless it is published, which in turn depends upon good scientific writing. Effective knowledge organisation and in appropriate language brings its rewards.

The 4th Industrial Revolution technologies have resulted in big changes during the past few decades the way work and live. What is needed all the more importantly is the change in the way we write scientific papers. Scientific communication has been around for more than 300 years, but the pace in the number of scientific outputs increased post World War II. This has further been fuelled by introduction of digital technologies. These digital technologies changed the medium of content, nature of content and the outreach. Another development noted has been the rise of new publishing enterprises. With increasing number of publishable researches, such publishing enterprises enforced norms for quality publishing and standards. Roles and responsibilities of authors, editors and reviewers have been refined. Rigorous processes of quality check and ethical code of conduct for the scientific writing and publishable work have been put in place. A proper dissemination of a scientific work is an integral part of the research process, in the form of well communicated publication. The phrase ‘Publish or Perish’ coined by Coolidge in 1932 is a dilemma for every academic. It has long been an obligation for academics, for performance appraisals, and new career opportunities. Publishing is an important step for advancement of knowledge, what makes it crucial is to get published in good publications. The number of papers the journal and book editors receive is much higher and thus poorly written ones are filtered out by them in the initial stage. Those who pass this stage are then subjected to blind or peer review process to sort out the best among the equals. This is certainly a challenge for everyone: authors, editors, and reviewers.

Here’s the book to which covers the ABC of scientific communication (accuracy, brevity and clarity). The book covers interesting, timely and relevant topics ranging from applications to distance education, design thinking for online learning to applications of artificial intelligence. It covers storytelling, animation, digital awareness, digital competence, digital fluency, student satisfaction in web-based distance learning programs, social responsibility for basic health knowledge, educational videos, learning communities, visual communication, problem-based learning, and how to produce error-free scientific research articles.

The editors have done an excellent job in this volume, I congratulate them and the authors of various chapters. This book would be a great treasure for those who wish to learn the art and science of scientific communication.

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