

# 20 Open Research: A Transformative Way Towards Collaboration, Sharing and Dissemination of Knowledge

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*In the long history of humankind (and animal kind too) those who learned to collaborate and improvise most effectively have prevailed.*

Charles Darwin

The true purpose of an education is to enhance the self-worth, dignity, and satisfaction of an individual through attainment and dissemination of knowledge. The Internet is the most ingenious and innovative technology of the present era. It has paved the way for knowledge sharing through open research. An open research can be defined as a research work which is ubiquitously accessible to everyone. The work published under open access policy can be re-used with proper citation as well as accreditation of accessed literature. Open research exterminates various barriers such as subscriptions, price per article, licensing fees, and permissions. There are numerous benefits of open research as depicted below.

## 1. Improved Citation of Research Work

The statistical findings depicted in the report published on Nature Communications [1] illustrate that open access documents are referred and cited thrice more than access controlled research papers. Thus, open research expands the reach as well as recognition of work. Enhanced citations and recognition given to distinctive research endeavors are decisive for the establishment of authors as experts in their respective fields.

## 2. Enhancement of Interdisciplinary Sharing and Research Endeavors

The evolution of technology has crossed the barrier of an explicit field. Open research is the significant factor behind interdisciplinary research endeavors as it broadens the horizons of knowledge sharing. Literature with constrained, paid, or subscribed access imposes the limit on interdisciplinary studies and resourceful knowledge exploration. Open access facilitates collaborative learning and research in multidisciplinary areas. Smart grid research can serve as the best example of interdisciplinary and collaborative research outcome of the present era.

### **3. Improved Public Access and Engagement**

Open research expedites and broadens the span of dissemination of facts and results. Some research results and investigations are of global public interest. For example, sharing of the research results conducted to find out adverse effects of the mobile phone as well as base station radiations is imperative to educate the citizens. Research in medical as well as paramedical fields plays a crucial role in information sharing and prevention of diseases.

### **4. Crossing the Barriers of Place, Time and Currency**

The Internet is the most radical invention of present era as it ubiquitously and instantly serves the plethora of information beyond the constraints of time and place. Open research is beneficial for developing countries as they can access the most contemporary and cutting edge innovations of the developed countries without the barriers of place, time and currency. The major issue of affordability of literature subscription being faced by countries with weaker currencies can be resolved through open access.

### **5. Improved Education, Research, and Development**

An education is inevitable for knowledge, survival, and growth. Information and communication technology has transformed the teaching-learning process but still, an education system is perceived as a tool to earn a certain qualification. An open research can expand and ignite the intellect of students beyond the four walls of classrooms and limited curriculum. Moreover, the qualities required for research and development can be instigated in the students at the early stage of education through open research. This can pave the path for students to build upon an existing knowledge.

### **6. Cross-Cultural Studies through Open Research**

The universe can be observed in terms of profound diversities and cultural inequalities. In the present era, the world is facing challenges of multifaceted distinctiveness emerged due to complex dissimilarities in gender, culture, economy, and environment. Open research fosters rigorous study and transformative exchange between communities from diverse cultures and identities in the areas of science, arts, and humanities.

## **7. Covenant with Open Research/Access Directives**

Creative common licenses foster legitimate and methodical sharing of the research documents. These licenses facilitate reuse, sharing, adaptation, modification, and distribution of creative work. An author can opt between CC BY, CC BY-SA, CC BY-ND, CC BY-NC-SA and CC BY-NC-ND licenses. CC-BY licenses are technologically extensive, uncomplicated, neutral and balanced as an issue of orphaned work is completely eradicated.

## **8. Bridging the Gap between Local and Global Research**

Open research promotes universal sharing of findings through the World Wide Web. Dissemination of facts and findings can be achieved through self-archiving, institutional repositories, and open access journals. Open research eliminates the gap between local and universal research which arises especially in developing countries due to affordability and funding issues. Moreover, open research also fosters an integration between local and global research.

## **9. Open Research for Addressing Health, Environmental and Technological Issues**

Several countries around the world are facing crucial issues pertaining to health and environment. Best practices can be adopted from dissemination of information through open research to address the issues related to health and ecology. Developing countries can be technologically uplifted through unobstructed access to research literature. The critical issues can be addressed through the dissemination of research results to various stakeholders such as policymakers, researchers, students, and masses.

## **10. Open Research for Eradication of Poverty and Malnutrition**

Open research significantly influences living of people and aids to make this world a better place. Prof. Mary Abukutsa-Onyango has identified six nutritious African vegetables that can be grown in local weather conditions in a home garden [2]. Dissemination of this kind of research can be a boon to eradicate malnourishment and poverty in African countries.

## **11. Open Research for Grassroots**

The Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI) [3] is an example of open research for Grassroots in India. This organization fosters conservation of biodiversity and culture through research

and innovations. The contributors of this research organization include students, teachers, scientists, farmers, clay craftsman and physically challenged person. This organization has transformed the perspective of research in the society as some of the innovations are accomplished by amateur, unschooled, and unaided researchers.

## 12. Open Research and Government Funding

Government-funded research must be made publicly available for the service of the community. The research grants of government-funded research projects are provided through taxes from citizens and thus dissemination of such research results is the greatest onus of giving back to society. Open research is inevitable for evolution and sustainability. Dissemination of information beyond social, financial, educational, and geographical barriers is essential for progression of humanity. Dissemination of knowledge through open research leads towards the greatest sense of gratification and sustainable development of civilisation.

## References

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