



# **INFORMATION & COMMUNICATION TECHNOLOGY IN EDUCATION**

(An Edited book for UG & PG  
Students of Education)

Edited By  
**Dr. Venkateswar Meher**  
**Dr. Rajkumari Singh**  
**Dr. Pradeep Kumar Tiwari**



# Information and Communication Technology in Education

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First Edition

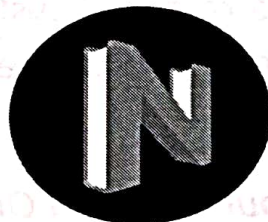


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*Presented to  
Prof. R.K. Singh  
[Signature]*

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**Information and Communication  
Technology in Education**

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# Dedication

This book is dedicated to almighty Lord Ganesha and Maa Saraswati.



# Preface

Information and Communication Technology (ICT) is a discipline that uses various forms of technologies to create, display, store, transmit, process, share, or exchange information. Hence, ICT is all about creating and communicating information via the use of various forms of technologies. Due to its enormous uses, it covers nearly the whole world and has revolutionised the same. ICT resulted in innovations and thus bringing about drastic changes in nearly every field. The use of ICT leads to effectiveness in the working of every field including education.

ICT in education means the use of various technologies, tools, and resources in education. It involves trained personnel who can transmit information effectively. With the use of ICT, the education sector can deal with many challenges leading to effective teaching and learning. In fact, after the COVID era, ICT has become a core in teaching and learning and gained its importance to a great extent. It has also evolved online learning which aids in the transmission of education worldwide and in remote areas thus making education accessible to all and leading to development. The use of these tools increases transparency in the system of education and strengthens its rules, policies, and laws. This aids in the evaluation of the behaviour of students and analysing their performance of students.

The use of ICT and its tools lead to the development and enhancement of teaching and learning. It enhances learning by making the concepts understand easily and effectively and acquiring skills. Also, it promotes the reasoning and thinking skills of the learners. Not only this it also fosters children to learn collaboratively thus developing communication and language. It develops the interest of the



learner towards learning and consequently their maximum participation in gaining knowledge and thus fostering knowledge through fun and creativity too. Due to its enormous application ICT has now been a part of the education curriculum.

Through this book, an attempt has been made to introduce the readers to this concept of ICT, its relevance as well as the various challenges faced during the integration of ICT with that education. It covers the online platform that exists today which makes education accessible and affordable to all. The book talks about the major software applications that are being used regularly and without which the work of enriching education or any other field would not have been possible. In addition to this, it assists the readers in gaining the knowledge of various subject and assessment tools of ICT that helps in making teaching and learning effectively. The book helps the readers in enriching their knowledge about the use of web browsers, search engines, Web 2.0 tools, e-library, infolibnet, e-journal, etc.

Thus, the book will be beneficial for both teachers and students. It will make teachers aware of how ICT enhances teaching and the various tools that existed to do so. Also, the readers will be able to know about various platforms that are important for quality learning.

Dr. Venkateswar Meher

Dr. Rajkumari Singh

Dr. Pradeep Kumar Tiwari

# Foreword



This book is based on the application of ICT in the field of Education. After reviewing the book, I can say that this book is clear, concise, and well-written. It can be said that the book titled '*ICT in Education*' covers all the major, essential and alarming topics. The book consists of topics that will take the reader from simple to complex and advanced levels. Sufficient information is given about every topic aided by the images, charts, and tables which makes the information easy to understand. Through this book, the author introduces the readers to technology that exists today and how this technology has enhanced the field of education. It gives detailed information about online services that exist today and the way it is capable of enriching learning and teaching. Overall, this is a high-quality book that has implications for education in many ways. I must congratulate all the editors and authors for such great academic work to enhance quality education.

Best Wishes.

A stylized, handwritten signature in black ink.

**Dr. Mpuangnan Kofi Nkonkonya**  
DEPARTMENT OF EDUCATION  
MAMPONG TECHNICAL COLLEGE OF EDUCATION  
GHANA



# Acknowledgements

First and foremost, we bow in reverence before the divine spirit mystery of the universe, the Almighty God for the wonderful blessings bestowed on us abundantly while making this book.

It is indeed our honour for us to express our sincere gratitude from the inner core of our hearts to the esteemed Rajeev Kothiwal, Chancellor of IFTM University, Abhinav Kothiwal, Pro-Chancellor, Prof. M. P. Pandey, Hon'ble Vice Chancellor, Prof. Rahul Kumar Mishra, Pro Vice Chancellor, Prof. Sanjeev Agrawal, Registrar, Prof. Vaibhav Trivedi, Director, HR of IFTM University, Moradabad and other authorities who continuously support, guide, encourage and motivate us for the initiation, execution and successful completion of this whole academic piece of writing.

A special thanks to Dr. Kofi for giving his valuable time in giving reviews for the book which helped in improving the presentation. A sincere appreciation to all the authors for their academic contributions to book chapters without which it would not have been successful.

We are thankful to Notion Press Publisher, Tamilnadu for their efforts in publishing this book. We also thank all the readers of the book, and we hope that this book will enhance the knowledge of the readers about the use of ICT in education.

**Best Regards**

Dr. V. Meher

Dr. R. Singh

Dr. P. K. Tiwari



# About the Editors



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# Costs and Benefits Analysis of College Education

*Rajkumari*

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**COSTS AND BENEFITS ANALYSIS  
OF  
COLLEGE EDUCATION IN THE  
MEERUT UNIVERSITY**

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## PREFACE

Education is one of the biggest enterprises of modern times. Like other productive sectors of Economy, Education makes its claim on a nation scarce resources. Higher Education in recent decades has had an unprecadented expansion qualititative and quantitative which calls for large funds. How far India will be able to expend so such money on Higher Education requires thinking about likely benefits.

The present study through a light on the various aspects of Economics of Education. How far this Industries of Education can serve the annals of society, is the sole pursuit of the Investigator.

During the course of my work, I have received love, guidance and cooperation in abundant. I am very much indebted to my supervisor Dr. S. K. Das Gupta, a known scholar and true researcher, Professor and Head of the Department of Education, Meerut College, Meerut, who spared his valuable time out of his academic pursuits to show me the path in the stormy sea like a light house. I wish to express my deep sense of gratitude to Mrs. S. K. Das Gupta.

I am also grateful to my principal Smt. Bimla Devi Gupta for her generosity in providing the leave during the course of present study.

My thanks are due to my younger brothers, K. P. Singh and I. P. Singh without their help in collecting scoring and tabulating the data, this work would not have been completed.

I will be failing in my duty if I do not my thanks to my husband Mr. Udaipal who was Instrumental for getting the present work published.

—Mrs. Raj Kumari

16 January, 1986  
GHAZIABAD.



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