

1. Record Nr.	UNINA9910725084703321
Autore	Murthy D. N. P
Titolo	Education and Research for the Future : Engineering as an Illustrative Case // by D. N. P. Murthy, N. W. Page
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2023
ISBN	9783031296857 9783031296840
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (391 pages)
Altri autori (Persone)	PageN. W
Disciplina	370.1
Soggetti	Schools Education Education—Philosophy Technical education Education—History Research—Methodology School and Schooling Philosophy of Education Engineering and Technology Education History of Education Research Skills Educació STEM Enginyeria Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1: An Overview -- Chapter 2: Knowledge -- Chapter 3: Community and Society -- Chapter 4: Culture -- Chapter 5: Nature and Science -- Chapter 6: Technology -- Chapter 7: Engineering and Engineers -- Chapter 8: Academic Disciplines -- Chapter 9: Problem Solving and Mathematical Modelling -- Chapter 10: Skills -- Chapter 11 Education -- Chapter 12: History of Education -- Chapter 13: Engineering Education and its History -- Chapter 14: Education for the Future -- Chapter 15: Undergraduate Engineering Education for the

Future -- Chapter 16: Postgraduate Engineering Education for the Future -- Chapter 17: Research -- Chapter 18: Research Education -- Chapter 19: Communicating Research Outcomes -- 20: Engineering Research -- Chapter 21: Education and Quality -- Chapter 22: Research and Quality -- Chapter 23: The Changes Needed.

Sommario/riassunto

This book takes a fresh look at the fundamental character of education, its history, interaction with society, purpose, changing focus over time and interactions with technology. It surveys the role of research in increasing the body of knowledge leading to new technologies that have helped serve the needs of humankind. In our lifetime there have been profound changes to the world we live in; the technologies used, the problems we struggle with, and the education systems intended to prepare this and following generations for the future. Many of the problems we face now are more complex than in earlier times, requiring broadly based approaches our traditional silo specialisations are ill-prepared to deal with. They involve technologies whose range of positive and negative effects are not well understood. Many of these problems are global in nature and can no longer be treated just as local issues. Our current approach to education does not adequately prepare us to tackle these problems. New approaches to education are needed to prepare us for the changes that are to come. The future of our planet, our civilisation, our community and our economy depend on it. This book proposes changes that will better prepare us for this future.
