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KEY=ELECTRICAL - LUCAS MCNEIL

ENGINEERING

ISSUES, CHALLENGES AND OPPORTUNITIES FOR DEVELOPMENT

UNESCO *This report reviews engineering's importance to human, economic, social and cultural development and in addressing the UN Millennium Development Goals. Engineering tends to be viewed as a national issue, but engineering knowledge, companies, conferences and journals, all demonstrate that it is as international as science. The report reviews the role of engineering in development, and covers issues including poverty reduction, sustainable development, climate change mitigation and adaptation. It presents the various fields of engineering around the world and is intended to identify issues and challenges facing engineering, promote better understanding of engineering and its role, and highlight ways of making engineering more attractive to young people, especially women.--Publisher's description.*

UNESCO SCIENCE REPORT

TOWARDS 2030

UNESCO Publishing *There are fewer grounds today than in the past to deplore a North-South divide in research and innovation. This is one of the key findings of the UNESCO Science Report: towards 2030. A large number of countries are now incorporating science, technology and innovation in their national development agenda, in order to make their economies less reliant on raw materials and more rooted in knowledge. Most research and development (R&D) is taking place in high-income countries, but innovation of some kind is now occurring across the full spectrum of income levels according to the first survey of manufacturing companies in 65 countries conducted by the UNESCO Institute for Statistics and summarized in this report. For many lower-income countries, sustainable development has become an integral part of their national development plans for the next 10–20 years. Among higher-income countries, a firm commitment to sustainable development is often coupled with the desire to maintain competitiveness in global markets that are increasingly leaning towards 'green' technologies. The quest for clean energy and greater energy efficiency now figures among the research priorities of numerous countries. Written by more than 50 experts who are each covering the country or region from which they hail, the UNESCO Science Report: towards 2030 provides more country-level information than ever before. The trends and developments in science, technology and innovation policy and governance between 2009 and mid-2015 described here provide essential baseline information on the concerns and priorities of countries that could orient the implementation and drive the assessment of the 2030 Agenda for Sustainable Development in the years to come.*

MEASURING GENDER EQUALITY IN SCIENCE AND ENGINEERING

THE SAGA TOOLKIT

UNESCO Publishing

ENGINEERING FOR SUSTAINABLE DEVELOPMENT

UNESCO Publishing

UNESCO SCIENCE REPORT

THE RACE AGAINST TIME FOR SMARTER DEVELOPMENT

UNESCO Publishing

MALAWI

POVERTY REDUCTION STRATEGY PAPER

International Monetary Fund *The Malawi Growth and Development Strategy II (MGDS-II) is a poverty reduction strategy for the period 2006–11, which is aimed at fulfilling Malawi's future developmental aspiration—Vision 2020. The strategy identifies broad thematic areas and key priority areas to bring about sustained economic growth. A striking feature of this strategy is that the various governmental organizations, private sector, and general public are equal stakeholders. However, successful implementation of MGDS-*

II will largely depend on sound macroeconomic management and a stable political environment.

VISIONS AND CONCEPTS FOR EDUCATION 4.0

PROCEEDINGS OF THE 9TH INTERNATIONAL CONFERENCE ON INTERACTIVE COLLABORATIVE AND BLENDED LEARNING (ICBL2020)

Springer Nature *This book contains papers in the fields of Interactive, Collaborative, and Blended Learning; Technology-Supported Learning; Education 4.0; Pedagogical and Psychological Issues. With growing calls for affordable and quality education worldwide, we are currently witnessing a significant transformation in the development of post-secondary education and pedagogical practices. Higher education is undergoing innovative transformations to respond to our urgent needs. The change is hastened by the global pandemic that is currently underway. The 9th International Conference on Interactive, Collaborative, and Blended Learning: Visions and Concepts for Education 4.0 was conducted in an online format at McMaster University, Canada, from 14th to 15th October 2020, to deliberate and share the innovations and strategies. This conference's main objectives were to discuss guidelines and new concepts for engineering education in higher education institutions, including emerging technologies in learning; to debate new conference format in worldwide pandemic and post-pandemic conditions; and to discuss new technology-based tools and resources that drive the education in non-traditional ways such as Education 4.0. Since its beginning in 2007, this conference is devoted to new learning approaches with a focus on applications and experiences in the fields of interactive, collaborative, and blended learning and related new technologies. Currently, the ICBL conferences are forums to exchange recent trends, research findings, and disseminate practical experiences in collaborative and blended learning, and engineering pedagogy. The conference bridges the gap between 'pure' scientific research and the everyday work of educators. Interested readership includes policymakers, academics, educators, researchers in pedagogy and learning theory, school teachers, industry-centric educators, continuing education practitioners, etc.*

TECHNOLOGY, SUSTAINABILITY AND EDUCATIONAL INNOVATION (TSIE)

Springer Nature *This book presents the proceedings of International Conference on Knowledge Society: Technology, Sustainability and Educational Innovation (TSIE 2019). The conference, which was held at UTN in Ibarra, Ecuador, on 3–5 July 2019, allowed participants and speakers to share their research and findings on emerging and innovative global issues. The conference was organized in collaboration with a number of research groups: Group for the Scientific Research Network (e-CIER); Research Group in Educational Innovation and Technology, University of Salamanca, Spain(GITE-USAL); International Research Group for Heritage and Sustainability (GIIPS), and the Social Science Research Group (GICS). In addition, it had the endorsement of the RedCLARA, e-science, Fidal Foundation, Red CEDIA, IEEE, Microsoft, Business IT, Adobe, and Argo Systems. The term "knowledge society" can be understood as the management, understanding and co-creation of knowledge oriented toward the sustainable development and positive transformation of society. In this context and on the occasion of the XXXIII anniversary of the Universidad Técnica del Norte (UTN), the Postgraduate Institute through its Master of Technology and Educational Innovation held the I International Congress on Knowledge Society: Technology, Sustainability and Educational Innovation – TSIE 2019, which brought together educators, researchers, academics, students, managers, and professionals, from both the public and private sectors to share knowledge and technological developments. The book covers the following topics: 1. curriculum, technology and educational innovation; 2. media and education; 3. applied computing; 4. educational robotics. 5. technology, culture, heritage, and tourism development perspectives; and 6. biodiversity and sustainability.*

MAJOR CHALLENGES FACING HIGHER EDUCATION IN THE ARAB WORLD: QUALITY ASSURANCE AND RELEVANCE

Springer *This book focuses on two crucial issues that need to be addressed as a matter of urgency by universities in the Arab region, namely (a) conducting independent assessments of the quality of their teaching, research, administration, governance, and planning; and (b) determining the relevance of their teaching, research, and societal impacts. Although well-established around the world in manufacturing industries and private-sector service industries, including the research and commercialisation arms of the major universities and research institutes, it is only in recent years that quality-assurance (QA) assessments have started to be applied to most aspects education. Several Arab universities are adopting various forms of QA but some variants are little more than bureaucratic "box-ticking" exercises with minimal commitment by staff to the ultimate aim of continuing self-improvement. This book will be of interest to senior management at faculty and departmental level and above in all Arab universities specifically, and more generally in Islamic institutions of higher education. Senior management in other universities, especially in the developing world will benefit from its analyses and recommendations.*

CONVERGING TECHNOLOGIES FOR IMPROVING HUMAN PERFORMANCE

NANOTECHNOLOGY, BIOTECHNOLOGY, INFORMATION TECHNOLOGY AND COGNITIVE SCIENCE

Springer Science & Business Media *M. C. Roco and W.S. Bainbridge In the early decades of the 21st century, concentrated efforts can unify science based on the unity of nature, thereby advancing the combination of nanotechnology, biotechnology, information technology, and new technologies based in cognitive science. With proper attention to ethical issues and societal needs, converging in human abilities, societal technologies could achieve a tremendous improvement outcomes, the nation's productivity, and the quality of life. This is a broad, cross cutting, emerging and timely opportunity of interest to individuals, society and humanity in the long term. The phrase "convergent technologies" refers to the synergistic combination of four major "NBIC" (nano-bio-info-cogno) provinces of science and technology, each of which is currently progressing at a rapid rate: (a) nanoscience and nanotechnology; (b) biotechnology and biomedicine, including genetic engineering; (c) information technology, including advanced computing and communications; (d) cognitive science, including cognitive neuroscience. Timely and Broad Opportunity. Convergence of diverse technologies is based on material unity at the nanoscale and on technology integration from that scale.*

EDUCATING ENGINEERS FOR FUTURE INDUSTRIAL REVOLUTIONS

PROCEEDINGS OF THE 23RD INTERNATIONAL CONFERENCE ON INTERACTIVE COLLABORATIVE LEARNING (ICL2020), VOLUME 2

Springer Nature *This book contains papers in the fields of engineering pedagogy education, public–private partnership and entrepreneurship education, research in engineering pedagogy, evaluation and outcomes assessment, Internet of Things & online laboratories, IT & knowledge management in education and real-world experiences. We are currently witnessing a significant transformation in the development of education and especially post-secondary education. To face these challenges, higher education has to find innovative ways to quickly respond to these new needs. There is also pressure by the new situation in regard to the Covid pandemic. These were the aims connected with the 23rd International Conference on Interactive Collaborative Learning (ICL2020), which was held online by University of Technology Tallinn, Estonia from 23 to 25 September 2020. Since its beginning in 1998, this conference is devoted to new approaches in learning with a focus on collaborative learning. Nowadays the ICL conferences are a forum of the exchange of relevant trends and research results as well as the presentation of practical experiences in Learning and Engineering Pedagogy. In this way, we try to bridge the gap between 'pure' scientific research and the everyday work of educators. Interested readership includes policymakers, academics, educators, researchers in pedagogy and learning theory, school teachers, learning industry, further and continuing education lecturers, etc.*

CRACKING THE CODE

GIRLS' AND WOMEN'S EDUCATION IN SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM)

UNESCO Publishing

SUCCESSFUL GLOBAL COLLABORATIONS IN HIGHER EDUCATION INSTITUTIONS

Springer *This open access book presents deep investigation to the manifold topics pertaining to global university collaboration. It outlines the strategies King Abdulaziz University has employed to rise in global rankings, and the reasons chosen to collaborate with other academic and research institutes. The environment in which universities currently exist is considered, and subsequently how an innovative culture might be established and maintained to enable global partnerships to be implemented and to succeed is discussed. The book provides an intense focus on why collaboration is a necessary ingredient for knowledge transfer and explains how to do it. The last part of the book considers how to sustain partnerships. This is because one of the challenges of global partnerships is not just setting them up, but also sustaining them.*

WHAT DO SCIENCE, TECHNOLOGY, AND INNOVATION MEAN FROM AFRICA?

MIT Press *Explorations of science, technology, and innovation in Africa not as the product of "technology transfer" from elsewhere but as the working of African knowledge. In the STI literature, Africa has often been regarded as a recipient of science, technology, and innovation rather than a maker of them. In this book, scholars from a range of disciplines show that STI in Africa is not merely the product of "technology transfer" from elsewhere but the working of African knowledge. Their contributions focus on African ways of looking, meaning-making, and creating. The chapter authors see Africans as intellectual agents whose perspectives constitute authoritative knowledge and whose strategic deployment of both endogenous and inbound things represents an African-centered notion of STI. "Things do not (always) mean the same from everywhere," observes Clapperton Chakanetsa Mavhunga, the volume's editor. Western, colonialist definitions of STI are not universalizable. The contributors discuss topics that include the trivialization of indigenous knowledge under colonialism; the creative labor of chimurenga, the transformation of everyday surroundings into military infrastructure; the role of enslaved Africans in America as innovators and synthesizers; the African ethos of "fixing"; the constitutive appropriation that makes mobile technologies African; and an African innovation strategy that builds on domestic capacities. The contributions describe an Africa that is creative, technological, and scientific, showing that African STI is the latest iteration of a long process of accumulative, multicultural knowledge production. Contributors Geri Augusto, Shadreck Chirikure, Chux Daniels, Ron Eglash, Ellen Foster, Garrick E. Louis, D. A. Masolo, Clapperton Chakanetsa Mavhunga, Neda Nazemi, Toluwalogo Odumosu, Katrien Pype, Scott Remer*

ADVANCES IN MATERIALS PROCESSING AND MANUFACTURING APPLICATIONS

PROCEEDINGS OF ICADMA 2020

Springer Nature *This book presents selected papers from the International Conference on Advances in Materials Processing and Manufacturing Applications (iCADMA 2020), held on November 5–6, 2020, at Malaviya National Institute of Technology, Jaipur, India. iCADMA 2020 proceedings is divided into four topical tracks – Advanced Materials, Materials Manufacturing and Processing, Engineering Optimization and Sustainable Development, and Tribology for Industrial Application.*

RISING TO THE CHALLENGE

U.S. INNOVATION POLICY FOR THE GLOBAL ECONOMY

National Academies Press *America's position as the source of much of the world's global innovation has been the foundation of its economic vitality and military power in the post-war. No longer is U.S. pre-eminence assured as a place to turn laboratory discoveries into new commercial products, companies, industries, and high-paying jobs. As the pillars of the U.S. innovation system erode through wavering financial and policy support, the rest of the world is racing to improve its capacity to generate new technologies and products, attract and grow existing industries, and build positions in the high technology industries of tomorrow. Rising to the*

Challenge: U.S. Innovation Policy for Global Economy emphasizes the importance of sustaining global leadership in the commercialization of innovation which is vital to America's security, its role as a world power, and the welfare of its people. The second decade of the 21st century is witnessing the rise of a global competition that is based on innovative advantage. To this end, both advanced as well as emerging nations are developing and pursuing policies and programs that are in many cases less constrained by ideological limitations on the role of government and the concept of free market economics. The rapid transformation of the global innovation landscape presents tremendous challenges as well as important opportunities for the United States. This report argues that far more vigorous attention be paid to capturing the outputs of innovation - the commercial products, the industries, and particularly high-quality jobs to restore full employment. America's economic and national security future depends on our succeeding in this endeavor.

THE 11TH INTERNATIONAL CONFERENCE ON EUROPEAN TRANSNATIONAL EDUCATIONAL (ICEUTE 2020)

Springer Nature *This book contains accepted papers presented at ICEUTE 2020 held in the beautiful and historic city of Burgos (Spain), in September 2020. The 11th International Conference on EUropean Transnational Education (ICEUTE 2020) has been a meeting point for people working on transnational education within Europe. It has provided a stimulating and fruitful forum for presenting and discussing the latest works and advances on transnational education within European countries. After a thorough peer-review process, the ICEUTE 2020 International Program Committee selected 44 papers which are published in these conference proceedings achieving an acceptance rate of 41%. Due to the COVID-19 outbreak, the ICEUTE 2020 edition was blended, combining on-site and on-line participation. In this relevant edition, a special emphasis was put on the organization of five special sessions related to relevant topics as Role of English in Transnational Education and Teacher Training, Personalization and ICT: a Path to Educational Inclusion, Innovation and Research Findings in Engineering Higher Education, Practical Implementations of Novel Initiatives, and Innovation in Computer Science Higher Education. The selection of papers was extremely rigorous in order to maintain the high quality of the conference, and we would like to thank the members of the Program Committees for their hard work in the reviewing process. This is a crucial process to the creation of a high standard conference, and the ICEUTE conference would not exist without their help.*

TRANSFORMING EDUCATION

THE POWER OF ICT POLICIES

UNESCO

HEALTH INFORMATION ON-LINE

MEASURING GENDER EQUALITY IN SCIENCE AND ENGINEERING

THE SAGA SURVEY OF DRIVERS AND BARRIERS TO CAREERS IN SCIENCE AND ENGINEERING

UNESCO Publishing

SHAPING THE FUTURE WE WANT

UN DECADE OF EDUCATION FOR SUSTAINABLE DEVELOPMENT; FINAL REPORT

UNESCO

SCIENCE & ENGINEERING INDICATORS

TECHNOLOGY AND VOCATIONAL EDUCATION FOR SUSTAINABLE DEVELOPMENT

EMPOWERING INDIVIDUALS FOR THE FUTURE

Springer Science & Business Media *Empowerment is the overarching idea used in this book. The term has a variety of meanings in different sociocultural and political contexts, including "self-strength, control, self-power, self-reliance, own choice, life of dignity in accordance with one's values, capable of fighting for one's rights, independence, own decision making, being free, awakening, and capability" (The World Bank, 2002, p. 10). However, the World Bank report observed that most definitions focus on issues of "gaining power and control over decisions and resources that determine the quality of one's life" (p. 10). This interpretation of empowerment provides a useful starting point for the development of the series of interconnected arguments explored here. Establishment of the basis for understanding, identifying and developing strategies through education necessary for individuals to be able to make choices that inf- ence the quality of their lives is the main aim of this book. There are a number of assumptions and boundaries that frame this analysis. First, the book focuses on "agents"; however, empowerment is often conceptualised in terms of relationships between agency and structure (e. g. , Alsop, Bertelsen, & H- land, 2006). Agency could be defined as "an actor's or group's ability to make purposeful choices – that is, the actor is able to envisage and purposively choose options" (p. 11).*

THE IMPACT OF DIGITAL INFRASTRUCTURE ON THE SUSTAINABLE DEVELOPMENT GOALS

A STUDY FOR SELECTED LATIN AMERICAN AND CARIBBEAN COUNTRIES

Inter-American Development Bank *This publication identifies the role of digital infrastructure in achieving the Sustainable Development Goals (SDGs)--including education, employment, agricultural sustainability, food security, and spatial inequality--in 12 countries in Latin America and the Caribbean. It identifies a gap between the outcomes achieved for each SDG in the countries*

studied and those achieved in OECD countries. Moreover, the region still has a long way to go to achieve the SDG targets set in the 2030 Agenda for Sustainable Development. The authors explain how investment in digital infrastructure can help close the gaps between the region and these two benchmarks (OECD countries and SDG targets). They also quantify the investment in telecom in the region between 2008 and 2017 and estimate what amount is still needed to help close these gaps.

HIGHER EDUCATION IN THE ERA OF THE FOURTH INDUSTRIAL REVOLUTION

Springer *This open access collection examines how higher education responds to the demands of the automation economy and the fourth industrial revolution. Considering significant trends in how people are learning, coupled with the ways in which different higher education institutions and education stakeholders are implementing adaptations, it looks at new programs and technological advances that are changing how and why we teach and learn. The book addresses trends in liberal arts integration of STEM innovations, the changing role of libraries in the digital age, global trends in youth mobility, and the development of lifelong learning programs. This is coupled with case study assessments of the various ways China, Singapore, South Africa and Costa Rica are preparing their populations for significant shifts in labour market demands – shifts that are already underway. Offering examples of new frameworks in which collaboration between government, industry, and higher education institutions can prevent lagging behind in this fast changing environment, this book is a key read for anyone wanting to understand how the world should respond to the radical technological shifts underway on the frontline of higher education.*

ENGINEERING EDUCATION

ACCREDITATION & GRADUATE GLOBAL MOBILITY

CRC Press *This book details the key concepts, objectives and processes relating to the professional accreditation of engineering bachelor (honours) degrees. The contemporary context of accreditation is examined in terms of the globalised nature of both the engineering profession and higher education. Examples of the processes relating to single and dual accreditation are provided, with examination of the Washington Accord and the requirements of the European Network for Accreditation of Engineering Education. Details are also provided as to how learning outcomes can be structured to demonstrate compliance with accreditation criteria. The final chapters deal briefly with quality assurance processes used in education and the current international quality ranking systems which exist. This book will provide the reader with a detailed examination of outcome based education within the context of Bachelor of Engineering (honours) degrees. A key feature of this book is the side-by-side comparison of different accreditation criteria and a thorough discussion of the relatively new phenomenon of dual accreditation. The book seeks to provide a very clear explanation and exploration of accreditation within the context of engineering education and will benefit those practitioners involved in the accreditation process.*

THE FOURTH INDUSTRIAL REVOLUTION

Currency *Between the 18th and 19th centuries, Britain experienced massive leaps in technological, scientific, and economical advancement*

COVID-19 AND EDUCATION IN ASIA AND THE PACIFIC

GUIDANCE NOTE

Asian Development Bank *This guidance note underscores the potential of education technology (EdTech) solutions in transforming learning, teaching, and training systems during and after the coronavirus disease (COVID-19) pandemic. Since the COVID-19 outbreak, governments have been coping with and responding to the challenges posed by the closure of education institutions while guidelines from international agencies seek to address the disruptions and responses. Drawing from and reinforcing the key principles of these courses of action, the guidance note also provides suggestions and pointers that stakeholders in developing countries can consider for a long-term road map to improve quality, relevance, and inclusion in education. It is one of a series produced by the Asian Development Bank for key sectors and thematic areas.*

GREENING TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING

A PRACTICAL GUIDE FOR INSTITUTIONS

UNESCO Publishing

ETHICAL ENGINEERING FOR INTERNATIONAL DEVELOPMENT AND ENVIRONMENTAL SUSTAINABILITY

Springer *Ensuring that their work has a positive influence on society is a responsibility and a privilege for engineers, but also a considerable challenge. This book addresses the ways in which engineers meet this challenge, working from the assumption that for a project to be truly ethical both the undertaking itself and its implementation must be ethically sound. The contributors discuss varied topics from an international and interdisciplinary perspective, including l robot ethics; l outer space; l international development; l internet privacy and security; l green branding; l arms conversion; l green employment; and l deliberate misinformation about climate change Important questions are answered, such as l what is meant by engineering ethics and its practical implications; l how decisions made by engineers in their working lives make an impact at the global as well as the local level; and l what ethics-related questions should be asked before making such decisions. Ethical Engineering for International Development and Environmental Sustainability will be a valuable resource for practising and student engineers as well as all who are interested in professional ethics, especially as it relates to engineering. Researchers and policy makers concerned with the effects of engineering decisions on environmental sustainability and international stability will find this book to be of special interest.*

SCIENCE, TECHNOLOGY AND GENDER

AN INTERNATIONAL REPORT

UNESCO *This publication examines the pressing needs to increase women's participation in S & T careers and enable the sex-disaggregated data collection that is needed for research and to raise public awareness of gender issues. Data and analysis provided by the UIS highlight the need for reinforced efforts at the national and international levels.--Publisher's description.*

THE NEW DEVELOPMENT OF TECHNOLOGY ENHANCED LEARNING

CONCEPT, RESEARCH AND BEST PRACTICES

Springer *The book addresses the main issues concerned with the new development of learning processes, innovative pedagogical changes, the effects of new technologies on education, future learning content, which aims to gather the newest concepts, research and best practices on the frontiers of technology enhanced learning from the aspects of learning, pedagogies and technologies in learning in order to draw a picture of technology enhanced learning in the near future. Some issues like "e-learning ... m-learning ... u-learning – innovative approaches," "the Framework and Method for Understanding the New Generation Students," "Context-aware Mobile Role Playing Game for Learning," " Pedagogical issues in content creation and use: IT literacy through Spoken Tutorials," "Supporting collaborative knowledge construction and discourse in the classroom," "Digital Systems for Hierarchical Open Access to Education," " Using Annotated Patient Records to Teach Clinical Reasoning to Undergraduate Students of Medicine," " Utilizing Cognitive Skills Ontology for Designing Personalized Learning Environments" and "Using Interactive Mobile Technologies to Develop Operating Room Technologies Competency" are discussed in separate chapters.*

UNDERSTANDING THE IMPACT OF ARTIFICIAL INTELLIGENCE ON SKILLS DEVELOPMENT

UNESCO Publishing

BUSINESS MANAGEMENT: AN INTRODUCTION

This compact, user-friendly book on business management training can easily be managed in one semester. It meets present day demands explaining all the basic concepts of the subject concisely and scientifically. Aspects for first-level training are discussed and assignments are given.

GENDER EQUITY IN STEM IN HIGHER EDUCATION

INTERNATIONAL PERSPECTIVES ON POLICY, INSTITUTIONAL CULTURE, AND INDIVIDUAL CHOICE

Routledge *This timely volume brings together a range of international scholars to analyse cultural, political, and individual factors which contribute to the continued global issue of female underrepresentation in STEM study and careers. Offering a comparative approach to examining gender equity in STEM fields across countries including the UK, Germany, the United States, Hong Kong, Taiwan, South Africa, and China, the volume provides a thematic breakdown of institutional trends and national policies that have successfully improved gender equity in STEM at institutions of higher education. Offering case studies that demonstrate how policies interact with changing social and cultural norms, and impact women's choices and experiences in relation to the uptake and continuation of STEM study at the undergraduate level, the volume highlights new directions for research and policy to promote gender equity in STEM at school, university, and career levels. Contributing to the United Nations' (UN) 2030 Agenda for Sustainable Development, this text will benefit researchers, academics, and educators with an interest in science education, higher education, and gender equity in STEM fields. The text will also support further discussion and reflection around multicultural education, educational policy and politics, and the sociology of education more broadly.*

INNOVATIVE STRATEGIES IN HIGHER EDUCATION FOR ACCELERATED HUMAN RESOURCE DEVELOPMENT IN SOUTH ASIA

NEPAL

Asian Development Bank *This publication is part of a series of six country reports on technical and vocational education and training (TVET) and higher education in Bangladesh, Nepal, and Sri Lanka. Each report presents current arrangements and initiatives in the respective country's skills development strategies. These are complemented by critical analyses to determine key issues, challenges, and opportunities for innovative strategies toward global competitiveness, increased productivity, and inclusive growth. The emphasis is to make skills training more relevant, efficient, and responsive to emerging domestic and international labor markets. The reports were finalized in 2013 under the Australian AID-supported Phase 1 of Subproject 11 (Innovative Strategies for Accelerated Human Resource Development) of Regional Technical Assistance 6337 (Development Partnership Program for South Asia).*

AI AND LEARNING SYSTEMS

INDUSTRIAL APPLICATIONS AND FUTURE DIRECTIONS

BoD – Books on Demand *Over the last few years, interest in the industrial applications of AI and learning systems has surged. This book covers the recent developments and provides a broad perspective of the key challenges that characterize the field of Industry 4.0 with a focus on applications of AI. The target audience for this book includes engineers involved in automation system design, operational planning, and decision support. Computer science practitioners and industrial automation platform developers will also benefit from the timely and accurate information provided in this work. The book is organized into two main sections comprising 12*

chapters overall: •Digital Platforms and Learning Systems •Industrial Applications of AI

POWERING A LEARNING SOCIETY DURING AN AGE OF DISRUPTION

Springer Nature *This open access book presents contemporary perspectives on the role of a learning society from the lens of leading practitioners, experts from universities, governments, and industry leaders. The think pieces argue for a learning society as a major driver of change with far-reaching influence on learning to serve the needs of economies and societies. The book is a testimonial to the importance of learning communities. It highlights the pivotal role that can be played by non-traditional actors such as city and urban planners, citizens, transport professionals, and technology companies. This collection seeks to contribute to the discourse on strengthening the fabric of a learning society crucial for future economic and social development, particularly in the aftermath of the coronavirus disease.*

ENCYCLOPEDIA OF EDUCATION AND INFORMATION TECHNOLOGIES

Springer *This encyclopedia aims to offer researchers an indication of the breadth and importance of information systems in education, including the way IT is being used, and could be used to enable learning and teaching. The encyclopedia covers all aspects of the interaction between education and information technologies, including IT in kindergartens, primary and secondary schools, universities, training colleges, industry training, distance education and further education. It also covers teaching and computing, the use of IT in many different subject areas, the use of IT in educational administration, and national policies of IT and education.*

OPEN DEVELOPMENT

NETWORKED INNOVATIONS IN INTERNATIONAL DEVELOPMENT

MIT Press *Experts explore current theory and practice in the application of digitally enabled open networked social models to international development. The emergence of open networked models made possible by digital technology has the potential to transform international development. Open network structures allow people to come together to share information, organize, and collaborate. Open development harnesses this power, to create new organizational forms and improve people's lives; it is not only an agenda for research and practice but also a statement about how to approach international development. In this volume, experts explore a variety of applications of openness, addressing challenges as well as opportunities. Open development requires new theoretical tools that focus on real world problems, consider a variety of solutions, and recognize the complexity of local contexts. After exploring the new theoretical terrain, the book describes a range of cases in which open models address such specific development issues as biotechnology research, improving education, and access to scholarly publications. Contributors then examine tensions between open models and existing structures, including struggles over privacy, intellectual property, and implementation. Finally, contributors offer broader conceptual perspectives, considering processes of social construction, knowledge management, and the role of individual intent in the development and outcomes of social models. Contributors Carla Bonina, Ineke Buskens, Leslie Chan, Abdallah Daar, Jeremy de Beer, Mark Graham, Eve Gray, Anita Gurumurthy, Havard Haarstad, Blane Harvey, Myra Khan, Melissa Loudon, Aaron K. Martin, Hassan Masum, Chidi Oguamanam, Katherine M. A. Reilly, Ulrike Rivett, Karl Schroeder, Parminder Jeet Singh, Matthew L. Smith, Marshall S. Smith Copublished with the International Development Research Centre of Canada (IDRC)*