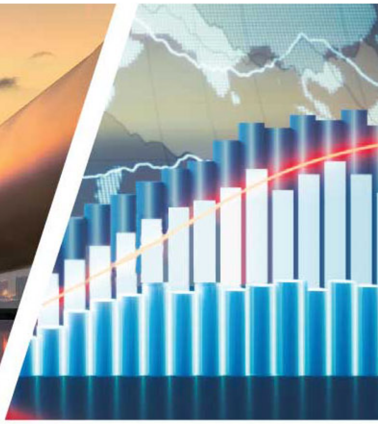
الجامعة العربية المفتوحة
Arab Open University
Sultanate of Oman



CO-CREATING THE POST COVID-19 WORLD
EXPLORING SUSTAINABLE PATHS

Editors
Dr. Mohammed Al Haziazi
Dr. Amer Al Hajri
Dr. Kabaly P Subramanian
Dr. Subrahmanian Muthuraman

General Supervision
Dr. Moosa bin Abdullah Al Kindi

الجامعة العربية المفتوحة
Arab Open University

ARAB OPEN UNIVERSITY
Sultanate of Oman

CO-CREATING THE POST COVID-19 WORLD
EXPLORING SUSTAINABLE PATHS

Editors

Dr. Mohammed Al Haziazi
Dr. Amer Al Hajri
Dr. Kabaly P Subramanian
Dr. Subrahmanian Muthuraman

General Supervision

Dr. Moosa bin Abdullah Al Kindi

Book Title
"Co-Creating the Post COVID-19 World
Exploring Sustainable Paths"

Editors
Dr. Mohammed Al Haziazi
Dr. Amer Al Hajri
Dr. Kabaly P Subramanian
Dr. Subrahmanian Muthuraman
Arab Open University, Muscat, Sultanate of Oman

General Supervision
Dr. Moosa bin Abdullah Al Kindi

Language & Volume
English
First Volume: January 2021

ISBN: 978-99969-838-0-1

The Chapter of the book are double-blind peer reviewed. The book is available for open access from www.aou.edu.om

Publisher
Arab Open University,
P.O. Box: 1596, Azaiba, P.C: 130, Sultanate of Oman
Website: www.aou.edu.om

الجامعة العربية المفتوحة
Arab Open University

ARAB OPEN UNIVERSITY
Sultanate of Oman

CO-CREATING THE POST COVID-19 WORLD
EXPLORING SUSTAINABLE PATHS

Editors

Dr. Mohammed Al Haziazi
Assistant Director for Academic Affairs, Arab Open University, Sultanate of Oman

Dr. Amer Al Hajri
Assistant Professor, Faculty of Business Studies, Arab Open University, Sultanate of Oman

Dr. Kabaly P Subramanian
Assistant Professor, Faculty of Business Studies, Arab Open University, Sultanate of Oman

Dr. Subrahmanian Muthuraman
Assistant Professor, Faculty of Business Studies, Arab Open University, Sultanate of Oman

General Supervision

Dr. Moosa bin Abdullah Al Kindi
Director, Arab Open University, Sultanate of Oman

His Majesty Sultan Haitham Bin Tariq

Sultan of Oman

His Majesty Sultan Qaboos Bin Said

Sultan of Oman - May Allah rest his soul in Peace

AOU VISION

A pioneering Arab Open University dedicated to building the science and knowledge society

AOU MISSION

Develop and disseminate knowledge and build expertise according to international quality standards without time or geographical barriers for the sake of contributing and preparing manpower for development needs, and to build science and knowledge society in the Arab countries

AOU VALUES

- Caring for students seeking knowledge
- Community service and social responsibility
- Lifelong learning
- Commitment to total quality standards
- Encouraging creativity
- Commitment to professionalism
- Belonging/Affiliation
- Teamwork
- Taking care of human resources
- Equity and equal opportunities
- Freedom of research and thinking

About AOU

The idea of establishing a non-profit Open University in the Arab world was initiated by HRH Prince Talal Bin Abdulaziz President of the Arab Gulf Development Programe (AGFUND). In 1996 HRH Prince Talal officially announced the concept of establishing the Arab Open University as a non-conventional academic institution and as a foundation which contributes to steering development in scientific, social and cultural spheres. This initiative developed to a full pledged Arab Open University in 2002 in a strategic partnership with the Open University in the United Kingdom. The AOU headquarter is located in the state of Kuwait. Today AOU has nine branches in Kuwait, Lebanon, Jordan, Saudi Arabia, Egypt, Bahrain, Oman, Sudan and Palestine.

The Open University is a world leader in modern blended learning and the pioneer of teaching and learning methods, which enable people to achieve their career and life goals through studying at times and in places convenient to them.

The OU works with other organizations in many ways, by providing courses, collaborating on new curriculum, validating programmes and sharing their expertise to help other blended learning ventures become a reality. AOU is a Partner Institution of the OU, delivering OU Validated Awards.

The OU validates undergraduate and postgraduate qualifications which are offered by the Faculties of Business Studies, Computer Studies, Language Studies and the Faculty of Education Studies. For those qualifications which are validated by the OU, successful students will receive a degree awarded by both the Arab OU and The Open University.


الجامعة العربية المفتوحة
Arab Open University

Reviewers

Dr. Valeria A. Frants, Associate Professor, Department of the Integrated Marketing Communications and Branding, School of Economics and Management, Ural Federal University Yekaterinburg, Russia

Dr. Eman Ahmed Farag, Assistant Professor of Accounting, Hull Business school, University of Hull, United Kingdom

Dr. Suvimon Punto, Assistant Professor, HRM program, Faculty of Business Administration, Phetchabun Rajabhat University, Government University, Thailand

Dr Darwin Joseph R, Senior Faculty, Business School, Management Development Institute of Singapore, Singapore

Dr Sulphey MM, Professor and Head, HRM Department, College of Business Administration, Prince Sattam Bin Abdulaziz University, Alkharj, Saudi Arabia

Prof. Ramanathan Ramanathan, program Leader, Melbourne Polytechnic, Preston Campus, Melbourne, Australia

Dr.Nirmal Raj, Professor & Head, Department of Management Studies, Savitha Engineering College, Saveetha University, India

Dr.Thresiamma Varghese, Assistant Professor, Faculty of Business, Sohar University, Sultanate of Oman

Dr. Valliappan Muthiah Chettiar, Assistant Professor & Head of Accounting Major, University of Technology & Applied Science, Nizwa, Sultanate of Oman

Dr. Balaji. S. K. Swaminathan, Business Administration Department, University of Technology & Applied Sciences, Ibri, Sultanate of Oman

Dr. Mohammed Al Haziazi, Associate Professor, Faculty of Business Studies, Arab Open University, Sultanate of Oman

Dr.Amer Al Hajri, Assistant Professor, Faculty of Business Studies, Arab Open University, Sultanate of Oman

Dr. Kabaly P Subramanian, Assistant Professor, Faculty of Business Studies, Arab Open University, Sultanate of Oman

Dr. Subrahmanian Muthuraman, Assistant Professor, Faculty of Business Studies, Arab Open University, Sultanate of Oman

Dr. Rengarajan Veerasamy, Faculty of Business Studies, Arab Open University, Sultanate of Oman

Acknowledgement

This book “Co-Creating the Post COVID-19 world: Exploring Sustainable Paths” is conceived as a knowledge production and dissemination project to provide insights into how organizations need to proactively co-create sustainable paths and respond to this crisis. This project would not have seen the light of day without the support of multiple stakeholders. We take this opportunity to express our gratitude to all those who have contributed and supported willingly and enormously to this book project.

We would like to record our gratitude to the Top Management AOU, Oman Dr. Moosa bin Abdullah Al Kindi, Director, Oman Branch, Dr. Mohammed Al Haziazi, Assistant Director for Academic Affairs, Oman Branch & Mr. Badar Al Busaidi, Assistant Director for Administration & Finance, Oman

We thank the Dr. Walid Aboraya, Research Director, Dr. Sherimon P.C, Head, Ethical Committee, Dr. Habib Beneltaif, PC, ELL, Dr. Alaa Ismaeel, PC, ITC, Dr. Nadar Shemy, PC, Education Studies, Dr. Baaziz Ali Bin Ali ALFakih, PC, Law, Dr. Aisha Al Darmaki, PC, General Studies, Ms. Shalini Narayan, PC, Foundation.

We record our sincere thanks and appreciation to Dr. Amer Al-Hajri, PC, Business Studies and the members of Faculty of Business Studies, AOU, Oman, Dr. Mohammed Al Haziazi, Dr. Kabaly P. Subramanian, Dr. Subrahmanian Muthuraman, Dr. Rengarajan Veerasamy, Ms. Afshan Younas, Mr. Syed Sadullah Hussainy, Mr. Nasser Al Yahyaei and Ms. Amani Al Balushi.

We thank for their continuous support Mr. Saif Al Kharusi, Head, Public Relation, Ms. Alya Al Salehi, Head, HR, Mr. Ahmed Al Brashdi, Head, Purchase, Ms. Khadija Al Ghassani, Head, Quality Assurance, Mr. Assad Al Ghafri, Head, Admission & Registration, Ms. Shabiba Al Sulaimani, Head, Student Affairs, Ms. Thuraiya al Hadhrami, Head I/C, Finance, Ms. Rahma Al Kharusi, Head, LRC, Mr. Muntasar Al Zakwani, Head, IT Support, Mr. Moosa Al Shuaily, Head, Training Unit.

We express our gratitude to The Research Council (TRC) and MoHE for their continuous motivation, encouragement and support to all our knowledge production and dissemination initiatives.

Our heartfelt thanks and appreciations to all the expert reviewers for their time and intellectual effort in reviewing the manuscripts and selecting the chapters for this book.

Finally, our sincere thanks to all the authors for their valuable contributions which made this project complete.

The Editors

Foreword

On behalf of Arab Open University, Oman I am delighted to present the first edition of "Exploring Sustainable Paths" which is an appreciable effort by Faculty of Business Studies, Arab Open University, Oman. Arab Open University, since its inception, believes in developing an ecosystem that promotes and nourishes intellectual pursuit, knowledge creation and dissemination through research, teaching and community extension activities like training and consulting.

Recently, COVID-19 has rapidly affected the economy, businesses, trade and movements and I n general how we go about our lives. This virus has created significant knock-on effect on the daily life of people as well as the global economy. Economic growth and development have suffered directly and indirectly. There is still a great deal of uncertainty about the impact of COVID-19 and countries are taking efforts to limit the pandemic's human and economic effects. The post pandemic future needs decisive actions to mitigate the risk and plan for rapid and sustainable recovery, as well as dealing with new and emerging realities.

The book "Co-Creating the Post COVID-19 world: Exploring Sustainable Paths" provides an insight into how organizations need to proactively co-create sustainable paths and respond to this crisis. All the sixteen chapters under the four sub themes Economy, Industry, Enterprises and Education are highly relevant and contemporary to the present context. I believe that this book will enrich the knowledge and ideas on how to find ways and means of exploring the sustainable paths for a better future. I hope that this book will become useful to academics and researchers in various fields.

I would like to commend the Faculty of Business Studies, at AOU Oman for taking up this initiative for the benefit of the society. I also commend the efforts taken by the editorial team and contributors for sharing their scholarly thoughts in this book. I wish the Faculty of Business Studies to move forward to many such initiatives in future.

Dr. Moosa bin Abudullah Al Kindi

Director, Arab Open University, Oman

Preface

The outbreak of COVID-19 has created significant knock-on effect on the daily life of people as well as the global economy. Economic growth and development pathway are subject to a shock that affect economy directly and indirectly. First time in the history, a health crisis has shut down the entire global economy. Every nation, economy, industry, business, and individual are to be mobilized into a rapid response and most comprehensive, rigorous and thorough measures to be adopted. As countries grapple with the human and economic costs of COVID-19, the pandemic is shifting the global landscape in many ways. We should stress with confidence and determination to triumph over the outbreak to minimize the impact in all the sectors. There needs an international coordination mechanism to manage the impact in all the sectors. In this context, Arab Open University planned to publish an edited book to bring all eminent scholars around the globe to discuss and deliberate their views on rediscovering, redesigning and reinventing the strategies to overcome this difficult situation faced by various industries.

The aim of this book "Co-Creating the Post COVID-19 world: Exploring Sustainable Paths" is to provide insights into how organizations need to proactively co-create sustainable paths and respond to this crisis. This book has been organized into four sub-themes, namely Economy, Industry, Enterprise and Education. The book consists of 16 chapters authored by 28 scholars, professionals and practitioners from various countries across the globe. This book consists of scientific papers, essays and opinions which can shape the thinking of the academics, students, professionals and practitioners. The papers were carefully selected after a double-blind peer review process. Our hope is that this book will kindle the thoughts and action by means of critical and theoretical reviews, research and practice of sailing through this unprecedented pandemic. The chapters of this book will be available for open access from the college website.

Arab Open University, as a part of its commitment to knowledge production and dissemination, encourages research initiatives and scholarly activities at the University. This research initiative is in response to the COVID-19 pandemic and to seek approaches to co-create sustainable paths in effective management of health, economic and social crisis. In this edited volume we tried to cover a range of issues related to the theme of this book which includes innovation, financial inclusion, economic development, sustainable marketing, corporate social responsibility, technology, customer experience, financial planning, entrepreneurship, employee engagement, digital transformation.

We express our thanks and appreciations to all the stakeholders of this book project who have contributed enormously to make this happen. We sincerely hope that this book will be a valuable addition to the growing literature and will be received well by the community.

The Editors

CONTENTS

About Editors

Dr. Mohammed Al-Haziazi is an Associate Professor at Faculty of Business Studies, Arab Open University, Oman. He holds Ph.D. in Public Administration / Personnel Management, HRM. He is presently the Assistant Director, Academics and Former Program Coordinator for BA & MBA Program, AOU, Oman Branch. He is a dedicated and experienced business management professional with proven success in managing team and encourage critical and high order thinking in a way that increases student performance. A highly passionate researcher in the field of Human Resource with 29 years of rich experience. His research interest lies at the intersection of Human Resource, Knowledge Management and Entrepreneurship. He has attended and presented his research in several International Conferences. He has published several articles in national and international refereed journals. He is acting as external examiner for MA program of universities in Oman. He is a member of the American Society of Public Administration and Arab Management Association.

alhaziazi@aou.edu.om

Dr. Amer Al Hajri is an Assistant Professor at Faculty of Business Studies, Arab Open University, Oman. He holds Ph.D. in Economics from University of Sheffield, UK. He is presently the Program Coordinator for BA & MBA Program at AOU, Oman Branch. Prior to AOU he worked as Director of Information and Documentation Centre Development Council, Ministry of Development, Oman and Director of several departments (Scholarships, planning, and research) at the Ministry of Higher Education, Oman. He was a senior lecturer at the College of Banking and Financial Studies, Oman, and also served as Pro-Vice Chancellor for Administration and Finance, Sohar University, Oman. He has served as Economic Researcher and Planner, The Development Council, Oman. He was the Project Coordinator, Muscat University Project, Oman and Project Director, Sharqiya University Project, Oman. He regularly participating in professional development programs. He is the member of board of Oman Economic Association and Royal Economic Society, UK.

amer.alhajri@aou.edu.om

Dr. Kabaly P Subramanian is an Assistant Professor at Faculty of Business Studies-MBA Program, Arab Open University, Oman. He holds MBA and PhD in Management. He is a member of British Academy of Management (UK). His Research interests lies at the intersection of Business Strategy, Business Innovation and Digital Transformation of Businesses. Dr. Kabaly has published in indexed journals and conferences. He has attended and presented his research in several International Conferences and Journals around the world including US and UK. Dr. Kabaly is presently leading a team of researchers in investigating Digital Transformation of Higher Education Institutions, funded by The Research Council, Oman. He is in the Editorial board of several academic research journals. Dr. Kabaly P Subramanian has trained more than 1000 Business Professionals. Presently he is consulting a large corporate in Oman on their Business Strategy and Digital Transformation Strategy.

kabaly@aou.edu.om

Dr. Subrahmanian Muthuraman is an Assistant Professor in the Faculty of Business Studies at Arab Open University, Sultanate of Oman. With over two decades of experience offers a blend of teaching, research, and training. His research interest lies in the broad areas of Marketing, Entrepreneurship, Education, and Digitalization. He has authored numerous highly cited journal publications, conference articles, and book chapters in the aforementioned topics. He has authored and edited 11 books including “Compensation & Reward Management” and “Training & Development – Theory & Practice”. He is currently engaged with two funded projects by TRC, Oman on SME & Digital HR. He has membership in several professional societies around the globe. He is the recipient of “Global Knowledge Management Researcher Award” in 28th World HRD Congress. He serves on editorial boards & reviewer of several journals. He has given numerous invited talks on various platforms

subrahmanian.m@aou.edu.om

ABOUT CONTRIBUTORS

Dr. Abul Bashar Bhuiyan is Associate Professor at Faculty of Business and Accountancy (FBA), University of Selangor (UNISEL), Selangor, Malaysia. He is working as academic researcher, supervisor as well as teaching the postgraduate students in the different leading reputed Malaysian academic institutions, especially as a Graduate Research Assistant (GRA) at the National University of Malaysia (UKM), Senior Lecturer at the University Malaysia Perlis (UniMAP) and Senior Lecturer at the University Utara Malaysia (UUM). He completed his Ph.D. degree in Microfinance and Sustainable Livelihood in 2012 from the Institute for Environment and Development (LESTARI), National University of Malaysia (UKM), Malaysia. He is supervising Ph.D. and master's postgraduate student. There are more than 75 articles presented and published in refereed journals and indexed conferences proceedings as well as chapters in books in the related field of research

bashariuk@gmail.com

Afshan Younas is Lecturer in the Faculty of Business Studies at Arab Open university, Oman Branch accredited by UK Open University. She is the General Course Coordinator for accounting courses and teaching accounting, management, and economics courses. She has a broad 16 years career in teaching at college and university level. She is professionally qualified, dedicated and highly motivated Lecturer with expertise in the areas of Finance, Accounting, Economics, Management, HR & Business. She is pursuing her PhD in corporate governance from Universiti Selangor, Malaysia. She completed her two masters, MBA in Finance (with distinction) and MSC in Economics from Pakistan. She is energetic to pursue research in the field of accounting & finance. She has published research papers in accounting and attended several conferences, seminars and workshops as organizer and presenter.

afshan@aou.edu.om

Amani Al Balushi is the Faculty member of Business Program, Arab Open University- Oman Branch. Holder of a master's degree in business administration from Franklin University, USA. A professional business trainer in small business strategies, and entrepreneurship. A Young research scholar in Entrepreneurship and Human Resource Development. Hand-on experience and a business consultant on management, leadership and learning and development.

amani.a@aou.edu.om

Dr. Amer Al Hajri is an Assistant Professor at Faculty of Business Studies, Arab Open University, Oman. He holds Ph.D. in Economics from University of Sheffield, UK. He is presently the Program Coordinator for BA & MBA Program at AOU, Oman Branch. Prior to AOU he worked as Director of Information and Documentation Centre Development Council, Ministry of Development, Oman and Director of several departments (Scholarships, planning, and research) at the Ministry of Higher Education, Oman. He was a senior lecturer at the College of Banking and Financial Studies, Oman, and also served as Pro-Vice Chancellor for Administration and Finance, Sohar University, Oman. He has served as Economic Researcher and Planner, The Development Council, Oman. He was the Project Coordinator, Muscat University Project, Oman and Project Director, Sharqiya University Project, Oman. He regularly participating in professional development programs. He is the member of board of Oman Economic Association and Royal Economic Society, UK.

amer.alhajri@aou.edu.om

Amr Abdelazim Elsayed Ibrahim is the School Principal, PhD Researcher in Instructional Technology- University of Science Malaysia. Master of Education - Instructional Technology, Excellent rank with GPA of 3.88 1st Ranking, Arab Open University- Oman, Bachelor of Education - Suez Canal University. Educational writer in instructional technology, in (Alroya newspaper Oman). TOT-Instructional trainer accredited by the Ministry of Manpower in Oman and certified by the British Academy of Training, UK and USA. Awards; Excellence in educational initiatives award for the e-project Ministry of Education- academic excellence Arab Open University - proficiency in educational leadership, Ministry of Education.

amrwow2010@gmail.com

Antonia Koumproglou has fifteen years of teaching experience in Higher Education. She is Lecturer in Business Management. Antonia is a transdisciplinary scholar of Business Management and Intercultural Communication, who explores the intersections between culture, language and cross-cultural, technology-mediated communication and organizational learning in a variety of contexts. Antonia has vast professional experience having worked in several institutions in Greece, United Kingdom, Switzerland, and Spain. She has participated in various conferences and has been a contributing author and editor in several books and articles covering a range of different topics such as entrepreneurial innovation, workplace learning in Small and Medium Enterprises. Antonia is a Fellow of Higher Education Academy (FHEA).

antonia_koumproglou@hotmail.com

Dr. Aza Azlina Md Kassim is the Associate Professor in School of Economics and Management, Xiamen University Malaysia, Malaysia. She provides lectures and supervisions and received positive evaluations from both undergraduates and postgraduates' students. She has published research papers in several refereed journals and authored a few books. She also received research funding from the Fundamental Research Grant Scheme (Malaysia), Selangor state and UNISEL. Her excellence in academic and research has brought her several award winnings includes the Best Academic Staff Award in UNISEL (2018), and Best Papers Awards. She is a member of Malaysian Institute of Accountant (MIA) and Akademi Profesor Malaysia (APM)

azaazlina.mdkassim@xum.edu.my

Dr. Cezar SCARLAT is the Professor within Department of Entrepreneurship & Management and PhD supervisor at Doctoral School of Entrepreneurship, Business Engineering & Management from University "Politehnica" of Bucharest, currently teaching Technology Entrepreneurship and related courses at universities in Romania and abroad. Master's degrees in engineering and International business, PhD degree in Management & industrial engineering. Research and study tours in Europe and North America. Over two-decade-experience in business management consulting and international projects. More than twenty books and about two hundred scientific reports and articles published. Member of professional organizations and scientific/editorial boards of academic publishers and international journals (IM&DS, ESWA, ABSRJ among others).

cezarscarlat@yahoo.com

Gabriela Doina Stănciulescu is a PhD student at Doctoral School of Entrepreneurship, Business Engineering and Management, University "Politehnica" of Bucharest with bachelor's degree in Electronics, Telecommunication and Information Technology and a master's degree in Entrepreneurship, Business Engineering & Management, obtained within the same university.

stanciulescu.gabriela2na@yahoo.com

Dr. G. Ilankumaran is an Associate Professor of Management and Director in charge of Alagappa Institute of Skill Development at Alagappa University in India. He has twenty years of experience in academia and four years of experience in Industry. His research areas are Strategy, Marketing and Agriculture. He has published 30 journal articles and serves in Boards of Studies of Management Programmes of colleges in India. He also has held various administrative responsibilities in Alagappa University managing Hostels, National Academic Depository Service and Career Guidance.

ilankumarang@alagappauniversity.ac.in

Jana Jagodick is a research scholar at the Global Institute for Sustainable Prosperity, a social entrepreneur, and the GISP director of research & innovation for Namibia. She works on innovative projects with local and international partners. Before becoming a social entrepreneur, she played an active role as a senior lecturer, research representative, and research cluster leader in innovation and project management at the Namibia University of Science & Technology. Her primary research interest is in education. Especially, she focuses on innovation by transformation. In every research project, Dr. Jana Jagodick includes her professional management work experiences from Germany.

jana.jagodick@a-consultancy.org

Dr. Kabaly P Subramanian is an Assistant Professor at Faculty of Business Studies-MBA Program, Arab Open University, Oman. He holds MBA and PhD in Management. He is a member of British Academy of Management (UK). His Research interests lies at the intersection of Business Strategy, Business Innovation and Digital Transformation of Businesses. Dr. Kabaly has published in indexed journals and conferences. He has attended and presented his research in several International Conferences and Journals around the world including US and UK. Dr. Kabaly is presently leading a team of researchers in investigating Digital Transformation of Higher Education Institutions, funded by The Research Council, Oman. He is in the Editorial board of several academic research journals. Dr. Kabaly P Subramanian has trained more than 1000 Business Professionals. Presently he is consulting a large corporate in Oman on their Business Strategy and Digital Transformation Strategy.

kabaly@aou.edu.om

Konstantinos Biginas has fifteen years of teaching experience in Higher Education. Konstantinos has extensive research and teaching experience (online, face to face and blended) in both International Business and Strategic Management fields. Teaching has been an important part of his career, as he has taught undergraduate and postgraduate International Business and Strategic modules in several Higher Education institutions. Konstantinos has researched and written on International Business Management and Global Competition. He has participated in various conferences and has his work published. As an Associate & Lead Editor he has participated in book series. Konstantinos is a Fellow of Chartered Management Institute (FCMI) and Senior Fellow of Higher Education Academy (SFHEA).

konstantin_27@hotmail.com

Malvika Sagar is an Assistant Professor at Amity University, Greater Noida, India with a demonstrated history of working in the education management industry. She is currently working as Assistant Professor at Amity University in School of Communication. She is skilled in Public Relations and Corporate Communication, Integrated Marketing, Advertising, with a creative bent as a visualizer, filmmaker, and storyteller along with knowledge of audio and video editing software. She has strong education professional with pursuing a Ph.D. in Media Management from Amity University Rajasthan and a fusion background of MBA and bachelor's focused on Mass Communication.

malvikasagar27@gmail.com

Mathi Tamizharasan, is a research scholar pursuing her part-time Ph.D at Alagappa Institute of Management, Alagappa University and her research work focus on Human resource management and Educational administration. She has more than 18 years of progressive and versatile professional experience in administration, operations and business performance. She is currently working as Head of Planning in Pre-university Education, Qatar Foundation, Qatar since 2008. Prior to joining Qatar Foundation, she served at various prominent institutions in Qatar, UAE & India.

mathi.ilan@gmail.com, milan@qf.org.qa

Dr. Mohammed Al-Haziazi is an Associate Professor at Faculty of Business Studies, Arab Open University, Oman. He holds Ph.D. in Public Administration /Personnel Management, HRM. He is presently the Assistant Director, Academics and Former Program Coordinator for BA & MBA Program, AOU, Oman Branch. He is a dedicated and experienced business management professional with proven success in managing team and encourage critical and high order thinking in a way that increases student performance. A highly passionate researcher in the field of Human Resource with 29 years of rich experience. His research interest lies at the intersection of Human Resource, Knowledge Management and Entrepreneurship. He has attended and presented his research in several International Conferences. He has published several articles in national and international refereed journals. He is acting as external examiner for MA program of universities in Oman. He is a member of the American Society of Public Administration and Arab Management Association.

alhaziazi@aou.edu.om

Dr. Muawia M.Elhasan Gaily is assistant professor of applied linguistics at the AOU in Khartoum. He has been teaching different subjects related to English language pedagogy both in Sudan and abroad for more than two decades.

m.gaily@aou.edu.sd

Dr. Mubarak Ali is Assistant Professor of the Department of Administrative and Financial Sciences, Oman College of Management and Technology, Sultanate of Oman. Formerly he worked as faculty member of Business Administration and Accounting in Defence University College, Ethopia. He was also faculty member in Accounting and Finance in Rhodes University, South Africa. He was the Head of the Department of Commerce, CMS College of Science and Commerce, India. Dr. Mubarak Ali holds a B.Com. degree in commerce from University of Madras, India, M.Com. degree in commerce from Bharathiyar University, India, M.B.A., from TNOU, India and a Ph.D. in Commerce from Bharathidasan University, India

mubarak.ali@omancollege.edu.om

Nasser Al Yahyaei is a Faculty in Business Studies at Arab Open University, Sultanate of Oman with experience in industry and academia. Currently he is pursuing his doctorate program from University Selangor, Malaysia on Entrepreneurial orientation and business performance of Small and Medium Enterprisers in Oman. He is highly active in research publication and participated in various conferences and workshops.

nasser.y@aou.edu.om

Dr. Nithin Kalorth is currently working as Assistant Professor at Bennett University of Times of India group. His interest area is teaching film studies, photography, news media and news design. He is also mobile journalism and storytelling trainer who conducted workshops for WHO, Kerala Press Club and other institutes and groups. After completing degree in Visual communication, he done his electronic media from University of Madras with First rank and Gold medal. He has completed PhD in film studies from MG University Kottayam with UGC JRF scholarship. He has also presented more than 20 research papers in various national and international conferences and publications in journal, books and encyclopaedia. He is active in documentary film making. Currently shooting a documentary on "Kaladham" an artist sociology of Greater Noida

nithinkalorth@gmail.com

Rami Mohamed Farid is a Lecturer at the Faculty of Business Studies at the Arab Open University (AOU), Egypt Branch. Farid has received his Master of Science (MSc) majoring in Corporate Finance from the American University in Cairo (AUC). His thesis focused on "The Impact of Financial Inclusion on Banks' credit Risk: A Perspective from MENA Region". His research interests include financial inclusion, finance for sustainable development, microfinance, and banking. Farid is a firm believer in extending financial services to the underserved segments of the community as a tool of economic empowerment and growth.

rami.farid@aou.edu.eg

Dr. Rengarajan Veerasamy is a Faculty Member in Faculty of Business Studies at Arab Open University, Oman. His specialization is Accounting and Finance. He holds Associate membership in two professional management accounting bodies CIMA (UK) and Institute of Cost Accountants of India (ICAI, India). He holds PhD in Finance. His research interest includes corporate finance, IPOs, Microfinance, Blended learning, Digital Finance. He has been with Arab Open University (Oman) for more than 10 years and teaching both BA and MBA programs. He is also part of funded research projects on the areas Digitalization of HEIs and Entrepreneurship. He is a recipient of Best Teacher Award from Ministry of Manpower, Sultanate of Oman and Vinayaka Mission University, Chennai, India.

renga@aou.edu.om

Dr. Shahrzad Yaghtin is a lecturer and researcher in marketing and business administration with a demonstrated history of practical experience in the industry as a senior marketing expert and consultant. Her research focuses on B2B marketing, digital marketing, marketing strategy, sharing economy, and the application of machine learning techniques in developing modern marketing services and recommendation systems. She uses a wide range of methodologies including quantitative and qualitative methods in her research.

yaghtin80@yahoo.com

Dr. Subrahmanian Muthuraman is an Assistant Professor in the Faculty of Business Studies at Arab Open University, Sultanate of Oman. With over two decades of experience offers a blend of teaching, research, and training. His research interest lies in the broad areas of Marketing, Entrepreneurship, Education, and Digitalization. He has authored numerous highly cited journal publications, conference articles, and book chapters in the aforementioned topics. He has authored and edited 11 books including "Compensation & Reward Management" and "Training & Development – Theory & Practice". He is currently engaged with two funded projects by TRC, Oman on SME & Digital HR. He has membership in several professional societies around the globe. He is the recipient of "Global Knowledge Management Researcher Award" in 28th World HRD Congress. He serves on editorial boards & reviewer of several journals. He has given numerous invited talks on various platforms

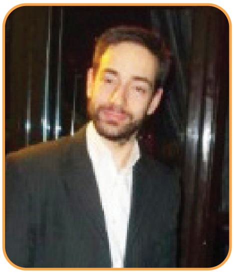
subrahmanian.m@aou.edu.om

Syed Sadullah Hussainy currently works as a lecturer at the Faculty of Business, Arab Open University, Oman. In India and the Middle East, he has over 17 years of teaching experience and has worked in the industry for one year. He is an active researcher and has presented and published his work in several national, international conferences and journals. In his qualifications, he holds double postgraduate degrees (MBA & MFM) and a postgraduate certificate in Human Resource Management (PGDHRM) and M.Phil. He is currently pursuing a Ph.D. (Doctorate from the University of Madras in Management & Commerce and will complete his doctorate in the near future. He has also served as a visiting faculty of BBA and MBA, for various South Indian Universities for teaching distance education classes

syed@aou.edu.om

Dr. Tameem Sharief S. is working as an Assistant Professor, PG and Research Department of Commerce, The New College (Autonomous), Chennai. Dr Tameem is having more than twenty years of teaching Commerce, Business and Management courses to undergraduate and graduate students. He holds double master's degrees (MBA and M. Com) and M.Phil. and Ph.D., in Commerce. He has published and presented numerous research papers in various national and international journals and conference. Dr Tameem is a formal Research supervisor of University of Madras working in the new college and supervised many M. Phil and Ph.D., scholars.

tameem08@hotmail.com



Vlasios Sarantinos has been with an academic, with a career spanning across several years and having taught in the UK and overseas across a range of different subjects in the wider areas of Business and Management. He is a keen researcher, engaging in scholarly activity that focuses on People Management, Leadership, Strategy, Education and International Partnerships. He is based in Bristol, UK and presently working for the University of the West of England.

vlasios.sarantinos@gmail.com, Vlasios.Sarantinos@uwe.ac.uk

Dr. Waleed Hmedat, an Economist, is the Dean of Oman College of Management and Technology, Sultanate of Oman. Formerly he was the Dean of faculty of Economics and Administrative Sciences and Director, Investment Fund, Yarmouk University, Irbid, Jordan. He was also Vice-Dean of Business and Economics in Qatar University, Qatar and Direct of Consultations and Community Services, Yarmouk University, Jordan. Prof Dr. Waleed Hmedat has also served as Chairman, Department of Economics, and Yarmouk University, Jordan. He was Economics Expert in Gulf Organisation for Industrial Consulting in the State of Qatar. Prof Dr. Waleed Hmedat holds a B.A. degree in Economics from Yarmouk University, Jordan, M.A. degree in Economics from Western Illinois University, USA and a Ph.D. in Economics from the University of Missouri – Columbia, USA. He is the recipient of scholarship from Yarmouk University, Jordan for his Master program and Ph.D. program

waleed.hmedat@omancollege.edu.om

Dr. Walid Aboraya obtained his PhD in Educational Technology from the UK in 2009, his background in ICT and education led him to work in the department of education technology and distance education at Cairo University. He is specialized in the pedagogical use of technology in education on both the research and practical levels. He is currently supervising number of MA & PhD dissertations in the field of instructional technology in Cairo University. Due to his specialization, he acted as a consultant, in planning for and applying the strategies of disseminating e-learning culture among public Egyptian universities. He is now acting as the research director in Arab Open University, Sultanate of Oman. His research interests include instructional technology, Special educational Needs, Diffusion of innovation, pedagogical use of ICT, and e-learning.

walid.Aboraya@aou.edu.om

Economy

CHAPTER

1

Coronavirus as enabler: Towards innovative education with new self-reflection

Jana Jagodick

Coronavirus as enabler: Towards innovative education with new self-reflection

Jana Jagodick

ABSTRACT

It is unprecedented in the human history that a coronavirus drives innovation at the global scale. Innovation is by its nature dysfunctional, complex and difficult to deal with. Like innovation, also coronavirus (known as COVID-19) enables new educational concepts. These innovative educational concepts need to incorporate a new type of self-reflection. In this book chapter, new self-reflection is defined as the inner transformation through dreams, forward-looking reflections and the design thinking process. The review of literature prior and during the coronavirus crisis shows that there is a great amount of publications on different subjects regarding backward thinking. Backward-thinking is a reactionary approach that is related to the past. Due to that most studies are analyzing the past events, there is a lack of firsthand self-reflection research on night dreams and forward-thinking reflections in line with the Stanford's design thinking process. The Stanford's d. School design thinking process can be broken down into five steps, known as "empathize", "define", "ideate", "prototype" and "test". The aim of this study is to illustrate how to practice new self-reflection by interconnecting written down night dreams, progressive reflections and the Stanford's d. School design thinking process. In this context, the book chapter specifically addresses the research question: "How to become innovative through new self-reflection?" Based on two case studies with six cases, this research contributes to the post COVID-19 world. Especially for this new era, the empirical study pioneers a novice concept for innovative education, lifelong learning and human-machine interaction.

Keywords

Education, innovation, reflection, dream, design thinking

1. INTRODUCTION

Corona pandemic also known as COVID-19 has received unprecedented media coverage both locally and internationally. According to the World Health Organization, COVID-19 is an infectious disease that is transmissible from human to human (WHO 2020). Emerging in China at the end of 2019, the coronavirus was spreading quickly during 2020. In the meantime, COVID-19 infections are skyrocketing and resulting in a global pandemic. Every day, the increasing infections and mortality rates have been reported in daily news. Like other countries, Arab states are also concerned with growing number of newly infected people and COVID-19 death cases. In order to help prevent spread of coronavirus different measures have been introduced, such as lockdowns, closing of schools, shutting down of universities, restricting business operations and air travel.

It is uncommon in human history that a new virus took nearly the entire world by storm. This virus crisis leads to economic slowdown at a global scale. Our public and scientist community still keep learning about COVID-19. Meanwhile there is a concern that coronavirus could hijack humanity for the long time. In contemplation of pandemic, there is a need for international cooperation (Al-Tamimi 2020). Besides international pandemic cooperation, there is a growing demand for innovative educational solutions. These novice educational concepts need to incorporate a new type of self-reflection. New self-reflection is a forward-thinking way of envisioning the future by considering modern ideas, methods and processes. In contrast, backward-thinking is a reactionary approach that is related to the past and it neglects a cutting-edge innovation. Innovation implies novelty. This novelty is especially demanded for the post COVID-19 world. Based on a fresh educational concept, this book chapter introduces an empirical study that is extending practical and theoretical knowledge by answering the research question: "How to become innovative through new self-reflection?" In order to address the aforementioned research, question the literature review below has been conducted.

2. LITERATURE REVIEW

In contemporary scientific discourse, numerous studies show that innovation plays a critical role (Jagodick et al. 2017, Dodgson 2000) in the development of any society. However, even by its theoretical definition, innovation is difficult to master (Jagodick et al. 2013). This is due to its non-linear patterns that causes disorder, chaos and requires specific skills (Tidd et al. 2005). These unique skills could be trained by a trial and error approach (Dodgson et al. 2005) and social interaction among virtual team members. Such experiments enable new learning and result in innovative solutions (Drucker 2015).

Given the demanding nature of innovation, it is challenging to make it sustainable (Kaczmar 2013). Sustainability of innovation is a big concern, mostly for social entrepreneurs. There is an interesting paper published by Dr. Subrahmanian Muthuraman, Dr. Mohammed Al Haziazi & Dr. Amer Al Hajri from the Arab Open University where, among other findings, they highlight the importance of social entrepreneurship for sustainable development (Muthurman et al. 2020). Otherwise, sustainable development remains open to different interpretations, embodying a wide range of ideas and dreams.

It is a widespread assumption that dreams are important. Dreams can begin to occur both at day and night. The daydreams are more limited to personal imagination (Gault 2009), whereas night dreams can be prophetic. Prophetic night dreams allow us to get outside of our comfort zone through a vision (Farbman 2008). This dream vision can be subject to different interpretations (Coolidge 2006). For instance, Domhoff (1996) recommends examining dreams systematically by a quantitative method. Regardless of applied methodology, some dreams are following "… the path of scientific innovation" (Mancini 2007, p. 59) which can be obtained by reflection.

In the words of Kolb, "… reflection is defined as the internal transformation of experience" (Kolb 2015, p. 58). This exceptional experience could be found in self-reflection. While Golden (2003) proposes that self-reflection "… involves being open to exploring our inner thoughts and feelings" (p.16), Bisson (2017) points out that self-reflection is an inside investigation which leads to awareness. This awareness fosters trust in us and others (Golden 2003). Trust emerges through observing oneself from the outside (Ramsay & Sweet, 2009). Apart from author's different points of view on reflection, also distinct models are offered in education.

The University of Edinburgh published Gibb's reflective cycle on their website. This reflection tool was developed by Graham Gibbs in 1988 and provides guidance how to learn from experiences, for example, by starting with a description of experiences, feelings, evaluation, analysis, conclusion and action plan for a future situation (University of Edinburgh 2020). Another well-known model for experiential learning is Kolb's framework. Kolb's learning cycle from 1984 includes reflective observations by watching, building concepts, testing concepts in practice which leads to specific knowledge based on experiences (Kolb 2015).

In contrast to Gibb's and Kolb's reflective practice, Schön's model from 1991 focuses on action. Specifically, Schön's model (1991) differentiates between reflection in action (when the event takes place) and reflection on action after an event occurred (Redmond 2016). On the other hand, Driscoll (2007) in his book recalled his structured reflection model from the year 1994 that was guided by three questions such as What? (Describing the event), So What? (Analyzing the event) and Now What? (Suggesting actions after the event). Similarly, Rolfe's et al. model looked at the same three questions What? So what? Now what? from the descriptive, theoretical and action-oriented level (University of Connecticut 2020).

By comparison, Johns' model of reflection consists of the description of experience, reflection, influencing factors, alternative strategies and learning gained from experience, whereas Atkins-Murphy's reflective framework is centered on action through a new experience, followed by description, analysis, evaluation and awareness of learning that took place (Peate 2006). Unlike previous authors, Brookfield (2017) draws attention to reflection from different perspectives. According to Brookfield's (2017) reflection model, the first perspective is a reflection note of a teacher, followed by student reflection, colleague reflection and theoretical guidance by consulting literature. Specifically, his four-perspective reflection model is designed for teachers.

Meanwhile, teachers are developing new skills through design thinking. Design thinking started at Stanford University. In 2005, d. School was founded at Stanford University with the aim to foster creativity and innovation through design thinking. It is a new approach which allows "… to think in a radically different way, as opposed to taking small, incremental steps based solely on what exists." (Bailey & Warwick 2020, p. 5). It implies that design thinking can be used as an agile and innovative strategy. This new strategy is forward looking that is an opposite of a traditional approach which is backward-looking and slow in execution (Diderich 2020). The traditional strategies rely on analytical, quantitative and exclusive approach, while design thinking is driven by intuition, analysis and inclusion of qualitative real time data from internal and external team members (Diderich 2020). This means that design thinking promotes thinking outside of the box. In this regard, it is still controversial and most embraced in education.

Since 2015, also Koh et al. (2015) endorse design thinking for education because it unites intuitive feelings with analytics in the notion of abduction. Abduction is a new term that is attached to design thinking. In the design thinking context, abduction implies uniting intuition with rational thinking in "the third way" (Dunne 2018, p. 86). This specific way of thinking makes teaching and learning more effective. In order to increase the effectiveness of teaching, Dr. Kabaly Subramanian proposes to reconsider current teaching practices (Subramanian

2014). Rethinking teaching and learning is a new trend that is driven by design thinking. Design thinking is a method that could be visible in a process (Jain 2018). In the same vein, Stanford d. School (2020) emphasizes the five-step process. Their design thinking process starts with "empathize" (gaining empathy for people through multiple methods), "define" (define the problem by using field data), "ideate" (present diverse potential solutions), "prototype" (create many practical solutions that can be viewed critically) and "test" that implies verifying solutions in settings (Stanford d. School 2020). In other words, it is an iterative process that repeats itself in cycles until a suitable solution is created.

It is evident in the literature that many authors use the term "reflection" synonymously with the term "self-reflection". Furthermore, the literature review discloses that different definitions are applied to self-reflections. In this book chapter, new self-reflection is defined as the inner transformation through dreams, forward-looking reflections and the design thinking process. The discussed self-reflection frameworks have been developed over time. All published reflection models above neglect night dreams, forward-thinking reflections and design thinking. This is due to the fact that the aforementioned reflection models have been developed in the prior coronavirus world. For the post COVID-19 educational world, there is a need to construct a novice self-reflection approach with virtual team members that could help later to develop a new way of human-machine interaction. Therefore, this study interconnects night dreams, forward-looking reflections and the Stanford's d.school design thinking process in a new self-reflection concept.

3. METHODOLOGY

The literature review indicates that design thinking can also be used as a methodology because it is founded on abductive reasoning. Abductive reasoning is a specific way of thinking that "… differentiates design from other forms of working, thinking, and decision making …the logic of what might be …involves pattern recognition … intuition combined with data from research …" (Stickdorn et al. 2018, pp. 160-161). This broad definition would explain why abduction "… is the least familiar mode of reasoning and …there has been relatively little work done with using abduction …" (Shank 2008, p.1). Abduction is referred to "third-way reasoning" (Magnani 2017, p. 96) which is outside of the inductive and deductive processes. Tavory & Timmermans (2014) criticize the inductive and deductive processes for lack of creativity and not contributing to the development of new theories. In their words, abduction is more than reasoning, it is a new method that is much better suited to analyze qualitative data and build theory than using an outdated tool that is well-known as grounded theory (Tavory & Timmermans 2014). In the same vein, Bryman & Bell (2015) write that the interactive process of abduction can enhance creativity through ongoing dialogue between a researcher and data. In this regard, the Butte College website highlights that the "…abductive process can be creative, intuitive, even revolutionary" (Butte College 2020). Consequently, the abductive processes materialize in the design thinking methodology.

This study combines night dreams, self-reflections and design thinking within case studies. Dreams and reflections are used for data collection purposes, whereas the Stanford's d. School design thinking process serves as an instrument to structure information within two case studies. Multiple case studies can be applied in a qualitative research (Duff 2018, Hamel et al. 1993) when answering contemporary research questions (Yin 2018). For the transparency purposes, every case study can consist of one or many cases. In this regard every case could be constructed (Babbie 2016, Yin 2003). A case can be viewed as an entity, event, occurrence, person or action (Yin 1993). As a result, cases can be compared with each other (Stake 2000). In each case empirical material is gathered (Salkind 2012, Denzin 1989). Empirical data can be collected systematically through night dreams (Kramer 2007). Especially, dreams enable individuals to break out of the old settings and experience a new world in a creative way which provides a basis for reflections (Rossi 2000). Through a structure, self-reflective experiences can be better analyzed, interpreted and therefore have higher validity (Evans 2002, p. 17). In this paper, the validity and reliability of data is increased with the design thinking process which includes abduction because it is also an appropriate method to analyze qualitative data.

4. EMPIRICAL RESULTS

In this paper, two case studies deliver empirical results. The case study 1 describes the first night dream in the 1. case and reflection on this first dream takes place in the 2. case, whereas gathered information from both cases is arranged according to the Stanford's d. School design thinking process in the 3. case. In contrast, the case study 2 describes the second night dream and reflection on this second dream occurs in the 2. case, while collected data from both cases is organized in line with the Stanford's d. School design thinking process in the 3. case.

Case study 1

1. Case: Describing the first dream

I was standing on ground with sword and wearing protective cloth and glasses. Through my glasses, I could see that coronavirus was coming towards me. My glasses prevented the virus from entering my eyes, instantly I switched on button reading "energy". Suddenly, the sword was moving around me. Then, I felt protected. The sword was radiating energy that created a protection zone for me. The voice from the sky was shouting "negative". Without warning, the space I was standing on lifted me and the entire city upwards to the sky.

2. Case: Reflecting on the first dream

Upon waking up in the morning, I started reflecting on the dream. Intuitively, I thought that there will be cloth and glasses that will protect us from viruses and radiation. In the future, there will be a possibility to lift up entire space with a negative energy which has not been discovered yet.

3. Case: Arranging data according to the Stanford's d. School design thinking process

Data collected in the first and second case is arranged according to the five step Stanford's d. School design thinking process below:

Step 1 : Empathize - I feel empathy for myself and future citizens by recalling the dream from a new world;

Step 2 : Define - I discovered that the first night dream illustrates entirely different world that cannot be defined by current knowledge. As a result, it needs imagination to move forward. My imagination is guided by created phrases. It could be also led by keywords;

Step 3 : Ideate - Imagined ideas from case 1. and 2. assist to generate phrases with an intention to expand the horizon. By way of illustration, I ideated the phrases such as "glasses against coronavirus", "cloth against radiation", "lifting space", "space elevator" and "negative energy". Greater number of phrases or keywords could be developed later in the case that prototyping fails to deliver desired outcomes.

Step 4 : Prototype - Every phrase is seen as a draft solution for a preliminary version of a prototype. Many virtual team members are linked to a prototype. This means that to each phrase one or many virtual team members are connected. These virtual team members are identified by using internet, expert systems or robots with artificial intelligence and numbered in a correct order. In this design thinking process, it is preferred to allocate numbers to virtual team members, but also names could be applied.

Step 5 : Test – For illustration purposes, in this paper only a few aforementioned phrases are searched on internet. For instance, the search results show that new findings on the phrase "glasses against coronavirus" are missing, but the internet search reveals that Chinese researchers suggest that wearing normal glasses could protect against coronavirus. The idea is coming from three Chinese researchers. As a result, all three Chinese researchers will be included as virtual team members and numbered adequately as a virtual team member 1, virtual team member 2 and virtual team member 3. In addition, it emerged that there is no specific clothing against coronavirus apart from face masks, but there is clothing that protects against electromagnetic radiation which is a different topic. The space elevator from the sky which could lift a city with a negative energy does not exist yet. It is a task for future generations.

Case study 2

1. Case: Describing the second dream

I saw screens floating in the air. People have been sleeping in front of screens. Suddenly, the screen programs started transforming themselves while people were sleeping. "What are you doing?" I asked. One man answered: "I am replacing my news, fed up with control". Shortly after, a woman said: "I am changing my movies, frustrated with actors". Looking at sleeping people, I saw rays coming out of their individual minds and projecting images on the screens.

2. Case: Reflecting on the second dream

In the morning after waking up, I reflected intuitively on the dream. The dream signalized advanced humans. It would be possible to have holographic TV screens. If unhappy with news or movies, citizens will be able to use artificial intelligence to change the outcomes of the news and modify movies through mind control and watch what suits the moods best. The communication between a human and machine will be telepathic.

3. Case: Organizing data according to the Stanford's d. School design thinking process

Data gathered in the first and second case is organized in line with the five step Stanford's d. School design thinking process below:

Step 1 : Empathize – There is a feeling of empathy for me and future citizens by remembering the dream that senses a new world;

Step 2 : Define – It is apparent that the second night dream reveals the future world that cannot be defined by present knowledge. Consequently, there is a need to move towards imagination. My imagination is guided by constructed phrases. It could be also led by keywords;

Step 3 : Ideate - Envisaged ideas from the case 1. and 2. help to develop phrases aimed at broadening the horizon. For example, I ideated the phrases such as "holographic TV screens in the air", "modifying the content of a TV program in the real time" and "telepathic communication between a human and machine". More phrases or keywords could be extracted in due time if prototyping fails to deliver envisaged results.

Step 4 : Prototype - Each phrase serves as a draft solution towards a prototype. Many virtual team members are directly connected to a prototype. This implies that to every phrase one or many virtual team members are linked. The virtual team members are found with the help of internet, expert systems or robots with artificial intelligence and numbered adequately. In this design thinking step, the numbers are assigned to virtual team members. Nevertheless, it is also possible to attach names.

Step 5 : Test – Testing means evaluating solutions that are guided by phrases and searched on internet. For example, the search results illustrate the following: the holographic TV screens in the air are coming; this solution could be attached to the virtual team member on the internet. The TV program is still rigid and it is impossible for users to modify any news or movies in the real time. This means that currently users are passive. In the future, it would create a great number of jobs, if TV programs could be changed in the real time according to users' preferences. Users could also change any scenes in the movies by replacing actors through robots with artificial intelligence and communicating telepathically through mind control.

5. FINDINGS AND DISCUSSION

As mentioned before, this paper is among the first that is guided by the research question: "How to become innovative through new self-reflection?" The findings are discussed in the context of three specific aspects below:

Start new self-reflection with dreams

Many studies suggest reflecting on experiences. In contrast, this research discovered that every night dream could serve as a trigger to start new self-reflection. Without night dreams, this innovative study would not be initiated.

Indeed, it is a good practice as suggested by Domhoff (1996) to investigate dreams in a systematic manner. This approach leads to a "scientific innovation" (Mancini 2007, p. 59). Furthermore, this paper confirms the findings of Coolidge (2006) that dreams can be understood in various ways and are subject to unique interpretations. This paper underpins that dreams inspire towards creative actions.

Boost creativity through reflections on dreams

This study found that writing down dreams after waking up in the morning increases creativity. This is specially the case when an intuitive reflection takes place after the dream's description. In particular, this research confirms the findings of Bisson (2017) and Golden (2003) that unstructured reflections steer towards awareness of individual feelings and thoughts. As a result, they can observe them from outside (Ramsay & Sweet, 2009). This study attests to Kolb's (2015) findings that reflections can trigger innovative experiences.

Create virtual team members in the design thinking process

Previous research on design thinking conducted by Diderich (2020), Jain (2018) and Koh et al. (2015) highlights the importance of human team members who present distinct perspectives. This study found that human team members are not a prerequisite for innovation. This paper shows that interaction can also take place between one human team member such as a learner and many virtual team members. This new type of interaction is initiated by a human. Later, virtual team members are identified through phrases which are inspired by night dreams and reflections on these new dreams. In previous practices, the team members are recruited based on their skills. In this research, the virtual team members need to deliver solutions according to phrases in order to participate. Guided by phrases, the search towards innovative solutions can start online, in experts' systems or by robots with artificial intelligence. The Stanford's d. School (2020) design thinking process is proposed for creative problem solving. In addition, this research found that the Stanford's d. School design thinking process can serve as an instrument to arrange data from dreams and reflections in a creative way in order to deliver innovation.

6. CONCLUSION

The COVID-19 crisis - like innovation - is by its definition a high-challenge task. Consequently, there is a demand for new educational concepts. This book chapter introduces a modern way of reflective practice which is sustainable, can boost creativity in the workplace and deliver exceptional outcomes. The findings of this study show that a new type of self-reflection that fosters inner transformation through dreams, forward-thinking reflections and the Stanford's d. School design thinking process can increase innovative knowledge. This is due to the following reasons: Firstly, dreams can be used to broaden the horizon and think outside the box. Secondly, the intuitive reflection on dreams in the morning after waking up drive's inspiration and creativity. Thirdly, the design thinking process can assist to become more innovative by fusing a learner's skills with virtual team members' knowledge. Guided by phrases, the virtual team members can be identified online, through expert systems or robots with artificial intelligence. This means that phrases, which have been inspired by dreams and reflections, can be directly linked to potential solutions. These selected solutions lead to the creation of many virtual team members and serve as prototypes for innovative concepts. Given the research findings, this study criticizes traditional learning methods and suggests the personified learning approach. Especially, the education sector needs to encourage human-machine interaction by involving robots with artificial intelligence in teaching and learning.

7. REFERENCES

Al-Tamimi, M. 2020. Ushering in the new digital era. Arab News. Accessed 10 May 2020. <https://www.arabnews.com/node/1672446>.

Babbie, E. 2016. The practice of social research. Cengage Learning, Boston.

Bailey, M. & Warwick, L. 2020. The third way for the third sector using design to transfer knowledge and improve service in a voluntary community sector organisation. Accessed 8 August 2020. <https://www.academia.edu/8432309/The_Third_Way_for_the_Third_Sector_Using_Design_to_Transfer_Knowledge_and_Improve_Service_in_a_Voluntary_Community_Sector_Organisation>.

Bisson, M. 2017. Coach yourself first: a coach's guide to self-reflection. Matador, Leicestershire.

Brookfield, S.D. 2017. Becoming a critically reflective teacher. Jossey-Bass, San Francisco.

Bryman, A. & Bell, E. 2015. Business research methods. Oxford University Press, Oxford.

Butte College 2020. Deductive, inductive and abductive reasoning. Accessed 9 August 2020. <http://www.butte.edu/departments/cas/tipsheets/thinking/reasoning.html>.

Coolidge, F.L. 2006. Dream interpretation as a psychotherapeutic technique. Radcliffe Publishing, Oxford.

Denzin, N.K. 1989. The research act: a theoretical introduction to sociological methods. Prentice Hall, Englewood Cliff.

Diderich, C. 2020. Design thinking for strategy: innovating towards competitive advantage. Springer Nature Switzerland AG, Cham.

Dodgson, M. 2000. The management of technological innovation: an international and strategic approach. Oxford University Press, Oxford.

Dodgson, M., Gann, D. & Salter, A. 2005. Think, play, do: technology, innovation, and organization. Oxford University Press, Oxford.

Domhoff, G.W. 1996. Finding meaning in dreams: a quantitative approach. Springer Science+Business Media, New York.

Driscoll, J. 2007. Practising clinical supervision: a reflective approach for healthcare professionals. Elsevier, Sydney.

Drucker, P. 2015. Innovation and entrepreneurship: practice and principles. Routledge, New York.

Duff, P. 2018. Case study research in applied linguistics. Routledge, New York.

Dunne, D. 2018. Design thinking at work: how innovative organizations are embracing design. University of Toronto Press, Toronto.

Evans, L. 2002. Reflective practice in educational research. Continuum, London.

Farbman, H. 2008. The other night: dreaming, writing, and restlessness in twentieth-century literature. Fordham University Press, New York.

Gault, J.L. 2009. Five minutes a daydream-action path: dream the life & world you desire, then create it. Accessed 9 May 2020. <https://www.bookdepository.com/publishers/Ocean-Manor-Publishing>.

Golden, B. 2003. Healthy anger: how to help children and teens manage their anger. Oxford University Press, Oxford.

Hamel, J., Dufour, S. & Fortin, D. 1993. Case study methods. Sage, London.

Jagodick, J., Nashima, E. & Courvisanos, J. 2017. Engaging Namibian informal settlement community in social innovation, 12th European Conference on Innovation and Entrepreneurship. Paris, 21-22 September. Academic Conferences and Publishing International, Sonning Common, pp. 323-329.

Jagodick, J., Courvisanos, J. & Yearwood, J. 2013. Innovation agents in Africa: the future roles of key drivers of technology projects. In: Grünwald, N. & Heinrichs, M. (Eds.). Innovation, entrepreneurship and sustainability. Robert-Schmidt-Institut, Wismar, pp. 86-92.

Jain, J. 2018. Design thinking for startups: a handbook for readers and workbook for practitioners. Notion Press, Chennai.

Kaczmar, N. 2013. How to make product innovation processes more sustainable? A Literature Review. GRIN Verlag, München.

Koh, J.H., Chai, C.S., Wong, B. & Hong, H.Y. 2015. Design thinking for education: conceptions and applications in teaching and learning. Springer Science+Business Media, Singapore.

Kolb, D.A. 2015. Experiential learning: experience as the source of learning and development. Pearson Education, Upper Saddle River.

Kramer, M. 2007. The dream experience: a systematic exploration. Routledge, New York.

Magnani, L. 2017. The abductive structure of scientific creativity: an essay on the ecology of cognition. Springer International Publishing AG, Cham.

Mancini, A. 2007. The meaning of dreams. Accessed 1 August 2020. <http://www.buenosbooks.us>.

Muthurman, S., Al Haziazi, M. & Al Hajri, A. 2020. Importance of social entrepreneurship in Oman towards the sustainable development. Innovative Journal of Business and Management, 9(2):173-180.

Peate, I. 2006. Becoming a nurse in the 21st century. John Wiley & Sons, Chichester.

Ramsay, G. & Sweet, H. 2009. A creative guide to exploring your life: self-reflection using photography, art, and writing. Jessica Kingsley Publishers, London.

Redmond, B. 2016. Reflection in action: developing reflective practice in health and social services. Routledge, New York.

Rossi, E.L. 2000. Dreams, consciousness, spirit: the quantum experience of self-reflection and co-creation. Zeig, Tucker & Theisen, Phoenix.

Salkind, N.J. 2012. Exploring research. Pearson, New York.

Shank, G. 2008. Abduction. In: Given, L.M. (Ed.). The sage encyclopedia of qualitative research methods. Sage, London, pp. 1-2.

Stake, R. 2000. The case study method in social inquiry. In: Gomm, R., Hammersley, M. & Foster, P. (Eds.). Case study method. Sage, London, pp. 19-26.

Stanford d.school 2020. Let's stop talking about the design process. Accessed 21 July 2020. <https://medium.com/stanford-d-school/lets-stop-talking-about-the-design-process-7446e52c13e8>.

Stickdorn, M., Hormess, M., Lawrence, A. & Schneider, J. 2018. This is service design doing: applying service design thinking in the real world. O'Reilly Media, Sebastopol.

Subramanian, K.P. 2014. Revisiting the art of teaching. Accessed 3 July 2020. <https://de.slideshare.net/KabalyPSubramanian/art-of-teaching-psk>.

Tavory, I. & Timmermans, S. 2014. Abductive analysis: theorizing qualitative research. The University of Chicago Press, Chicago.

Tidd, J., Bessant, J. & Pavitt, K. 2005. Managing innovation: integrating technological, market and organizational change. John Wiley & Sons, West Sussex.

University of Connecticut 2020. Center for excellence in teaching and learning what? So what? Now what? Model. Accessed 3 September 2020. <https://cetl.uconn.edu/what-so-what-now-what-model/>.

University of Edinburgh 2020. Gibbs' reflective cycle. Accessed 1 September 2020. <https://www.ed.ac.uk/reflection/reflectors-toolkit/reflecting-on-experience/gibbs-reflective-cycle>.

WHO 2020. Coronavirus disease (COVID-19) pandemic. Accessed 19 September 2020. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>.

Yin, R.K. 1993. Applications of case study research. Sage, London.

Yin, R. K. 2003. Case study research: design and methods. Sage, London.

Yin, R.K. 2018. Case study research and applications: design and methods. Sage, Los Angeles.

94.15
58.32
68.90
73.94
76.41
58.21
763.06
68.90
74.28
11.65
72.11
34.56
33.24
58.32
76.41
4.62
69.08
76.41
12.52

CHAPTER

2

The Effect of Gender Financial Inclusion on Economic Growth: A Covid-19 Policy Response

Rami Mohamed Farid Abdel Monem

The Effect of Gender Financial Inclusion on Economic Growth: A Covid-19 Policy Response

Rami Mohamed Farid Abdel Monem

ABSTRACT

Women suffer from disproportionate poverty, over representation in low sector wages, and less income security. COVID-19 is likely to strike this segment the most, causing further gender inequality and narrowing women access to finance. Putting women's potential in contributing to economic growth into consideration, policymakers have concluded that building an inclusive policy response to COVID-19 that leaves no one behind and answers women needs for equal financial access, is vital in developing a resilient economy capable of absorbing shocks and smoothening vicious economic impacts caused by sudden events such as pandemic spreads. Accordingly gender financial inclusion is an example of such a policy response. This study aims to test the impact of gender financial inclusion indicators on economic growth measured by Gross Domestic Product (GDP) at constant local currency unit. Using the Least Square Method for non-linear models, the findings prove that borrowing to start, operate, or expand a farm or business for males and females has a significant positive impact on the GDP. However, women borrowers are likely to contribute more to the GDP than their male counterparts under financial inclusive programs. The issuance of national identification cards does not have any significant impact on GDP in this econometric model.

Keywords

COVID-19, Women Financial Inclusion, Inequality, empowerment

1. INTRODUCTION

COVID-19 is perpetrating tremendous human costs worldwide. Measures to curb increasing cases such as isolation, lockdowns and widespread closure of businesses were the main reasons for slowing and crippling the economy. Due to the pandemic, the global economy is confronting a sharp contraction of 3% in 2020. This figure was not even recorded post the 2008-09 financial crisis. Despite the wavering predictions of 5.8% growth in the global economy once COVID-19 starts to fade, extreme uncertainty of economic growth remains to foreshadow leading economies worldwide (IMF, 2020). This is due to the hazy pathway of the pandemic, the intensity and efficiency of containment efforts, the possibility of supply disruption, the tightening of financial market conditions, the shifts in spending patterns, and the consumer behavioral changes that encompass ceasing businesses at shopping malls and commuting using public transportation. The repercussions of the pandemic extend to encapsulate factors that shake the macroeconomics of countries to their core such as health shocks, reversals of capital flows, plummeting of commodities prices, and deficiencies in external demands.

In this respect, international financial institutions (IFIs) have started to conceive economic policies that will cushion the impact of the diminishing activities on firms, financial systems, and people and guarantee that economic recovery can begin quickly once the pandemic ends. As the economic downturns produced shocks in specific sectors, policymakers will have to develop targeted fiscal, monetary and financial measures to support businesses and households' casualties. These actions are meant to sustain economic relationship throughout the duration of the pandemic and to enable the economic activities to normalize gradually after COVID-19 containment measures are lifted.

Accordingly, knowing for a fact that COVID-19 is likely to have its toll on the most vulnerable segments of the global community, policymakers have concluded that the pandemic's policy response should be inclusive and "leave no one behind". Hence, financial inclusion became a key element in the global answer to the viciousness of the disease. The World Bank defines financial inclusion as the means by which individuals and businesses gain useful and affordable access to financial products and services to satisfy their needs (World Bank, 2016). Financial inclusion makes up a strong pillar for the realization of the Sustainable Development Goals (SDGs), with the start of the Decade of Action, as it has the capacity to absorb financially excluded poor people, most of whom are rural women. Correspondingly, financial inclusion is indispensable in reducing poverty and boosting economic growth. Leaving no one behind includes gender equality, which when coupled with access to financial services, statistics turn out bleak. The gender gap in access to finance is currently at 9% in developing economies generally and 18% in North Africa specifically (AFI, 2020). The new economy must entail women inclusion who make up 49.5% of the global population, as they have less economic security, a lower chance for economic resilience, and are overrepresented in the low wage sectors (AFI, 2020). Social protection systems that overlook gender inequality will fail to mitigate the risk of COVID-19 for women, much worse, will further aggravate inequalities. This occurs when women are marginalized in the design of policy and program responses (World Bank, 2020). Gender financial inclusion can limit COVID-19's negative impact on the economy as gender-driven GDP ranges from 10% in an advance economy to more than 30% in the Middle East and North Africa and South Asia. This means that not only women will be part of the formal economy, but also the entire society will benefit. Thus, gender financial inclusion means that everybody is a winner (AFI, 2020).

The rest of the paper is structured as follows: First, the researcher outlines the relevant literature. Second, the researcher showcases how the data is gathered, the method of sample size calculation, and the variables used in the paper. Third, the research demonstrates the outcomes of the empirical analysis and discussion of the results. Fourth and last, the researcher states the conclusion and policy recommendation.

2. REVIEW OF RELEVANT LITERATURE

A- Relevant Literature on the Impact of Financial inclusion on the Economy

Hanning and Jansen (2010) contend that low-income groups are immune to economic cycles. Hence, including them in the formal financial sector is likely to raise the stability of financial institutions. They have provided groundbreaking evidence that serving customers on the lower end tends to endure macro crisis and sustain the local economic activity (Hanning & Jansen, 2010).

Khan (2011), advances several main approaches by which financial inclusion can have a positive impact on financial stability and subsequently economic growth. One approach is allowing the entry of more small savers into the financial system. The accessibility of this segment to the formal financial sector would stabilize the deposit volume and diminish the reliance on non-core financing which has a negative impact in times of financial catastrophe. The other approach is that the successful implementation of financial inclusion reflects sound monetary policy through which financial stability and economic improvement can be achieved (Khan, 2011).

Sarma and Pais (2011) have conducted empirical analysis that corroborate that income measured by per capita GDP is a crucial factor in explaining the level of financial inclusion in a country. In fact, countries having low per capita GDP demonstrate a higher level of income inequality. They confirmed that along with the per capita GDP indicator, factors such as income inequality, urbanization, and adult literacy are very crucial. (Sarma & Pais,2011)

According to Spratt (2013), when perceiving financial inclusion in the context of the finance growth theory, it can create a burgeoning ground for productivity and in turn economic growth. Among the imperatives of economic growth are the levels of financial inclusion, the composition and the stability of financial institutions. Increasing the demand on financial institutions, an end that could be realized by availing inclusive financial services, can help financial markets to evolve from a nascent economy (Spratt, 2013).

Han and Melecky (2013) observe that financial inclusion measured by wider access and use of deposit can enhance banks' deposit base in the period of financial traumas. This will strengthen middle-income countries' ability to stabilize their financial sectors (Han & Melecky, 2013). On the credit side of the spectrum, Morgan and Pointes (2014), argue that financial inclusion measured by the proportion of credit provided to Small and Medium Sized Enterprises (SMEs) is likely to enhance stability in the financial system.

Sharma (2016) in a study on the nexus between financial inclusion and economic growth, asserts a positive and significant association between the various dimensions of financial inclusion and the GDP. This suggests that financial inclusion is a driver of economic growth (Sharma,2016). However, Awad and Eid (2018) have found a negative correlation between financial inclusion and financial stability and that these elements are only linked through more trade-offs than synergies. In other words, financial inclusion and stability nexus is affected by the extent of financial openness, fiscal freedom, education, and the depth of credit information system (Awad & Eid, 2018).

B- Relevant Literature on Gender Financial Inclusion

Swamy (2014) studies the gender dimension in financial inclusion and deduces that the impact of financial inclusive programs on gender dimension can be witnessed through the change in income of the poor particularly impoverished women. The impact was more in favor of women than men. This is illustrated in the income growth net of inflation effect which was estimated at 8.4% for women in contrast to 3.97% for men. Furthermore, financial inclusive programs are more beneficial to women than men as women are more aware of and have access to instruments of economic progress (Swamy, 2014).

As per Ademola (2017), financial and social inclusion have a positive and significant impact on women-owned businesses' performance. When combining financial and social inclusion programs, the performance of women-owned businesses rises by 42.9%. Likewise, social inclusion is cardinal for the realization of financial inclusion (Ademola, 2017).

Ogunleya (2017), substantiates that lending to women improves the repayment rates in Nigeria. His study also adds that a higher proportion of female clients is linked to fewer provisions or lower portfolio at risk. Accordingly, the study recommends that greater attention should be given to female clients to increase microfinance institutions' repayment rate and allow for greater access to industries that weren't available to women (Ogunleya, 2017).

Garcia, Del Brio, and Victorio (2019) suggest that the gender gap in financial inclusion in terms of access to the financial system has a negative effect on development. This means that developing a financial system willing to receive women improves global economic and social wellbeing. It is also found that access to a bank account and to a credit card is significant in explaining the relationship with economic development (Garcia et al. 2019).

Hendriks (2019) believes that gender financial inclusion can have a transformative effect on women. The active participation of women in the financial system allow them to better manage risk, smoothen consumption in the face of economic shocks and fund household commitments such as education. Securing low-income women with financial tools to save and borrow money as well as make and receive payments is fundamental for their economic empowerment. This is in addition to its poverty reduction feature especially since women are more likely to experience disproportionate poverty. It is argued that women access to individual private accounts is likely to advance economic resilience (Hendriks, 2019).

3. DATA, SAMPLE, VARIABLES AND METHODOLOGY

The data on financial inclusion is obtained from the Global Financial Inclusion Index (FINDEX) that is compiled by the World Bank (https://globalfindex.worldbank.org/). This index reports on the worldwide status of financial inclusion every three years, starting from the year 2011 till 2017. The researcher has chosen the year 2017, as it is the most recent reported year and the closest to COVID-19's impact on the global economy. For this reason, the researcher has preferred to conduct a cross-section analysis on 75 countries ranging from emerging to developed economies to test for the effect of gender financial inclusion on the global economy and how it can mitigate the negative corollaries of COVID-19. The GDP measured in constant local currency unit has been used as a proxy to measure the economy's status. Data on GDP is extracted from World Development Indicator compiled by the World Bank. The researcher has operated Statistical Package for Social Science (SPSS) to conduct the below empirical analysis.

Sample Size

To determine the sample size, the researcher has employed Cochran's formula which utilizes the following equation:

$$n_0 = \frac{Z^2 pq}{e^2}$$

The researcher has assumed a 0.35 estimated proportion at a 90% confidence level and 9% level of precision; the calculation has yielded a sample size of 75 countries.

Study Variables

The variables examined in this study are as follows:

1. The dependent variable (Y) = Gross Domestic Product (GDP) at constant local currency unit, used a proxy to measure economic condition in the chosen sample of countries
2. The independent variables (X) = These include financial inclusion indicators chosen to meet the objective of the study. These indicators are:
   a. X1: Borrowed to start, operate, or expand a farm or business, female (% age 15+)
   b. X2: Borrowed to start, operate or expand a farm or business, male (% age 15+)
   c. X3: Has a national identity card (% age 15+)
   d. X4: Households and NPISHs Final consumption expenditure at constant local currency unit. Used as a control variable to the dependent variable.

Table (1) list of factors examined in the study

Variable	Measure	References
Borrowed to start, operate, or expand a farm or business, female (% age 15+)	The percentage of respondents who reported borrowing any money to start, operate, or expand a farm or business in the past 12 months, female (% age 15+)	Global Findex database
Borrowed to start, operate, or expand a farm or business, male (% age 15+)	The percentage of respondents who reported borrowing any money to start, operate, or expand a farm or business in the past 12 months, male (% age 15+).	Global Findex database
Has a national identity card (% age 15+)	The percentage of respondents who report having a national identity card	Global Findex database
Gross Domestic Product (GDP) at constant local currency unit	GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. Data are in constant local currency.	World Bank national accounts data, and OECD National Accounts data files
Households and NPISHs final consumption expenditure at constant local currency unit.	Household final consumption expenditure (formerly private consumption) is the market value of all goods and services, including durable products (such as cars, washing machines, and home computers), purchased by households. It excludes purchases of dwellings but includes imputed rent for owner-occupied dwellings. It also includes payments and fees to governments to obtain permits and licenses. Here, household consumption expenditure includes the expenditures of nonprofit institutions serving households, even when reported separately by the country. Data are in constant local currency.	World Bank national accounts data, and OECD National Accounts data files

The Study Methodology and Measures

The researcher has used the Normality test, Linearity test, and the Heteroscedasticity test to acquire rounded descriptive analysis and sound results.

The study has used the normality test to determine if the data set is well modeled by a normal distribution. Many statistical methods cannot be applied unless the data is normally distributed or at least approximated by a normal distribution. For this reason, Kolmogrov-Smirnov and Shapiro-Wilk tests are deployed where the latter test have better power properties when compared to a wide range of alternatives (Shapiro, Wilk, & Chen, 1968).

Normality test

The abovementioned tests measure the closeness of the variables' distribution to the assumption of the normal distribution. The test runs the hypothesis as follows:

H_0: The data are drawn from a normal distribution.

H_a: The data are drawn from a non-normal distribution

The results of the normality show that not all variables are normally distributed. Table (2) reports the results of the Kolmogorov-Smirnov and Shapiro-Wilk test.

Table (2): The Results of Kolmogorov-Smirnov and Shapiro-Wilk test for Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
GDP (constant LCU)	.474	75	.000	.214	75	.000
Borrowed to start, operate, or expand a farm or business, female (% age 15+)	.121	75	.008	.950	75	.005
Borrowed to start, operate, or expand a farm or business, male (% age 15+)	.085	75	.200*	.968	75	.052
Has a national identity card (% age 15+)	.219	75	.000	.824	75	.000
Households and NPISHs Final consumption expenditure (constant LCU)	.447	75	.000	.234	75	.000
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

Having found that the data are not normally distributed, an approximation to normality is critical to satisfying the multivariate analysis main assumptions. The assumption of a normal distribution is requisite to conduct several statistical procedures such as t-test, linear regression, analysis of variance and discriminant analysis (Conover and

Iman, 1979). Van Der Waerden method is carried out to approximate the data to normal distribution based on smoothed ranks. (Conover, 1980; van der Waerden, 1927, 1930, 1931; Wright, 2000). The signed ranks are smoothed by converting them to quantiles of the normal distribution (normal scores) using the equations that follow:

$$A_{ij} = \Phi^{-1}\left(\frac{R\left(x_{ij}\right)}{T+1}\right)$$

A_{ij} = Normal score of each observation in a variable (x_{ij})

$R\left(x_{ij}\right)$ = The ordinary rank where observations of a variable (x_{ij}) are ranked in ascending order.

$\left(\frac{R\left(x_{ij}\right)}{T+1}\right)$ = cumulative probabilities of each observation in a variable (x_{ij}).

Ranks are smoothed through the computation of the probability associated with each observation.

T = Total number of observations in a variable (x_{ij})

Φ^{-1} = the quantile of the normal distribution is the inverse of each probability given by $\left(\frac{R\left(x_{ij}\right)}{T+1}\right)$

Heteroscedasticity test

Heteroscedasticity refers to varying variances of the error term which results in bias in the statistical estimation. The researcher has used the standard test that runs on the square of the error term. The hypothesis underlying the test and estimation equation is as follow:

$$\hat{e}_{it}^{2} = \alpha + \sum_{t=1}^{n} \beta_i x_{it} + v_i$$

H0: "Error variances are all equal (Homoskedastic)"

H1: "Error variances are not equal (Heteroskedastic)"

Table (3): the results of the Heteroscedasticity test

ANOVAa						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.000	4	.000	.000	1.000b
	Residual	2015887957712930000000000000000.000	70	28798399395899000000000000000.000		
	Total	2015887957712930000000000000000.000	74			
a. Dependent Variable: RES2						
b. Predictors: (Constant), Households and NPISHs Final consumption expenditure (constant LCU), Has a national identity card (% age 15+), Borrowed to start, operate, or expand a farm or business, male (% age 15+), Borrowed to start, operate, or expand a farm or business, female (% age 15+)						

By regressing the independent variables on the square of the error term, the model has proven no significance as P level of 1.00 is greater than the alpha level of 0.05, the null hypothesis rejection is failed. This means that error variances are homoscedastic.

Linearity Test

The linearity versus non-linearity is addressed and examined through the Regression Equation Specification Test (RESET) (Ramsey, 1969; Thursby and Schmidt, 1977; Thursby, 1979; Sapra, 2005; Wooldridge, 2006). RESET test approximates non-linearity that has been recommended in well-known econometric texts such as Greene. It employs two hypotheses as follow:

For the test the null hypothesis is:

H0: $\mathbf{y}_{\mathrm{i}} = \beta_0 + \beta_1 \mathbf{X}_{i1} + \beta_2 \mathbf{X}_{i2} + \beta_3 \mathbf{X}_{i3} + \beta_4 \mathbf{X}_{i4} + \varepsilon_{\mathrm{i}}$

And the alternative hypothesis is:

H1: $\mathbf{y}_{\mathrm{i}} = \beta_0 + \beta_1 \mathbf{X}_{i1} + \beta_2 \mathbf{X}_{i2} + \beta_3 \mathbf{X}_{i3} + \beta_4 \mathbf{X}_{i4} + \psi_{5i} \hat{y}^{2}_{5,i} + \psi_{6i} \hat{y}^{3}_{6,i} + \varepsilon_{\mathrm{i}}$

The null hypothesis refers to the linearity while the alternative hypothesis refers to non-linearity. $F-\text{statistic} = \dfrac{\left(\mathrm{SSE}_{\mathrm{R}} - \mathrm{SSE}_{\mathrm{U}}\right) \div \mathrm{J}}{\mathrm{SSE}_{\mathrm{U}} \div (\mathrm{T} - \mathrm{K})}$ where $\mathrm{SSE}_{\mathrm{R}}$ and $\mathrm{SSE}_{\mathrm{U}}$ are the sum squared errors for the restricted and unrestricted models respectively, J refers to the two hypotheses under consideration, T is the number of observations, and K is the number of regressors.

In case of linearity, the ordinary least square estimation is satisfied. In case of non-linearity, the literature has covered several treatments. One of the treatments is to conduct log or natural log transformation to both, the dependent and the independent variables which is the method chosen by the researcher (Allen, 1997; Chatterjee and Hadi, 2012)

Table (4): The Results of the RESET test

Data Input	
J	**2**
T	**73**
K	**5**
SSE-restricted	57.267
SSE-Unrestricted	56.805
Alpha (Prob)	0.05
Computed Values	
df-numerator	2
df-denomerator	68
F	0.276347677
Right Critical Values	3.131671971
Decision	Fail to Reject Ho
p-value	0.75940

Estimation Model

The general estimating equation for the non-linear model takes the form of the least squares method that follows:

$$\ln \mathbf{y}_{\mathrm{i}} = \beta_0 + \ln\beta_1 \mathbf{X}_{i1} + \ln\beta_2 \mathbf{X}_{i2} + \ln\beta_3 \mathbf{X}_{i3} + \ln\beta_4 \mathbf{X}_{i4} + \varepsilon_{\mathrm{i}}$$

Where i represents the ith value of the response variable y

4. RESULTS DISCUSSION

In this section, the researcher shall run the regression equation by regressing the GDP on the gender financial inclusion indicators and the control variable. Post observing the outcomes of the empirical analysis, the researcher shall compare the results to the literature review to conclude whether the results do agree with past scholars or negate and challenge them. This section reports the results of regressing the gender financial inclusion on the GDP in Table (5).

Table (5): the effect of gender financial inclusion on the economy (N=73)

Model B		Unstandardized Coefficients		t	Sig.
		Std. Error			
1	(Constant)	-1.462	2.081	-.702	.485
	Ln Borrowed to start, operate, or expand a farm or business, female (% age 15+)	.392	.194	2.017	.048
	Ln Borrowed to start, operate, or expand a farm or business, male (% age 15+)	.350	.192	1.825	.072
	Ln Has a national identity card (% age 15+)	.489	.383	1.275	.207
	Ln Households and NPISHs Final consumption expenditure (constant LCU)	.930	.036	26.170	.000
R=.958, R Squared=.918, Std. Error of the estimate=.91769, Sig=.000					

Dependent Variable: Ln GDP (constant LCU)

Giving the output of table (5), the researcher has resolved that 91.8% of the variability in the dependent variable is explained by the independent variable. This is indicated by the measure of the quality of fit provided by R squared. The significance of F-test table (5) implies that the model is significant in predicting the relationship between gender financial inclusion and the GDP.

By regressing the GDP on the gender financial inclusion indicators, the output from the coefficient table (5) has resolved that the “Borrowed to start, operate, or expand a farm or business, female (% age 15+)” variable, and the “Borrowed to start, operate, or expand a farm or business, male (% age 15+)” variable are both significant in predicting the relationship with the dependent variable at 10% significant level. Moreover, both variables have a positive impact on the GDP as when women and men borrow to start, operate, or expand a farm or a business, the GDP tends to increase by .392 and .350 respectively. However, it is worth noting that women borrowing for the sake of opening or expanding on a business activity has a higher contribution to the GDP than their male counterparts. As for the “Households and NPISHs Final consumption expenditure at constant local currency unit” variable has been used as a control variable because household consumption is one of the main determinants of the GDP. Hence, it is deemed positively significant in predicting the relationship with GDP. Last but not least, the “Has a national identity card (%age 15+)” variable, has no significant impact on the GDP in this model. The researcher has used the former variable as it has been mentioned in several occasions that the issuance of national identification cards (ID's) is preliminary for financial inclusion mainstreaming on a local level. This is as local financial institutions require national (ID's) to conduct Know Your Customer (KYC) procedures and the opening of bank accounts. When relating the empirical analysis outcome to the literature, the researcher can observe its consistency with what previous scholars have found on the matter. The significant positive impact of borrowing to start, operate, or expand a farm or a business for both female and male on GDP agree with the findings of Hanning and Jansen (2010), Khan (2011), Sarma and Pais (2011), Spratt (2013), Morgan and Pointes (2014), and Sharma (2016). Moreover, comparing female borrowers to their male counterparts, the researcher has found the outcome matches the findings of Swamy (2014) illustrated in the income growth net of inflation which is higher for women than for men. It also confirms that of Ogunleya's (2017) conclusion concerning lending to women and how they improve the repayment rates of microfinance institutions. In addition, this study's results further confirm Garcia et al. (2019) and Hendriks (2019) findings on the necessity of ameliorating the gender gap in financial access to reach economic wellbeing.

5. CONCLUSION AND POLICY RECOMMENDATIONS

The researcher can conclude that financial inclusion has a key role in furnishing economic growth. Inclusive finance is also vital for sustaining economic prosperity as it provides an equal opportunity for all segments of the community to have a financial service cover, let alone its capacity to improve people's quality of life and decrease poverty rates. Unfortunately, women constitute an alarming component of global poverty that if policymakers remain blindfolded on this fact, the world will waste a global GDP improvement of 10%-30%, better repayment rates of loans, and higher contribution to GDP than their male counterparts. Seeing their poverty rates status, COVID-19 is likely to strike this segment the hardest, which means that gender inequality will intensify and be damaged the most. As men are the breadwinners in the majority of cases, they will suffer higher mortality rates, leaving women to uphold the economic consequences caused by the pandemic on their own. Therefore, the inevitability of developing inclusive COVID-19 policy interventions that leave no one behind and answer the gender gap needs to financial access is the winning card in evolving a resilient system capable of absorbing economic shocks caused by major events such as pandemic spreads. It is also worth noting that, looking at women's access to finance as just a booming economic opportunity is a very materialistic and narrow angle. The world needs to perceive women as a partner in humanity, a requisite for the success of sustainable development and a guarantor of world peace.

To improve gender access to finance and develop an inclusive and resilient system, women must have equal access to technology as preliminary to digital financial services that enable access to funds, make payments and deposits without the necessity to travel or physical interaction with bank personnel. Policies to lessen the burdens of unpaid care work on women by supporting for childcare, sick leaves, tailoring of micro-insurance products to women needs with linkage to a robust health system that provides reimbursement for income lost from health emergencies. In times of pandemic, social assistance programs are vital for instant economic relief for the most underserved segments of the community. This assistance can allow more women into the formal financial sector through the transfer of funds directly into bank accounts via government to person (G2P) programs.

On an institutional level, financial regulators need to institutionalize gender in their work and establish a gender focal point that upholds the responsibility of assessing present levels of women representations within institutions, this will help to inform the process of developing policies and guidelines that support women leadership and gender diversity. Regulations should also focus on women-led SMEs, as they lose opportunities for formal financing due to non-existent track records, absence of collaterals and formal identification. In this light, there should be women focused credit guarantee schemes and deployment of movable credit registries.

6. ACKNOWLEDGMENT

I would like to extend my deepest appreciation to the support of Dr. Shirley Nagy, Program Coordinator, The Arab Open University (AOU), Egypt Branch, for she has encouraged me to take part in this initiative and for relaxing some of my urgent tasks to focus on research. I would also like to thank from the bottom of my heart Professor Tarek El Domiaty for teaching me how to conduct a proper research and understand financial econometrics. Moreover, I'd like to thank my cousin Dr. Rasha Moustafa Hammam for her academic and emotional support. This paper is dedicated to my family

7. REFERENCES

Ademola S, S., 2017. The Influence of Financial Inclusion and Social Inclusion on the Performance of Women-Owned Businesses in Lagos State, Nigeria. Scholdge International Journal of Management & Development, 4(3), pp. 18-27.

Allen, M. P. 1997. Understanding Regression Analysis. Plenum Press, New York.

Alliance for Financial Inclusion, 2020. Why the Economic Response to Covid-19 Needs to be Financially Inclusive and Gender Sensitive. [Online]

Available at: https://www.afi-global.org/sites/default/files/publications/2020-09/AFI_GIF_covid_AW_digital.pdf

[Accessed 24 September 2020].

Awad, M., & Eid, N., 2018. Financial Inclusion in the MENA Region: A Case Study on Egypt. Economics and Finance, 9(1). Retrieved from http://www.iosrjournals.org/iosr-jef/papers/Vol9-Issue1/Version-2/B0901021125.pdf

Briand, G. and Hill, R. Carter. 2011. Using Excel for Principles of Econometrics. 4th edition, Wiley

Breusch, T. S., and A. R. Pagan. 1979. A simple test for heteroscedasticity and random coefficient variation. Econometrica 47: 1287–1294.

Chatterjee, S. and Hadi, A.S., 2012 Regression Analysis by Example. 5th Edition, Wiley, New York, 98.

Conover, W. J. 1980. Practical Nonparametric Statistics, 2nd edition, John Wiley & Sons.

Cook, R. D., and S. Weisberg. 1982. Residuals and Influence in Regression. New York: Chapman & Hall/CRC.

Cook, R.D. and Weisberg, S., 1983. Diagnostics for heteroscedasticity in regression. Biometrika, 70(1), pp.1-10.

Conover, W.J. and Iman, R.L., 1979. On multiple-comparison procedures. Technical report, Los Alamos Scientific Laboratory

Garcia, L.-C., Del Brio, E. B. & Victorio, M. L. O., 2019. Female financial inclusion and its impacts on inclusive economic development. Women's Study's International Forum, November-December.Volume 77.

Han R & Melecky M 2013, 'Financial inclusion for financial stability: access to bank deposits and the growth of deposits in the global financial crisis', World Bank Policy Research Working Paper No.6577. World Bank, Washington.

Hannig A & Jansen S., 2010, 'Financial inclusion and financial stability: current policy issues', ADBI Working Paper No. 259. Tokyo: Asian Development Bank Institute.

Hendriks, S., 2019. The role of financial inclusion in driving women's economic empowerment. Development in Practice, 29(8).

Israel, Glenn D. 1992. Sampling the Evidence Of Extension Program Impact. Program Evaluation and Organizational Development, IFAS, University of Florida. PEOD-5. October

Khan HR 2011, 'Financial inclusion and financial stability: are they two sides of the same Coin?', address by Shri H. R. Khan, Deputy Governor of the Reserve Bank of India, at BANCON 2011, organized by the Indian Bankers Association and Indian Overseas Bank, Chennai, India. http://www.bis.org/review/r111229f.pdf

Krzysztofowicz, R. 1997. Transformation and normalization of variates with specified distributions, Journal of Hydrology, 197(1-4): 286–292.

Morgan P & Pontines V 2014, 'Financial stability and financial inclusion', ADBI Working Paper No.488, Tokyo: Asian Development Bank Institute.

Ogunleye, T.S., 2017, Financial Inclusion and the Role of Women in Nigeria. African Development Review, 29: 249-258. doi:10.1111/1467-8268.12254

Pohlert, T., 2014. The Pairwise Multiple Comparison of Mean Ranks Package (PMCMR). R package. Available at http://CRAN.R-project.org/package=PMCMR

Ramsey, J. B. 1969. Tests for Specification Errors in Classical Linear Least Squares Regression Analysis. Journal of Royal Statistical Society B, 31(2): 350–371.

Sapra, S. 2005. A regression error specification test (RESET) for generalized linear models. Economics Bulletin, 3(1): 1-6.

Sarma, M. & Pais, J., 2011. Financial Inclusion and Development. Journal of International Development, 23(5), pp. 613-628.

Sharma, D., 2016, "Nexus between financial inclusion and economic growth: Evidence from the emerging Indian economy", Journal of Financial Economic Policy, Vol. 8 No. 1, pp. 13-36. https://doi.org/10.1108/JFEP-01-2015-0004

Swamy, V., 2014. Financial Inclusion, Gender Dimension, and Economic Impact on Poor Households. World Development, Volume 56, pp. 1-15.

The Internal Monetary Fund, 2020. World Economic Outlook: The Great Lockdown, Washington: The International Monetary Fund.

Thursby, Jerry G., Schmidt, P. 1977. Some Properties of Tests for Specification Error in a Linear Regression Model. Journal of the American Statistical Association, 72(359): 635–641.

Van der Waerden, B. L. 1927. Beweis einer Baudetschen Vermutung, Nieuw Archief voor Wiskunde 15: 212–216

Van der Waerden, B. L. 1930. Moderne Algebra, volume 1. Julius Springer, Berlin, 1st edition.

Van der Waerden, B. L. 1931. Moderne Algebra, volume 2. Julius Springer, Berlin, 1st edition.

Wooldridge, Jeffrey M. 2006. Introductory Econometrics - A Modern Approach. Thomson South-Western, International Student Edition.

World Bank, 2016. UFA2020 Overview: Universal Financial Access by 2020, World Bank Publication, Washington, DC

World Bank, 2020. Digital Cash Transfer in the Time of Covid-19: Opportunities and Consideration for Women's Inclusion and Empowerment. [Online] Available at: http://documents1.worldbank.org/curated/en/378931596643390083/pdf/Digital-Cash-Transfers-in-Times-of-COVID-19-Opportunities-and-Considerations-for-Womens-Inclusion-and-Empowerment.pdf [Accessed 24 September 2020].

CHAPTER

3

SME – Key Drivers for Economic Development in the Sultanate of Oman

Subrahmanian Muthuraman,
Mohammed Al Haziazi, Rengarajan Veerasamy,
Nasser Al Yahyaei

SME – Key Drivers for Economic Development in the Sultanate of Oman

Subrahmanian Muthuraman, Mohammed Al Haziazi, Rengarajan Veerasamy, Nasser Al Yahyaei

ABSTRACT

Small and Medium Enterprise plays an important role in the development of the country's economy. SME contributes to economic development in various ways: by capacity building, employment generation, promoting competitive market, technology development. The development of SMEs is seen as the way to accelerating the achievement of wider socio-economic goals of the country. SMEs are the major growing force behind the growing economy of the Sultanate of Oman. Experts and economists are unanimous about the role of small and medium enterprises in the development of Oman's economy. The contribution which small and medium businesses can make to the national economy and wealth creation needs to be recognized by the governments from the beginning and be considered as part and parcel of the economic development process. This research aims to examine and to emphasize the role of SME in economic development, and to ascertain the role of SMEs in capacity building, employment generation, promoting competitive market, technological development for economic development in the Sultanate of Oman. The research design will be empirical in nature. Data will be collected from small and medium enterprise entrepreneurs in the Sultanate of Oman and it will be analyzed through various statistical tools using SPSS. The study will give directions on ways to improve the current strategies to motivate more young entrepreneurs to come forward and take up entrepreneurship. The result of the study will provide a direction for the development of new SMEs and the expected role of SME entrepreneurs for the contribution to the economic development in the Sultanate of Oman.

Keywords

SME, Capacity Building, Entrepreneurship, Technology Development, Economic Development

1. INTRODUCTION

Economic experts have abandoned their traditional approach to economic development based mainly on recruiting large companies with different financial and fiscal inducements. Today they are relying more on small and medium enterprises and new ventures than in the past (Toma et al., 2014). Small and Medium Enterprises have been discovered to be a key driver for a country's economic growth of any country (Schmiemann, 2009). Small and Medium Enterprises occupy a place of pride in virtually every country or state. Because of their significant roles in the development and growth of various economies, they have aptly been referred to as "the engine of growth" and "catalysts for socio-economic transformation of any country". SMEs represent a veritable vehicle for the achievement of national economic objectives of employment generation and poverty reduction at low investment cost as well as the development of entrepreneurial capabilities including indigenous technology (Nwachukwu, 2012).

International organizations, governments, and policymakers have shown greater attention to the function fulfilled by entrepreneurship in generating economic development (Toma et al., 2014). In developing countries, the role of SMEs is even more important since SMEs often offer the only realistic prospects for creating additional employment and thus reducing poverty and enhancing the quality of lives (Shokan, 1997). The potential of SMEs to promote domestic-led growth in new and existing industries and to strengthen the resilience of the economy in a competitive and challenging environment is inarguable. Economic growth in developed countries was significantly generated by SME activities (Aris, 2007). Small and medium-sized enterprises (SMEs) are a very heterogeneous group of businesses usually operating in the service, trade, agri-business, and manufacturing sectors (Lukács, 2005). Due to their sheer numbers, size, and nature of operations, the role of SMEs in promoting endogenous sources of growth and strengthening the infrastructure for accelerated economic expansion and development in the Sultanate of Oman has been recognized (Aris, 2007).

2. LITERATURE REVIEW

The review of literature has great importance in carrying out any research, also the literature helps the researcher in many ways in understanding the current scenario, prevailing problem and to identify the gap in the research. There is a large body of literature available in entrepreneurship and economic development. Some of the literature relevant to this study has been identified and incorporated into this paper.

SME can be defined based on certain criteria including, turnover, number of employees, profit, capital employed, available finance, market share, and relative size within the industry. The definition can be based on either some quantitative or qualitative variables. Quantitative definitions mainly express the size of enterprises, mainly in monetary terms such as turnover, asset value, profit, as well as a quantitative index like the number of employees (Etuk, et al, 2014). For SMEs to fully participate in the process of globalization they must develop capacities that will enable them to be internationally competitive in global markets. This will involve building upon the advantages possessed by their entrepreneurial spirit, flexibility, resourcefulness, and an ability to identify business opportunities and market niches based upon their unique products and services (Harvie, 2004).

SMEs have a propensity to employ more labor-intensive production processes than large enterprises. Consequently, they contribute significantly to the provision of productive employment opportunities, the generation of income, and, eventually, the reduction of poverty. According to the statistics, in industrialized countries, SMEs are major contributors to private sector employment. Empirical studies have shown that SMEs contribute to over 55% of GDP and over 65% of total employment in high-income countries. SMEs and informal enterprises account for over 60% of GDP and over 70% of total employment in low-income countries, while they contribute about 70% of GDP and 95% of total employment in middle-income countries (Fida, 2208).

In the past decades, there has been a growing interest regarding the concepts of economic development and entrepreneurship. Researchers have concluded that although "economic development theory can still be argued to lack a 'general theory' of entrepreneurship, one that could encompass a variety of development outcomes, progress has been made in extending the notion and understanding of entrepreneurship in economic development" (Naudé, 2008, p47). Entrepreneurship is spreading recognized by government officials throughout the world not only as "a key mechanism for enhancing economic development, particularly in regions where entrepreneurial activity was once vibrant and is now lagging", but also as "a good solution because it provides a relatively non-controversial way to increase the proverbial pie, creating jobs and enhancing per capita income growth" (Shane, 2005, p 265).

From the review of literature, it can be understood that small and medium entrepreneurs play a vital role in improving the economic development of a country, the small and medium enterprises will definitely contribute to the growth of GDP of any country. The role of small and medium enterprises is varying from country to country depending on the socio-economic environment. In the

Sultanate of Oman, there is a huge scope for small and medium enterprises as the government has open avenues for various sectors such as tourism, manufacturing, logistics, mining, and agriculture.

3. SME IN SULTANATE OF OMAN

His Majesty of Sultanate of Oman vision is that the National Economy of a country is in fact based on small and medium industries, these are the fundamentals, the foundations of all national economies. The Public Authority for Small & Medium Enterprises Development (Riyada) is the Sultanate of Oman's arm for the development of small and medium enterprises and the strengthening of their contribution to the local economy through a wide range of business advisory services and training programs. According to the data released by the National Centre for Statistics and Information (NCSI), the Sultanate of Oman, The total number of Small and Medium Enterprises (SMEs) registered with the Public Authority for Small and Medium Enterprises Development (Riyada) till the end of March 2020 stood at 44,083, which is an increase by 13.7 percent compared to the same period of 2019 (Observer, 2020). Small and Medium Enterprises (SMEs) are expected to play a key role in Oman's GDP in the future. Every year, more measures were taken by both public and private sectors to enhance the role of SMEs (Kothaneth, 2018).

Both developed and developing countries recognize the important contributions which Small and Medium Enterprises (SMEs) make in the development of national goals. As a result, SMEs are, in most countries, a key component of the development agenda and strategy (Al-Kharusi, 2003). Small and medium-sized enterprises (SMEs) are now recognized as being of major importance to the strategic agendas of many countries around the world since they can lower unemployment and increase economic growth. This is particularly significant for a small country like Oman which is seeking to diversify (Al-Kharusi, 2003). By reinforcing economic growth and development, small firms help to create a more prosperous society, thus improving the nation's well-being as a whole. The high priority given to promoting small business in Oman is not just because of the above-mentioned contributions, but also more significantly due to Oman's industrial structure.

Small and Medium Enterprises are mostly endogenously based enterprises, their links with large companies in Oman contribute indirectly to the same goal and therefore, by encouraging these links, the growth and expansion of SMEs are fostered. As the Omani economy moves into a more complex phase of industrialization and because more global, in its activities, the integration of an efficient network of supply industries is extremely essential if export activities are to expand (Al-Markazi, 2001).

4. PROBLEM STATEMENT

Several dynamic forces, such as technological disruption, fluctuating economies, or demographical changes, have brought new opportunities and threats for organizations, and transformed societies from all over the world. To cope with these shifting forces, governments, public and private organizations, and the public are more and more aware of the significance of entrepreneurship. The role of entrepreneurship in society has become prominent since the end of the last century (Toma et al., 2014). Small businesses have earned government recognition in Oman because they have been important in generating employment, complementing the work of large firms, and in developing local resources (Al-Markazi, 2001). The Omani government has made it clear that small businesses will play one of the leading roles in Oman's future industrial growth and, to assist such businesses, it has taken responsibility for the establishment of the nation's infrastructure.

Unfortunately, SMEs have not played the significant and crucial role they are expected to play in Oman's economic growth, development and industrialization. The most common constraints hindering small and medium scale business growth in Oman are lack of financial support, poor management, lack of training and experience, insufficient profits, and low demand for product and services. So, the mortality rate among SMEs in Oman is very high within their first five years of existence. The reasons for the high mortality rate include the following among others: Many prospective entrepreneurs do not have a clear vision and mission of what they intend to do. Many of the SMEs are not business-specific and hence have no focus and are easily blown away by the wind. With the dismantling of trade barriers as part of globalization, SMEs in developing countries are facing intense competition from industries of other countries, which have an enabling environment for production, distribution, and marketing (Nwachukwu, 2012).

Arising from the above discussion emerges the following question: What is the relationship between economic development and entrepreneurship? This has led us to provide some contextual background to the field of entrepreneurship and economic development, laying the foundation for this study on exploration and research on how SME contributes to the economic development in the Sultanate of Oman.

5. OBJECTIVES OF THE STUDY

The main purpose of this research is to identify ways and means, which will establish and sustain the vibrancy for Omani SME entrepreneurs so that they can play the expected vital role as the engine of growth in Oman's economic development efforts. To achieve this, the research attempts to achieve the following objectives:

1. To examine the role of Small and Medium Enterprises in Economic Growth and Development
2. To access the SME contribution to the economic development in the Sultanate of Oman through capacity building, employment generation, promoting competitive market, technological development
3. To offer policymakers ways to increase the role of SME in achieving economic growth of the country

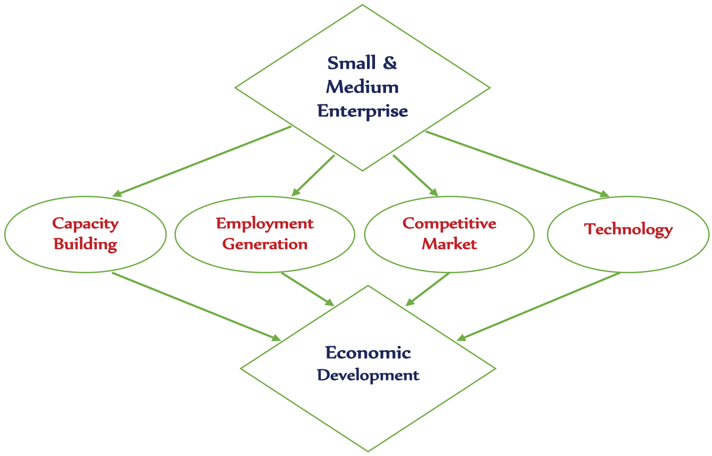
6. SIGNIFICANCE

The economic growth of a country depends on the number of entrepreneurs present in that country as well as on a favorable social-economic environment of that country. Government and economic experts fully recognized that SME is the main engine for economic growth and a major factor in promoting private sector development and partnership (Nwachukwu, 2012). The development of the SME sector therefore represents an essential element in the growth strategy of most economies and holds particular significance in the case of the Sultanate of Oman.

SMEs not only contribute significantly to improved living standards, employment generation, and poverty reduction but they also bring about substantial domestic or local capital formation and achieve high levels of productivity and capability. From a planning standpoint, SMEs are increasingly recognized as the principal means for achieving equitable and sustainable industrial diversification, growth, and dispersal. In most countries, SMEs account for well over half of the total share of employment, sales, value-added and hence contribution to GDP (Nwachukwu, 2012).

The SME role is not crucial as expected to play in Oman's economic development. There is a need for inculcating entrepreneurship education and developing entrepreneurial skills among students has become an essential component in college and university curriculum (Subrahmanian, et al., 2016). To remain competitive in the market, youth entrepreneurs in Oman, need to have entrepreneurial skills such as creativity, innovation, new product development, new marketing strategies, and networking (Muthuraman, et al., 2019).

7. CONCEPTUAL MODEL



The study by Thurik provided a view on emerging economies and throws the light on the view that entrepreneurship has emerged as an important element in the organization of economies (Thurik, 2008). Smith studied entrepreneurship and economic growth in terms of the function of entrepreneurship in economic growth (Smith, 2010). Researchers have made significant efforts to deal with the problem of measurement difficulties as well by constructing measures of capacity building. It has been observed that in the light of the definition put forth by Teece et al. of dynamic capabilities, the research has put more emphasis on a firm's ability to integrate, build and reconfigure its internal competencies (Teece, et al., 1997). Extant strategic management theory highlights that firms use alliances as a medium for acquiring external competencies, technology innovation, and enhancing core business activities (Mitchell & Canel, 2013).

ILO found empirical evidence confirming small businesses to be the engine of job creation in the developing economies. The job creation or destruction dynamics are driven by births and deaths, expansions and contractions, and in- and out-migration of firms (Muthuraman, et al., 2020). Understanding the present and future needs of customers is crucial for an organization to spur the culture of innovation in the organization so as to continuously improve and develop products and services that meet customer wants and needs (Pelham & Wilson, 1995). On the other hand, competitor orientation involves active monitoring of all existing and potential competitors in the marketplace and collect competitive intelligence to differentiate the competitors' approaches (Narver & Slater, 1990). The key objective of market-oriented organizations is to be attentive towards the competitor's activities and consider this as a source of ideas for new product development. In fact, a greater understanding of competitor orientation may reduce the failure of new products (Mahmoud, et al., 2016).

SMEs can be benefited from the new process, techniques, or new ideas of production. SMEs with new technology may be able to overcome diseconomies of scale so as to compete with large enterprises. To compete in this competitive market, SMEs have to monitor technological development actively. SMEs need technology to meet or exceed the expectations of customers (Islam & Nasira, 2017). SMEs have played many vital roles in providing avenues for local investors to diversify into manufacturing outputs as well as offering affordable investment opportunities that are suitable for domestic investors and the present managerial capability (Al-Dhahab, 2001). It is difficult to fathom out the reason why the SMEs would not lead Oman to the socio-economic development and industrial transformation as the same has led other countries to their industrial developments and quality living standards (Muthuraman, et al., 2020).

8. MATERIALS AND METHODS

The focus of this study is to investigate the role of small and medium enterprises in the economic development of the Sultanate of Oman. The study will adopt an empirical research design. Empirical research design is very opted for this study because, in the current situation, most of the entrepreneurs believe only that what they can see, hear and experience. So based on the empirical research, the gathered data can be compared with the theory and hypothesis that will validate the result arrived out of this research. The survey population of this study will consist of SME entrepreneurs who have experience in running a business for at least one year. The sampling unit will cover the industries such as oil & gas, construction, engineering, manufacturing, services, trading, tourism, banking, food, automobile, health, telecom, and insurance in Muscat city. Convenience sampling will be adopted for the data collection purpose. The study will be conducted in major urban and suburban of Oman where most of the SME's were located.

This study is based on both primary data and secondary data. The primary data will be collected through a survey questionnaire which will be developed in conjunction with the literature review aimed at understanding the contributions of SME entrepreneurs in economic development. The questionnaire will consist of three components such as a profile of the SME & entrepreneur, perceptions on SME development, contributing factors, and role of SMEs in achieving economic development. Then the questionnaire will be submitted to the experts in the field of entrepreneurship for getting feedback. Based on their feedback if any changes required will be incorporated and the same will be distributed to a few sample populations for the pilot study and the reliability will be checked using the Cronbach alpha value. The respondents will clearly be explained the purpose of this research before collecting data. The secondary data will be collected through the analysis of reports, studies, news articles, and other text sensitive documentation.

The data collected will be processed and analyzed using the Microsoft Excel and Statistical Package for Social Sciences (SPSS). The use of statistical distributions such as tables showing frequencies and percentages will be adopted in the study. Descriptive analysis will be used for analyzing the perception of the entrepreneurs. The hypotheses will be developed, and it will be tested with the help of various univariate, bivariate, and multivariate statistical tools to understand the role of SME in economic development of the Sultanate of Oman.

9. EXPECTED OUTCOME

It is expected that small and medium enterprises, now representing the largest category in the economic sector, will complement the activities of large-scale businesses as industrialization gains pace in Oman. This will come about through their integration into the mainstream of industrial development since Oman is seeking to diversify its production base and also to develop a viable private sector capable of sustaining and increasing economic growth (Al-Kharusi, 2003).

The result of the study will provide a direction for the new and existing SMEs and the expected role for the contribution to the economic development in the Sultanate of Oman through capacity building, employment generation, promoting competitive market, technological development. The study will provide recommendations to the Government the ways to assist and support prospective SME entrepreneurs relating to business opportunities which would enable them to operate more efficiently to meet the market competitions. The result will give recommendations to authorities who may support Omani graduates to realize their entrepreneurial ambitions, contribute to the Omani economy, and achieve national inclusion (Subrahmanian, et al., 2016). For the government to succeed in reinventing the future of SMEs, the findings and suggestions will give directions on ways to improve the current strategies to motivate more young entrepreneurs to come forward and take up entrepreneurship instead of waiting for job opportunities. The study will try to emphasize that young Omani should be job providers and not job seekers. The thrust and emphasis of this study also emphasize introducing modern technology, practical technological, and entrepreneurial spirit aimed at improving the economic development of the Sultanate of Oman.

10. ACKNOWLEDGEMENT

This paper is the partial outcome of the project titled "SME & Economic Development in Sultanate of Oman" ID: BFP/RGP/EHR/18/126 funded by The Research Council (TRC), Sultanate of Oman

11. REFERENCES

Al-Dhahab, H. (2001). Oman Newspaper, October 2001.

Al-Kharusi, A., (2003). Financing small business in Oman (Doctoral dissertation, © Abdulaziz Al-Kharusi).

Al-Markazi, (2001). Monthly publication of the Central Bank of Oman, Special Issue, Volume 25.

Aris, N.M., (2007). SMEs: Building blocks for economic growth. Department of National Statistics, Malaysia.

Etuk, R.U., Etuk, G.R. and Michael, B., (2014). Small and medium scale enterprises (SMEs) and Nigeria's economic development. Mediterranean Journal of Social Sciences, 5(7), p.656.

Fida BA, (2008). The Role of Small and Medium Enterprises (SMEs) in Economic Development. Enterprise Development, Free Online Library

Harvie, C., (2004). East Asian SME capacity building, competitiveness and market opportunities in a global economy

Islam, M., & Nasira, S, (2017). Role of Technology on Development of SME: Bangladesh Perspective. Journal of Entrepreneurship & Management, 6(1), pp 1–11.

Kothaneth, L. (2018). SMEs set to play key role in Oman's GDP. Observer, 2018, July 7.

Lukács, Edit. (2005). "The economic role of SMEs in world economy, especially in Europe." European integration studies 4 (1), pp 3-12.

Mahmoud, M. A., Blankson, C., Owusu-Frimpong, N., Nwankwo, S., & Trang, T. P. (2016). Market orientation, learning orientation and business performance. International Journal of Bank Marketing

Mitchell, S., & Canel, C, (2013). Evaluating strategic alliances in small and medium-sized enterprises. Advances in Management, 6(4), pp 2-9.

Muthuraman S, Al Haziazi M. (2019). Entrepreneurial Growth: Challenges to Young Omani Entrepreneurs, International Journal of Business and Applied Social Science, 5(7), pp 98-114

Muthuraman, S., Al Haziazi, M., Veerasamy, R. and Al Yahyaei, N., (2020). Framework for Oman's Economic Development through Small & Medium Enterprise.

Narver, J. C., & Slater, S. F. (1990). The effect of a market orientation on business profitability. Journal of marketing, 54(4), pp 20-35.

Naudé, W., (2008). Entrepreneurship in Economic Development, UNU-WIDER, Research Paper No. 2008/20, p. 47.

Nwachukwu, A.C., (2012). The role of entrepreneurship in economic development: The Nigerian perspective. European Journal of Business and Management, 4(8), p.96.

Observer, O. (2020). 44,083 SMEs registered till March 2020, April 4.

Pelham, A. M., & Wilson, D. T. (1995). A longitudinal study of the impact of market structure, firm structure, strategy, and market orientation culture on dimensions of small-firm performance. Journal of the academy of marketing science, 24(1), pp 27-43.

Schmiemann, M., (2009). SMEs were the main drivers of economic growth between 2004 and 2006. Statistics in focus, 71, p.8.

Shane, SA. (ed.), (2005). Economic Development through Entrepreneurship. Government, University and Business Linkages", Edward Elgar, Cheltenham, p. 265.

Shokan O. (1997). Entrepreneurship Development in Small Scale Business. Lagos, Labson resource Nigeria Ltd.

Smith D. (2010). The role of entrepreneurship in economic growth. Undergraduate economic review, 13;6(1):7.

Subrahmanian M, Subramanian K, Al-Haziazi M, Herimon PC. (2017). Entrepreneurial Intent of Prospective Graduates in Sultanate of Oman in European Conference on Innovation and Entrepreneurship, Academic Conferences International Limited, pp. 653-661

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. Strategic management journal, 18(7), pp 509-533.

Thurik, R, (2008). Entrepreneurship, economic growth and policy in emerging economies

Toma, S.G., Grigore, A.M. and Marinescu, P., (2014). Economic development and entrepreneurship. Procedia Economics and Finance, 8, pp.436-443.

Industry

CHAPTER

4

Sustainable B2B marketing during a pandemic crisis: An overview of sustainable solutions and marketing practices

Shahrzad Yaghtin

Sustainable B2B marketing during a pandemic crisis: An overview of sustainable solutions and marketing practices

Shahrzad Yaghtin

ABSTRACT

In addition to the public and society, the current Coronavirus pandemic is bringing about wide-ranging and severe challenges for organizations and B2B firms. Such challenges have provoked enormous concerns about the future of society and businesses and call attention to the importance of sustainable marketing to promote socially responsible practices for moving toward a sustainable post-pandemic future. Thus, the present paper aims to provide a framework for planning an efficient B2B marketing strategy for implementing during a pandemic crisis based on the principles of sustainable marketing. The five dimensions of sustainable marketing, including economic, social, environmental, ethical, and technological pillars, were considered as the cornerstones of sustainable B2B marketing and its relevant practices. Furthermore, this study involves practical implications by introducing sustainable solutions and marketing practices that can be applied by B2B firms during a pandemic crisis. For this purpose, a comprehensive literature review was conducted to explore the practical solutions that empower B2B firms to meet the stakeholders' urgent and long-term needs and to help society and other organizations to get through the crisis more confidently. Therefore, this research contributes to a broader application of sustainable marketing by offering viable solutions to B2B firms and organizations for efficient transformations toward a sustainable post-pandemic future.

Keywords

Sustainability; Coronavirus pandemic; COVID-19 crisis; B2B marketing; B2B firms; Sustainable solutions

1. INTRODUCTION

The COVID-19 pandemic crisis is having catastrophic effects for most B2B organizations around the world. The current intra-organizational and inter-organizational tensions require a mindful approach for managing business operations. Also, the direct threat of an infectious disease to human beings enhances the importance of managers' positive attitudes toward individuals and societal concerns (Cortez and Johnston, 2020). During the current situation that it is not clear if and when the normal business will return (Cankurtaran and Beverland, 2020), organizations should incorporate a responsive approach to help their stakeholders and society in all their marketing efforts as the businesses and society are mutually interdependent. Needless to say that organizations have little impact on the occurrence of exogenous shocks (Hartmann and Lussier, 2020), nor can the occurrence of any one specific event be pinpointed to a certain point in time in the future (Oehmen et al. 2020); however, organizations that implement holistic sustainability strategies send a strong message to their stakeholders and customers that they have a profound understanding of today's social and environmental challenges, and they enact positive changes by integrating social and environmental concerns in their businesses. Besides, taking a sustainable market orientation enables B2B organizations to incorporate the principles of macro marketing systems management into their marketing efforts, which is of high importance during uncertain situations. It's time to believe that "the purpose of business is more than business", it is to nurture all of its stakeholders, including employees, customers, suppliers, and community and not just the investors (Sheth, 2020). This brief statement reveals why B2B firms should consider sustainable marketing to find efficient solutions for navigating through the pandemic crisis more efficiently. These sustainable paths lead organizations to provide continuous fulfillment of the customers' and other stakeholders' needs during the pandemic and the post-pandemic.

Based on the arguments above, this study aims to propose a framework for implementing sustainable marketing by B2B firms to reduce the adverse impacts of a pandemic on stakeholders and society and to identify new business opportunities during a pandemic crisis. For this purpose, this research investigates the findings of previous studies by conducting a comprehensive literature review based on the main dimensions of sustainable marketing. Thus, this study contributes theoretically by providing a framework for planning an efficient sustainable marketing strategy based on the sustainable marketing pillars. Moreover, it practically contributes by introducing viable solutions and marketing practices that can be applied by firms to help their stakeholders and society to get through a pandemic crisis toward a sustainable post-pandemic future.

2. METHODOLOGY

This paper explores sustainable solutions that can aid B2B firms to manage through a pandemic crisis, based on a literature review of recent studies. The research databases made available through Web of Science, ScienceDirect, and Emerald were used to identify relevant publications for the analysis. Together, access to around 71 studies was provided from peer-reviewed journals, scholarly books, and conferences proceedings on the consequences of pandemic crisis, the solutions to pandemic crises, and the other topics that are particularly relevant to this research. In the process of literature review, first, the search was conducted for the terms most widely used to describe the phenomenon: pandemics, epidemics, crises, sustainability, pandemic crisis, COVID-19, Coronavirus pandemic, pandemic solutions/recommendations, pandemic impacts, economic impacts, financial impact, social impact, psychological impacts, solution provider. However, not all related studies apply this terminology, with some scholars serving more descriptive language. The review of the titles and abstracts of the search results yielded 45 studies for further inspection.

At the next step, selection criteria were used to refine our choice of studies for investigation in the detailed analysis. This time, the selection criteria limited the studies to 23 contributions for a deeper investigation. The majority of the included studies (78.26%), was academic publications from the ABS journals (Table 1). All findings, intermediate results, inclusion and exclusion criteria, and decisions were reported in a review protocol. The publication dates range from 2011 to 2020, with a noticeable rise in publications peak in 2020 (60.86% of studies). To analyze the full text of the 23 contributions a data extraction form was created. For each study, the study focused on the kind of pandemic impact being studied and the type of solution being proposed.

Table 1 ABS Journals included in the sample

Journal title	ABS ranking	Number of publications	Weight %
Journal of Management	4*	1	4.35
Journal of Marketing	4*	1	4.35
Journal of Service Research	4	1	4.35
Industrial Marketing Management	3	7	30.44

Journal title	ABS ranking	Number of publications	Weight %
Journal of Business Research	3	2	8.69
Journal of Business & Industrial Marketing	2	2	8.69
Journal of Service Management	2	1	4.35
Journal of Social Marketing	1	2	8.69
Marketing Intelligence and Planning	1	1	4.35
International Journal of Emerging Markets	1	1	4.35
Other publications	_	5	21.74

3. FINDINGS

3.1 Proposed sustainable marketing solutions

In the current situation, a broader view of marketing management is imperative due to the social and economic severe problems arising from the adverse impacts of the COVID-19 crisis. Relying on the constructs of sustainable marketing can result in providing sustainable solutions that aid B2B firms in maintaining their business continuity and growth and simultaneously contribute to environmental and social development during the difficult times of a pandemic crisis. Elkington (1998) defines sustainable marketing as a three-dimensional construct, including social engagement, economic success, and environmental responsibility, while Lim (2016) develops the model into five dimensions: economic, social, ethical, environmental, and technological (Ćorić et al. 2020). Lim's study is also the first study to incorporate ethical and technological dimensions into the sustainability marketing model. The ethical pillar, in which a proposed synthesis among deontology, consequentialism, and virtue ethics is argued to reinforce the sustainability agenda, and the technological pillar, in which the innovation and the use of technology is discussed to enable society and education of sustainability and the creation or co-creation of alternatives or solutions that lead to greater sustainability (Lim, 2016; Ćorić et al. 2020). Table 2 shows the overview of findings of previous studies on sustainable solutions that can be considered by B2B firms during the COVID-19 pandemic based on the five main dimensions of sustainable marketing.

Table 2 Overview of findings of previous studies on sustainable marketing solutions

Areas of sustainable marketing	Sustainable solution	Brief explanation	Author
Economics	Reallocating the marketing budget to digital efforts	Due to the cancellation of most B2B exhibitions and tradeshows and regarding the growing importance of e-commerce since the onset of the COVID-19 outbreak, the shift for reallocating the marketing budget to digital efforts is imperative for B2B firms.	Petro, 2020; Gavin et al., 2020; Bond et al., 2020
	Efficient digital content marketing strategy	Digital content marketing enables B2B customers to find their required information with the least effort depends on their needs and concerns in different situations.	Yaghtin et al., 2020; Seyyedamiri and Tajrobehkar, 2019; Huotari, 2015;
	Using digital showrooms	Efficient digital showrooms enable buyer-seller communication and strengthen customer relationships through questions and answers in the platform.	Cortez and Johnston, 2020
	Re-evaluating the company's business relationships	During a pandemic, it is critical to re-evaluate the business relationships to empower them to meet the customers' needs more responsively.	Obal and Gao, 2020; Zafari, Biggemann, Garry, 2020; Sheth, 2020
	Collaborative B2B marketing strategies	B2B firms can develop a coopetition (simultaneous cooperation and competition) strategy to avoid resource limitation during a pandemic crisis.	Crick and Crick, 2020; Zafari, Biggemann, Garry, 2020

Areas of sustainable marketing	Sustainable solution	Brief explanation	Author
Society	Conveying helpful information	Companies can convey relevant information to the public to promote appropriate psychological and health-protective behaviors and effective responses.	Sharma et al. 2020; Naumovska, Jovevski, and Brockova, 2020
	Risk Communication	Risk communication is a critical tool in response to different pandemic consequences, as it aims to establish public and professional awareness and confidence.	Brown et al. 2013; Krewski, D., Turner, M.C. and Tyshenko
	Management of emotions and stress	In a pandemic crisis, it is crucial to plan and implement the crisis communication strategies to mitigate the adverse impacts of anger and anxiety caused by the pandemic within the society.	Naumovska, Jovevski, and Brockova, 2020; Cortez and Johnston, 2020
	CSR activities	One of the most valuable lessons learned from pandemics is that we are all in this together, which undoubtedly raises people's expectations of businesses being more socially responsible.	He and Harris, 2020
	Multi generational relationship	The economic crisis generated by the lockdown and social distancing has been a good wake up call for businesses to remind that the best way to survive is multigenerational relationship with society, suppliers, and employees.	Sheth, 2020
	Social marketing	Social marketing has a notable role to play in empowering and transforming societies to be capable, free, equitable, fair, and sustainable, particularly during a crisis.	Saunders, Barrington, and Sridharannd, 2015; Lefebvre, 2012

Areas of sustainable marketing	**Sustainable solution**	**Brief explanation**	**Author**
Environment	CSR activities	The current pandemic offers a significant opportunity for firms to shift towards more genuine and authentic CSR and contribute to address urgent global environmental and social challenges.	He and Harris, 2020
	Green Marketing	The main goal of green marketing is to place emphasis on building long-term relationships with all stakeholders and creating the natural need to be environmentally responsible.	Fraj, Martínez, and Matute, 2013; Kotler, 2011
Ethics	Reinforcing the sense of altruism in communications	Providing clear communication and reinforcing the sense of altruism that people should rightly be feeling, is essential during the pandemics.	Brooks et al., 2020
	Considering the critical role of Trust and Transparency	The crisis communication should be based on trust and that need to be build up by transparency.	Naumovska, Jovevski, and Brockova, 2020
Technology	Openness to innovation	Openness to new ideas can generate more experiments and knowledge and explore more paths to apply that knowledge to meet customer needs.	Chesbrough, 2020
	Using design thinking	Disruptive events such as pandemic crises represent wicked problems that require managers to break out of traditional patterns of thinking. Design thinking represents one such approach.	Cankurtaran and Beverland, 2020

Areas of sustainable marketing	Sustainable solution	Brief explanation	Author
Technology	Using technical webinars	Using technical webinars can help B2B organizations to co-create and share knowledge to recover faster from the pandemic crisis.	Cortez and Johnston, 2020
	Using high quality data and analytics	During pandemic crisis, high-quality data and analytics can enable knowledge-based, innovative, and transformative solutions.	Dillon et al. 2016
	Digital transformation	The quality of an organization's response to the crisis depends notably on the current state of the digital transformation.	Cortez and Johnston, 2020; Heinonen, and Strandvik, 2020

4. DISCUSSION AND IMPLICATIONS

The findings of the literature review (Table 2) identified viable sustainable solutions and efficient marketing practices derived from previous studies that can be implemented by B2B firms during a pandemic crisis. These solutions are offered based on the five areas of sustainable marketing:

4.1 Sustainable marketing solutions related to economics pillar:

In this section, the valuable solutions or marketing practices that can be applied by the firms to reduce the adverse effects of a pandemic on economics are introduced. The urgent needs and current concerns of customers and society are the major considerations for offering the proposed solutions:

i) Reallocating the marketing budget to digital efforts: A survey among more than 3600 B2B decision-makers revealed currently around 90% percent of sales operations take place via digital platforms (Gavin et al., 2020). Cancellation of most B2B exhibitions and tradeshows, as one of the most efficient B2B communication tools, due to the COVID-19 outbreak is another significant reason that places more emphasis on the reallocation of the marketing budget to digital efforts in B2B environments.

ii) Efficient digital content marketing strategy: Currently, B2B customers are more than any time looking for the reliable and helpful information in order to get through the pandemic situation. Providing relevant and valuable information through an efficient digital content marketing strategy aids B2B customers to find their required information with the least effort. It also allows B2B firms to use customers' qualitative and quantitative feedback on digital platforms in order to obtain customer insight for improving their marketing strategy during the pandemic and the post-pandemic (Yaghtin et al., 2020; Seyyedamiri and Tajrobehkar, 2019).

iii) Using digital showrooms: Before the pandemic, the sales efforts commonly rely on face-to-face interactions with supportive physical or digital material. During the pandemic, it is critical to offer buyers the chance to have a simulated usage experience of the product or service execution. This provides customers the opportunity to pay attention to key attributes, preventing them from just concentrating on transactional elements such as terms of payment, billing, or delivery time. Moreover, efficient digital showrooms strengthen buyer-seller communication and facilitate the creation of relationships through questions and answers in the digital platform (Cortez and Johnston, 2020).

iv) Re-evaluating the company's business relationships: During stable times, B2B companies will commonly aim to create long-term relationships that provide enhanced efficiency and profitability. However, uncertain times, such as the time during a pandemic crisis, cause undesired disruptions in both the internal and external environment. Therefore, it is vital during a pandemic to reevaluate the firm's business relationships as a whole. Also, a pandemic crisis may present opportunities for creating new business ties as there may be other organizations/partners/suppliers who are better equipped to help the firm in meeting the urgent short-term needs of customers or to capitalize on outstanding long-term opportunities (Obal and Gao, 2020; Zafari, Biggemann, Garry, 2020).

v) Collaborative B2B marketing strategies: Mindfully managing business activities needs a combination of trust, doubt, and control mechanisms to perform exchange while safeguarding against relational vulnerabilities (Zafari, Biggemann, Garry, 2020). For this purpose, managers must balance the risks and rewards of coopetition (simultaneous cooperation and competition) activities. Also, they should make a sensible decision on whether to maintain their cooperation relationship once the pandemic has ended or resume their activities individually (Crick and Crick, 2020).

4.2 Sustainable marketing solutions related to social pillar:

One of the critical roles of organizations in this crisis is to aid the government in supporting the people and society to be prepared for recovering faster from the pandemic crisis to move toward a sustainable future. The proposed sustainable solutions that can help to reduce the social concerns caused by the pandemic include:

i) Conveying helpful information: The current uncertain situation reinforces a pivotal principle for an informed society. People must be well aware of updated information from reliable sources (Naumovska, Jovevski, and Brockova, 2020). Dissemination of valuable and helpful information to the public not only mitigate the anxiety of the society that stems from the lack of knowledge and awareness but also reduce the undesired customer behaviors that can have indirectly adverse impacts on industrial markets.

ii) Risk communication: The evolution of risk communication occurred during the 1980s to 1990s caused a shift from objective technical information about risks by using scientific data to focus on increasing public trust through relationship building, open discourse, and shared decision-making efforts with greater public participation in risk dialogues (Krewski, Turner, and Tyshenko, 2011). In addition to the multi-dimensional evaluation of risks, risk communication would lead to enhancing the firm's publicity, the rise in the online traffic of the firm's social media platforms, and the improvement of relationship with B2B audiences and customers.

iii) Managing emotions: The two dominant emotions that emerge in a crisis within the society are anger and anxiety that need to be taken into consideration for efficiently navigating through a major crisis such as a pandemic. A prudent task is to connect the crisis communication strategies to the logical outcome variables in order to reduce the negative impacts of uncontrollable emotions that stem from the distress or anxiety (Naumovska, Jovevski, and Brockova, 2020). Furthermore, preparing ahead of time for a range of crises is another effective strategy for protecting stakeholders from the adverse effects of a crisis.

iv) CSR activities: Despite the economic loss and many financial strains caused by the current pandemic, fortunately, many B2B companies, particularly those that can offer urgent help and assistance to combat the COVID-19, have proactively participate in various CSR activities. An optimistic view about the CSR activities is that the Coronavirus crisis will accelerate post-pandemic CSR development during the pandemic and the post-pandemic, as more and more companies and businesses realize that their long-term survival and growth depend on achieving a delicate balance between profitability and harmony with its various stakeholders (He and Harris, 2020).

v) Multigenerational relationship: The historical lesson learned from the previous crises and the current COVID-19 pandemic reaffirmed the fact that companies and society are two peas in a pod and are mutually interdependent. No one can survive without the other (Sheth, 2020). Consequently, the multigenerational relationship with the community, employees, and other stakeholders often saved the company, especially in difficult situations.

vi) Social marketing: Some scholars define social marketing as the application of marketing principles that enable individuals, organizations, and collective ideas in the achievement of effective, efficient, fair, equitable, and sustained social transformation (Saunders, Barrington, and Sridharannd, 2015). Through efficient social marketing efforts, organizations and firms can aid people and the society to be mentally well-prepared, to act responsibly, and to respond mindfully to many alterations in the changing environment during a pandemic and in the post-pandemic world.

4.3 Sustainable marketing solutions related to environmental pillar:

Unlike the current COVID-19 pandemic, the environmental concern is not a new issue for the earth and human beings. The environmental challenge arises from notable limits on both resource use and pollution absorption capacity and may lead to the significant risk of catastrophic climate change (Moriarty and Honnery, 2020). The proposed sustainable solutions that can be used by B2B firms to reduce the risk of environmental issues include: i) CSR activities: The global response of COVID-19 teaches us to fight together against the threat to human beings (Rume and Islam, 2020). While the influence of COVID-19 on reducing the emission of greenhouse gases and lessening water and air pollution are short-term (Cohen, 2020), united and efficient CSR efforts to save the earth from the adverse effects of global climate change can strengthen long-term environmental sustainability. ii) Green marketing: During recent years, many companies have chosen to create products using ingenious clean solutions, and noticeable progress has been occurred in the development of green products to mitigate their environmental effects. Although many businesses implement green marketing, especially for reasons such as social and environmental responsibility, pressure from government, and cost reduction, achieving a competitive advantage can be possible through green marketing strategies by realizing the connections between customer and stakeholder, environmental and social values, branding, and proactive businesses (Moravcikova et al. 2017).

4.4 Sustainable solutions related to ethics:

The proposed solutions related to ethics that should take into consideration more persistently during a pandemic involve: i) Strengthening the sense of altruism in communications: The adverse consequences of the COVID-19 pandemic and pandemic-driven lockdown will leave emotional, psychological, economic, societal pains that may never cure. One of the most efficient practices to mitigate these long-lasting pains is to awaken the sense of altruism within society and organizations through mindful and meaningful communications. This responsibility poses fundamental challenges to B2B firms about the extent that they feel commitment against society and how they can encourage people to participate in charities and altruism activities. ii) Considering the critical role of trust and transparency: When the situation is uncertain for a long time, timely and transparent dissemination of accurate, accessible, and reliable information can build public trust and confidence. For this purpose, it should be taken into consideration to minimize speculation and to avoid over-interpretation of data as well as overly confident assessments of public health investigations and control measures (Naumovska, Jovevski, and Brockova, 2020).

4.5 Sustainable marketing solutions related to the technological pillar:

Innovation, knowledge, and technology have a significant role to play in recovering from the aftermath of the COVID-19 pandemic (Chesbrough, 2020). Some scholars argue that the COVID-19 pandemic exposes the fractures in the current global socio-technical order and presents the prospects of several different alternative futures (Cankurtaran and Beverland, 2020; Petrescu and Krishen, 2020). The sustainable solutions derived from previous research in relation to area of technology include:

i) Openness to new innovation: Opening up will facilitate the company's innovation process, and enables a company to learn knowledge from others (outside in), and allows others to exploit required information or knowledge in their business (inside out). This process will lead to the generation of more knowledge and the exploration of more paths to apply that knowledge for managing through the crises (Chesbrough, 2020).

ii) Using design thinking: For an efficient management of the risks and uncertainties arising from a crisis, B2B marketers require a transformation in mindset in line with other fundamental aspects of B2B marketing. Cankurtaran and Beverland (2020) introduced a three-stage process of design thinking that consists of disrupting current assumptions, developing new solutions and practices, and transforming company practices to ensure greater future resilience. Critically, the new normal situation will require a more sensible risk management, including the deployment of design thinking quick responses to fluid and emergent challenges.

iii) Using technical webinars: Utilization of technical webinars for the co-creation and sharing of knowledge not only allow B2B audiences to acquire their required information but also empowers B2B firms to discover new opportunities and viable business solutions to recover faster from the adverse impacts of a crisis.

iv) Using high quality data and analytics: Currently, researchers have limited access to clean high-quality data, require time for data preparation and to calibrate existing models. This might lead to negative responses from decision-makers because of outcome bias, or the tendency to overweight observed outcomes (Dillon et al. 2016). During a pandemic crisis, the critical role of high-quality data and analytics throughout the back end and front-end organizational processes, such as the supply chain and the customer relationship management (CRM) process, is more considerable than ever (Petrescu and Krishen, 2020).

v) Digital transformation: Due to the lockdown regulations caused by the Coronavirus outbreak, B2B firms have experienced series of challenges, like employees who have to work from home, the growing importance of high-quality data, and the significant role of e-commerce. To face these challenges, firms mandate to strengthen the digital transformation substructures (Cortez and Johnston, 2020).

Based on the discussion above, this paper presents a framework for planning a sustainable B2B marketing strategy during a crisis based on the main pillars of sustainable marketing (see Figure 1). Using this framework and implementing the proposed sustainable solutions described in this section not only aids B2B firms to meet the stakeholders' urgent and long-term needs but also empowers society and other organizations to get through the crisis more mindfully and confidently.

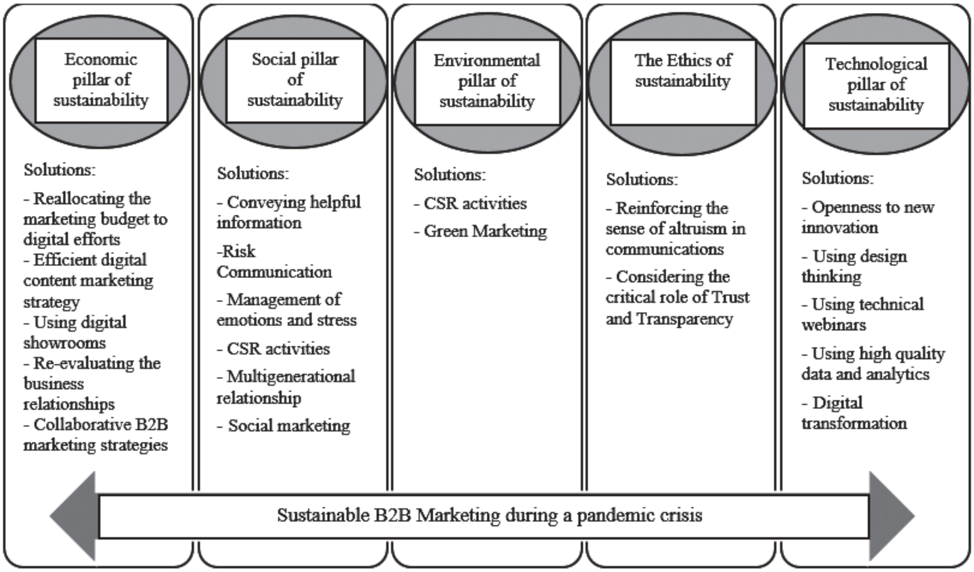


Figure 1. Proposed framework for implementing sustainable B2B marketing during a pandemic crisis

5. CONCLUSION

One of the most important lessons learned from the previous crises and the current COVID-19 pandemic is that to overcome a major crisis, every organization, business, and individual has its own critical role. Accordingly, B2B firms require a transformation in mindset to ensure the greater pandemic and post-pandemic resilience. Considering the effectiveness of sustainable marketing to empower organizations in maintaining their business growth and contributing to environmental and social development crisis, this paper provides a framework for sustainable B2B marketing. This paper also introduces a number of viable solutions for applying during a pandemic crisis based on the principles of sustainable marketing including economic, social, environmental, ethical, and technological pillars.

6. REFERENCES

Bond, E.U., Jong, A.D., Eggert, A., Houston, M.B., Kleinaltenkamp, M., Kohli, A.K., Ritter, T. and Ulaga, W. (2020). The Future of B2B Customer Solutions in a Post-COVID-19 Economy: Managerial Issues and an Agenda for Academic Inquiry. Journal of Service Research, https://doi.org/10.1177/1094670520960230.

Brooks, S.K., Webster, R.K., Smith, L.E., Woodland, L., Wessely, S., Greenberg, N., & James Rubin, G. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. The LANCET, 395(10227), pp. 912-920.

Brown, C., Massimo, C., & Lindencrone, M.H., Penttinen, P., Snacken, R., & Nicoll, R. (2013). Guide to revision of national pandemic influenza preparedness plans: Lessons learned from the 2009 A(H1N1) pandemic. World Health Organization.

Cankurtaran, P. and Beverland, M.B. (2020). Using design thinking to respond to crises: B2B lessons from the 2020 COVID-19 pandemic. Industrial Marketing Management, 88, pp. 255-260.

Chesbrough, H. (2020). To recover faster from Covid-19, open up: Managerial implications from an open innovation perspective. Industrial Marketing Management, 88, pp. 410-413.

Cohen, M.J. (2020). Does the COVID-19 outbreak mark the onset of a sustainable consumption transition? Sustainability: Science, Practice and Policy, 16(1), pp.1–3.

Cortez. R.M. and Johnston, W.J. (2020). The Coronavirus crisis in B2B settings: Crisis uniqueness and managerial implications based on social exchange theory. Industrial Marketing Management, 88, pp. 125-135.

Ćorić, D.S., Lučić. A., Brečić. R., Šević, A. and Šević, Z. (2020). An Exploration of Start-ups' Sustainable Marketing Orientation (SMO). Industrial Marketing Management, 91, pp.176-186.

Crick, J.M. and Crick, D. (2020). Coopetition and COVID-19: Collaborative business-to-business marketing strategies in a pandemic crisis. Industrial Marketing Management, 88, pp. 206-213.

Dillon, R.L., Tinsley, C.H., Madsen, P.M. and Rogers. E.W. (2016). Improving recognition of near-miss events through organizational repair of the outcome bias. Journal of Management, 42 (3), pp. 671–697.

Elkington, J. (1998). Cannibals with forks: The triple bottom line of the 21st century business. Gabriola Island (Canada), Stony Creek: New Societies Publishers.

Fraj, E., Martínez, E. and Matute, J. (2013). Analysis from the natural-resource-based view of the firm. Journal of Business & Industrial Marketing, 28(5). pp. 396-410.

Gavin, R., Harrison, L., Plotkin, C.L., Spillecke, D. and Stanley, J. (2020). The B2B digital inflection point: How sales have changed during COVID-19. McKinsey & Company. Available at://www.mckinsey.com/business-functions/ marketing-and-sales/our-insights/the-b2b-digital-inflection-point-how-sales-havechanged-during-covid-19.

Hartmann, N. N., & Lussier, B. (2020). Managing the sales force through the unexpected exogenous COVID-19 crisis. Industrial Marketing Management, 88, pp. 101–111.

He, L. and Harris, L. (2020). The impact of Covid-19 pandemic on corporate social responsibility and marketing philosophy. Journal of Business Research, 116, pp. 176-182.

Heinonen, K. and Strandvik, T. (2020). Reframing service innovation: COVID-19asacatalystforimposed service innovation. Journal of Service Management, https://doi.org/10.1108/JOSM-05-2020-0161.

Huotari, L. Ulkuniemi, P. Saraniemi, S. and Mäläskä, M. (2015), "Analysis of content creation in social media by B2B companies. Journal of Business & Industrial Marketing, 30(6). 761-770.

Kotler, P. (2011). Reinventing Marketing to Manage the Environmental Imperative. Journal of Marketing, 75(4), pp. 132-135.

Krewski, D., Turner, M.C. and Tyshenko, M.G. (2011). Risk Management in Environmental Health Decision. 2011 Elsevier B.V. pp. 867-877.

Lefebvre, R.C. (2012). Transformative social marketing: co-creating the social marketing discipline and brand. Journal of Social Marketing, 2(2), pp. 118-129.

Lim, W. M. (2016). A blueprint for sustainability marketing: Defining its conceptual boundaries for progress. Marketing Theory, 16(2), pp. 232–249.

Moravcikova, D., Krizanova, A., Kliestikova, J. and Rypakova, M. (2017). Green Marketing as the Source of the Competitive Advantage of the Business. Sustainability, 9(12), 2218, doi:10.3390/su9122218.

Moriarty, P. and Honnery, D. (2020). New Approaches for Ecological and Social Sustainability in a Post-Pandemic World. World, 1(3), pp. 191-204.

Naumovska. A., Jovevski, D. and Brockova, K. (2020). Social Responsibility & Ethics in Marketing during crisis. International virtual conference on management and economics, IVCME, 29 May, 2020.

Obal, M. and Gao, T. (2020). Managing business relationships during a pandemic: Conducting a relationship audit and developing a path forward. Industrial Marketing Management, 88, pp. 247-254.

Oehmena, J., Locatellib, G., Wieda, M. and Willumsen, P. (2020). Risk, uncertainty, ignorance and myopia: Their managerial implications for. Industrial Marketing Management, 88, pp. 330-338.

Petrescu, M. and Krishen, A. (2020). The importance of high-quality data and analytics during the pandemic. Journal of Marketing Analytics, 8:43–44.

Petro, K. (2020). How B2B businesses are going digital during the coronavirus pandemic. https://www.impactbnd.com/blog/b2b-organizations-are-going-digital-amidst-the-coronavirus-pandemic.

Rume, T. and Didar-Ul Islam, S.M. (2020). Environmental effects of COVID-19 pandemic and potential strategies of sustainability. Heliyon, 6(9), e04965.

Saunders, S.G., Barrington, D.J. and Sridharan, S. (2015). Redefining social marketing: beyond behavioural change, Journal of Social Marketing, Vol. 5 No. 2, pp. 160-168.

Seyyedamiri, N. and Tajrobehkar, L. (2019). Social content marketing, social media and product development process effectiveness in high-tech companies, International Journal of Emerging Markets, https://doi.org/10.1108/IJOEM-06-2018-0323.

Sharma, P., Leungb, T.Y., Kingshottc, R.P.J., Davcikd, N.S. and Cardinalie, S. (2020). Managing uncertainty during a global pandemic: An international business perspective. Journal of Business Research, 16, pp. 188-192.

Sheth, J. (2020). Business of business is more than business: Managing during the Covid crisis. Industrial Marketing Management, 88, pp. 261-264.

Yaghtin, S., Safarzadeh, H. and Karimi Zand, M. (2020). Planning a goal-oriented B2B content marketing strategy", Marketing Intelligence & Planning, 38 (7), 1007-1020.

Zafari, K., Biggemann, S. and Garry, T. (2020). Mindful management of relationships during periods of crises: A model of trust, doubt and relational adjustments. Industrial Marketing Management, 88, pp. 278-286.

CHAPTER

5

Empirical Review of Covid-19 Pandemic Effect's on the Corporate Social Responsibility in Oman: Challenges and Opportunities

Afshan Younas, Aza Azlina Md Kassim,
Abul Bashar Bhuiyan

Empirical Review of Covid-19 Pandemic Effect's on the Corporate Social Responsibility in Oman: Challenges and Opportunities

Afshan Younas, Aza Azlina Md Kassim, Abul Bashar Bhuiyan

ABSTRACT

The global corporate structure was badly hit and at the helm because of the outbreak of the Covid-19 pandemic. The pandemic and its impacts have led to intense global disruption. Addressing and coping with this pandemic perceived as a gigantic challenge for people and businesses suffer vulnerable scenarios affecting existing economic indicators, especially microeconomic indicators such as rising unemployment, lower income, higher health care costs, low productivity, higher household expenses, mental stress, the collapse in commodity prices, and heavy financial losses. Therefore, the corporations couldn't put considerable effort into overcoming the unexpected challenges and accordingly pursue Corporate Social Responsibility (CSR) among stakeholders. Thus, the main purpose of this study is to highlight the challenges and opportunities for the cause of the Covid-19 pandemic in terms of the company's role in safeguarding social responsibilities in Oman. The study was conducted on the basis of an empirical overview of recent study works, reports, news and available online resources about the Covid-19 pandemic and CSR around the world. The survey's findings showed that companies are facing a massive crisis to ensure CSR to maintain their positive brand image. However, the study concluded that the company must play an important and mature role in developing a strategic recovery framework to ensure practices and coordination. The study recommends policy guidelines for business recovery by strengthening health care, restoring commodity market volatility, financial market restructuring, resuming production and supply chain and special concern for reducing unemployment problem for the company in Oman.

Keywords

Corporate Social Responsibility, Opportunity, COVID-19, Challenge

1. INTRODUCTION

The coronavirus which is regarded as Covid-19 started in China in December 2019, then it spread rapidly and was declared pandemic by World Health Organization (WHO) in March 2020 (World Health Organization, 2020). The epidemic of Covid-19 resulted many businesses and factories to shut down and dismissing several travel plans. The International Monetary Fund Predicted that due to worse impact of this pandemic the GDP of the world will shrink by 3% in 2020 (IMF, 2020). While there were many developments took place in the year 2019 for Corporate Social Responsibility (CSR) activities but the year 2020 started with the pandemic impact, which reshaped the businesses plans and stakeholders' expectations regarding CSR actions. The influence of Covid-19 on the global market is exceptional since the Great Depression in 1930s (He and Harris, 2020). Some influences of this pandemic are immediate and temporary which covers, lockdown, social distancing, and curfew restrictions. Whereas some other impacts will change the business operations, economic outlook, and social environment in the long run (Marom and Lussier, 2020)spreading like wildfire and causing fatal illness to many. The ongoing pandemic and its implications have led to severe global socioeconomic disruption, halting most regular activities. Coping with the pandemic and its horrible consequences required to pull together all resources and unite efforts by individuals, organizations and governments. Businesses have embarked on an effort to support coping with the pandemic in various ways, as aligned with the concept of corporate social responsibility (CSR.

The Covid-19 influences all fields of life, thus business world also affected strongly and there is a big concern about its sustainability. Now businesses have two major challenges, the first is survival during this pandemic and second is long term sustainability and creating positive image of business even during and after the epidemic. There is no definite limit when this pandemic will end, and life will back to normal. Thus, businesses are facing several challenges due to Covid-19 impacts, while optimistically at the same time it provides opportunity to the businesses to take advantage of new happenings (He and Harris, 2020). Covid-19 has impacted every country, business, industry, sector, and there are several challenges and opportunities. This pandemic has also opened various future research areas. Aguinis, Villamor and Gabriel (2020), has described seven possible research directions. First area of CSR is described as to focus on HRM practices (employee CSR) or Internal CSR), Second refers to bridging the micro-macro divide. The third possible area is to measure CSR impact on stakeholders outside the firm, fourth opportunity is to see the influence of CSR Programs in reaction to Covid-19. The fifth proposed area of research is indicators of employee resistance to CSR, the sixth opportunity is hybrid public-private collaborations and the last proposed research area is social inclusiveness and vulnerable populations (Stahl et al., 2020)align their activities with the needs and expectations of a broader set of stakeholders, and help tackle the world's grand challenges. We argue that human resource management (HRM. This chapter focused on the fourth research opportunity which is suggested by Aguinis et al. (2020).

This chapter focuses on some preliminary ideas on how this pandemic can influence the field of CSR and business efforts on CSR. Therefore, the main purpose of this study is to assess and highlight the challenges and opportunities for the cause of the Covid-19 pandemic in terms of the company's role in safeguarding social responsibilities in Oman. It is structured as follows. The next section covers the background of CSR. Next, CSR after Covid-19 in the world and how businesses responded to this challenge. Then CSR actions taken by businesses in Oman and how they proof that they are responsible citizen and businesses and finally in conclusion some recommendations and future research areas are suggested.

2. BACKGROUND / LITERATURE WORK

The concept of corporate social responsibility was first introduced by Bowen (1953) (an American economist) in his publication 'Social Responsibilities of the Businessman'. Bowen set the specific principles for corporations to fulfil their social responsibilities. (Carroll, 2009). Later it was further expanded and extended by Davis in 1960 and finally the awareness of corporate social responsibility started to spread extensively. The more specific definition of CSR was introduced in 1980s and later. But still there is no consensus on its definition because of its wider scope (Jhawar and Gupta, 2017). In 1990s, the major themes of CSR which continued to grow were corporate social performance, stakeholder theory, business ethics, and sustainability. During 1990's more global companies emerged in the economy, the managers then start to give special place to CSR and community welfare measures (Carroll, 2009). In 2000s, the emphasis moved strongly to theoretical contributions to the concept and dimensions of CSR. Different business theories offered multi-dimension definitions of CSR, which includes stakeholder theory, institutional theory and contingency theory (Jamali, 2008). After 2000, the CSR has been a global phenomenon and voluntary initiative in CSR have become major trend in international business (Valeri, 2019). While some CSR initiatives are due to under legal and regulatory pressure to adopt the practices. The CSR trends and practices has both moral and ethical and business component. In intense global competition, CSR is used as sustainable business tool which add value to corporate success (Carroll, 2009).

CSR stages are classified into four eras that include the period before and after 1950s. The period before 1950s was the 'philanthropic' era in which companies give charities only without any business actions. The era 1953-1967 was classified as the 'awareness' era, in which recognition of CSR concept increased and specific principles set by Bowen which poses more responsibility on the businesses. The period 1968-1973 was regarded as the 'issue' era in which firms began to focus on specific issues such as racism, urban rural concerns and pollution problems. The fourth era named as 'responsiveness' era, 1974-1978, and continue beyond. In this era, business taking serious actions to address CSR issues and it became one of the strategic objective of corporate governance which poses responsibility on the firms to be responsible for society (Murphy, 1978). In 1950s the company's primary focus was on businesses' responsibilities to society and good deeds for society. While in 1960s key people, ideas and concepts were major player in featuring the social changes altered during this decade. In 1970s, business managers applied CSR with the traditional management function. Then in 1980s, business and social wellbeing become closer and firms realized to be more responsiveness to their stakeholders. In the decade of 1990s, the concept of CSR universally approved and accepted. While, 2000 onwards CSR become an important objective of strategic planning and adopted by several firms extensively (Moura-Leite and Padgett, 2011).

Companies that commit to develop thorough CSR strategies can expect benefits from several ways. CSR is considered as highly visible in the growing concern among organizations; thus, businesses will have better chance to create positive business image and become more ethical business. Businesses have boarded efforts to support combating the pandemic in a variety of practices. Companies are more concerned about their stakeholders and how they perceive and react to business practices relating to corporate social responsibility (CSR) (Jones, Willness and Glavas, 2017)corporate leaders, and other stakeholders have shown increasing interest in Corporate Social Responsibility (CSR. CSR actions are usually reflection of stakeholders' expectation about the business economic, social, and environmental performance. Since the 1950's CSR concept begin to realization and slowly dominated in the scholarly research field (Aguinis, 2011). Thus, Corporate Social Responsibility is recognised as an important aspect for business sustainability.

Corporate Social Responsibility refers to commitment of organizations and businesses to reduce any negative business practices and to increase firm's contribution to society. Thus, the existence of CSR depends on organizations' responsibility when they consider different contributions to the community. It is essential for firms to consider being socially responsible by extending contribution to communities instead of being only profit oriented. Businesses can express this through following the polices and ethical standards while dealing with their stakeholders. CSR oriented firms creates positive image and thus able to gain competitive advantages which in turn enhance financial reward (Abbas et al., 2019). Many studies have been conducted to gauge the influence of firm's CSR actions on firm performance and its brand image. Khojastehpour and Johns (2014), studied the impact of environmental CSR on corporate reputation and profitability. The study indicated positive relationship between the variables. Gregory, Tharyan and Whittaker (2014)by disaggregating the effects on forecasted profitability, long-term growth and the cost of capital. The study explores the possible risk (reducing, investigated the impact of CSR on firm value, the findings of the study described CSR performance is directly associated long run prospects. Thus, businesses' CSR activities by creating social and reputational capita ultimately leads to profitability and competitive advantage (Mohtsham Saeed and Arshad, 2012).

3. WORLDWIDE CSR INITIATIVES AFTER COVID-19

Today, the concept of being a good corporate citizen goes beyond the traditional CSR practices. Consistent and robust CSR policies have become foundation of the identity of many brands. The successful CSR brands will be then considered as business stars and champions particularly in the time of this pandemic. CSR actions can be internal and external, businesses first focus on the people and their employee's safety on which they depend more and run their businesses. Thus, there is no One-Size-Fits solution for CSR actions. Firms needs to develop their own perspective of CSR. Covid-19 poses challenges to organizations about CSR expectations. In many countries it has been reported that some retailers or firms have tried to earn super profits from this crisis (OECD, 2020). As a result, government responsibility is increased to watchdog the market and set up special workforce to ensure fair business practices. At the same time this crisis has put companies under test for its commitment to ethical conduct of business practices and CSR actions (He and Harris, 2020).

Contrary to above, many companies not only resisted unethical practices but also proactively engaged in various CSR activities, specifically those offer free products and assistance to fight against this pandemic. It is evident that almost in every many businesses offered discounted goods and services even it is not directly related to virus but in fact such services and goods are offered to create positive image and in order to gain the trust of the customers, and society at large (He and Harris, 2020). A true CSR oriented firms will try to develop strong image of business among its customers and the general public because customer usually keeps a high expectation from their favourable leading brands specifically during the crisis such as the case of current scenario. Customers usually feel comfortable when the leading brands fulfil their expectations, and this will positively impact on customer loyalty even in the crisis as well as during peaceful times. Thus, Covid-19 offered great opportunities to those firms who are actively engage with their CSR activities.

Covid-19 provided a great opportunity to businesses where they can play a key role and become the market champions. Socially responsible firms performed various CSR actions during the pandemic and considered more ethical and moral agent of the business environment. In response to current pandemic many businesses around the world shifting their override to help fight the coronavirus. For being socially responsible, companies shifted their production away from its original goods to some others more socially responsible. Car manufacturers across the world have started the production of ventilators and facemask to help their governments during this pandemic. Ford and General Motors (GM) has established partnership with ventilator-maker. 3D-printing companies working on manufacturing protective equipment and swabs for Covid-19 testing (Albergotti and Siddiqui, 2020). Similarly, many designers Prada, Gucci, Zara and Yves Saint Laurent shifted their manufacturing to face marks. In addition, many leading fast-food businesses shared their secret recipes on social media for customers to try during the time of quarantine (Hassan, 2020). An overview some of companies' example that followed focused CSR practices to respond Covid-19 are given in table 1.

Table 1. Famed Businesses' CSR Activities in response to Covid-19

Companies	Corporate Social Responsibility Activities
Starbucks	Mental wellness therapy for employees
Microsoft, Facebook, Twitter, Expedia, Google	Regular payments to hourly workers even without work
Google	Support and provide financial assistance to Small businesses for survival
Alibaba	Jack Ma donated millions worth of testing Kits, medical equipment & Face masks to many countries
Ford & GMC	Established partnership with ventilator-maker

Source: (Albergotti and Siddiqui, 2020)(Gafni, 2020)(He and Harris, 2020)(Hessekiel, 2020)

The above discussed examples are multinational leading companies and those companies which are regarded as market champions. While on the other side, this pandemic negatively influences on society and business as well. Small to medium size business due to critical survival terminate their employees and unable to fulfil their CSR commitment. Many people lose their jobs worldwide. According to United Nation report there will be significant increase in global unemployment rate, and it will be reach to 25 million. Also, 35 million more people will be added in the rank of poverty (King, 2020). This pandemic will represent in deepest recession since World War II, even in the rich countries the economic activity is expected to decline by seven percent (Cirillo, 2020).

4. COVID-19 CSR IN CONTEXT OF OMAN

In Oman, the corporate social responsibility is the one of the important principles of Code of Corporate governance of Oman, which is issued by Capital Market Authority in 2015 and implemented in 2016 (CMA, 2016). According to this code, all listed firms in Oman are liable to set CSR objectives in their strategic planning. All the firms in Oman setting CSR annual plan and at the end of every year the disclosure of CSR activities should be reported in the annual reports. The global spread of Covid-19 has affected almost every country in the world including Oman. In Oman the first two cases of Covid-19 was reported on 24th February 2020, and within a period of one month it reached to 131 (AlBadi, 2020). His Majesty Sultan Haitham Bin Tariq Al-Said Ordered on 10th March the formation of supreme committee to handle the implications of the spread of the Covid-19 (Khalid, 2020).

Supreme Committee (SC) Oman issued different directives in order to control and tackle the spread of Covid-19, as well as asked businesses to take necessary actions to support the decisions. In line with SC directives many firms and businesses responded positively and being Socially responsible firms focused on many internal and external CSR activities. Thus, in line with SC directives all businesses introduced "Work from Home" policy for the majority of employees (The Arabian Stories News, 2020). The initiative "Work from Home" is the first step towards employee CSR. Like many multinational brands all the public and private companies in Oman offered flexibility to their employees' work. The Covid-19 CSR is not only limited to flexible working hours but also significant contributions to combat against this pandemic. Some of the examples of Covid-19 CSR activities in of businesses in Oman are described in table 2.

Table 2. Renowned Businesses' CSR Activities in response to Covid-19 in Oman

Companies	Corporate Social Responsibility Action
Ooredoo Oman	Free internet and Agreement with Ministry of education for e-learning and virtual classrooms for the year 2020-2021. Also joined Dal al Atta'a to help affected families, Help new entrepreneurs with FURSA training program
Bank Dhofar	Shareholders Authorizes OMR 1 million CSR donation for COVID-19
Oman LNG	Pledges RO 6 Million to Support COVID-19 Efforts, Job Security Fund as a part of Covid-19 CSR initiatives
Bank Muscat	Deferred Loan payments and extended support to the 'Fak Kurba' project of the Omani Lawyer's Association (OLA's)
Oman Shell	Donation to Ministry of Health (OMR 750,000 for purchase of testing kits and worth of OMR 300,000 fuel for emergency vehicles)
National Bank of Oman	NBO pledges OMR 1 million to combat Covid-19, deferred loan payments, digital banking platforms & online branches services

Source: (Bank Dhofar, 2020; Bank Muscat, 2020; NBO, 2020; ONA, 2020b; Ooredoo, 2020; Shell Oman, 2020)

Other than the above examples many businesses and even entrepreneurs in Oman contributed to CSR activities voluntarily and in line with SC directives. Top of all His Majesty Sultan Haitham bin Tarik who initiated the SC fund, donated with a personal Contribution of OMR 10 million. Similarly, many entrepreneurs and corporate citizens donated significant amount to SC fund and Ministry of Health. As a part of public and private CSR capital market authority (CMA) urged insurance sector to cover Covid-19 treatment. Moreover, a major and significant contribution is launched by private sector, many grocery stores and supermarkets extended their timings to keep social distancing between shoppers. Free home delivery is offered during lockdown period. Postponement of water and electricity bills for three months came into implement. Fuel subsidy cards are given to lower income nationals (ONA, 2020a).

Many other renowned firms being an ethical citizen fulfil their social responsibility in response to Covid-19. KPMG Oman CSR program build on education, environment, diversity and staff health and wellbeing (Hariharan, 2020). Similarly, Oman Arab bank in response to Covid-19 CSR donated OMR 500,000 to Ministry of Health and followed several employees CSR initiatives (Oman Arab Bank, 2020). As a part of monetary contribution, many companies and businesses through different platforms tried to fulfil their responsibility for being ethical corporate citizen. This includes awareness messages, free safety kits and social media campaign.

On the other side, Oman also witness the negative impact of Covid-19. Small and medium suffered badly due to Covid-19 lockdown and restrictions. Some businesses hike the prices of many products to profiteering during this pandemic. According to Public Authority for Consumer Protection (PACP) within 12 days of April 2020 after spread of Covid-19, over 2000 price hikes cases reported. In total around 50,000 customer complaints related to price hike and unethical practices, were reported only in the first half of 2020 (Yousuf, 2020). With such negative practice's businesses developed negative image as compared to those who actively involved in Covid-19 CSR activities.

Another adverse impact of Covid-19 on society is unemployment. According to estimate 10 percent of total population (4.7 million) decreased due to job loss for the first half of 2020 (Zawya, 2020). Around 147 million employees were terminated worldwide by May 2020, researchers expect if stringent measures continue then the effect will be worse. While, analysing above examples of Covid-19 CSR activities from Omani companies it can be summarised that many firms showed and proved ethical corporate citizen. It is hard to invest in CSR during this crucial time, but this will be paid off to them in the long run. Thus, CSR in times of Covid-19 creates a win-win situation (Parekh, 2020).

Covid-19 CSR is an opportunity for businesses in long run to create positive image and develop optimistic reputation. If business focus on short term and tries to exploit Covid-19 period by price hikes and lowering quality, the business will destroy its image and the sustainability of business will be questioned. The basis for the intensive development of CSR in 1960s and 1970s in America lies on the behaviour of irresponsible companies due to which customers reluctant to purchase from them (Madrakhimova, 2013). Therefore, if companies show responsible citizen and ethical behaviour, they will be able to survive and sustain in the future as can be seen from the American history of CSR.

5. LIMITATIONS AND FUTURE RESEARCH PROSPECTS

This chapter acknowledge certain limitations, first the Covid-19 pandemic is not over yet at the time of writing this chapter, it will take time when life will be back to 'New Normal'. Thus, this review depicts the picture of current situation.

Second, according to WHO the second wave is expected to have severe impact as compare to the current situation, this may reshape the CSR expectations and business environment. Third, this chapter covers the data of mostly famed firms in the world and particularly Oman but not all firms' CSR activities explored and listed. Recommended future research should cover and start from the limitations of this study. Since the pandemic is not over yet thus, there is a continuous need of research on the CSR practices during Covid-19 crisis. Further, future research may cover Covid-19 CSR impact on profitability, leverage, and marketing.

6. CONCLUSION

As the main purpose of this study is to assess and highlight the challenges and opportunities for the cause of the Covid-19 pandemic in terms of the company's role in safeguarding social responsibilities in Oman. The Covid-19 pandemic has significantly changed our life, thinking, lifestyle as well as business and economic environment. Individuals, organizations, and governments contributed efforts to survive with the outcomes of the pandemic, following the notion of their CSR. The impact of various CSR practices examined and discussed. CSR practices provides an opportunity as well as challenge, however it depends on companies and firms how they perceive and react to it and show their social responsibility. The study revealed that the pandemic has led to intense global disruptions which caused for suffering of vulnerable scenarios that affecting badly for rising of unemployment, lower income, higher health care costs, higher household expenses, low productivity, mental stress, lower consumption, social imbalance, the collapse in commodity prices, the factory closed and heavy financial losses. Therefore, the company couldn't put considerable effort into overcoming the unexpected challenges and accordingly pursue Corporate Social Responsibility (CSR) among stakeholders. The study was conducted on the basis of an empirical overview of recent study works, reports, news, working papers and available online resources about the Covid-19 pandemic and Corporate Social Responsibility (CSR) around the world. The study recommends policy guidelines for business recovery by strengthening health care, restoring commodity market volatility, financial market restructuring, resuming production and supply chain, special concern for reducing unemployment problem, developing a sustainable recovery framework for the company in Oman. This chapter focused on theoretical and practical contribution in context of Oman. The chapter covered data of famous multinational companies as well as renowned Omani firms that how these businesses responded to Covid-19 crisis. This leads to better understanding of best CSR practices to combat against Covid-19 and in the afterwards 'new normal'.

7. REFERENCES

Abbas, J. et al. (2019) 'The effects of corporate social responsibility practices and environmental factors through a moderating role of social media marketing on sustainable performance of business firms', Sustainability (Switzerland), 11(12). doi: 10.3390/SU11123434.

Aguinis, H. (2011) 'Organizational responsibility: Doing good and doing well.', Organizational Responsibility: Doing Good and Doing Well, pp. 855–879. doi: 10.1037/12171-024.

Aguinis, H., Villamor, I. and Gabriel, K. P. (2020) 'Understanding employee responses to COVID-19: a behavioral corporate social responsibility perspective', Management Research, (May). doi: 10.1108/MRJIAM-06-2020-1053.

AlBadi, H. (2020) Two cases of Coronavirus reported in Oman: MOH, omanobserver.om. Available at: https://www.omanobserver.om/two-cases-of-coronavirus-reported-in-oman-moh/ (Accessed: 12 September 2020).

Albergotti, R. and Siddiqui, F. (2020) Ford and GM are racing to build coronavirus ventilators, but their efforts may be too late - The Washington Post, Washingtonpost.com. Available at: https://www.washingtonpost.com/business/2020/04/04/ventilators-coronavirus-ford-gm/ (Accessed: 18 September 2020).

Bank Dhofar (2020) BankDhofar - News, bankdhofar.com. Available at: http://www.bankdhofar.com/en-GB/News/2/1187.aspx (Accessed: 19 September 2020).

Bank Muscat (2020) Bank Muscat Supports Fak Kurba Initiative to Secure Release of 166 Debtors, omannews.gov.om. Available at: https://omannews.gov.om/NewsDescription/ArtMID/392/ArticleID/12861/Bank-Muscat-Supports-Fak-Kurba-Initiative-to-Secure-Release-of-166-Debtors (Accessed: 18 September 2020).

Bowen, H. (1953) Social Responsibilities of the Businessman Harper & Row, New York.

Carroll, A. B. (2009) 'A History of Corporate Social Responsibility: Concepts and Practices', The Oxford Handbook of Corporate Social Responsibility, (January 2008). doi: 10.1093/oxfordhb/9780199211593.003.0002.

Cirillo, K. (2020) Coronavirus: World Bank confirms deepest recession since World War Two - UN News, news.un.org. Available at: https://news.un.org/en/story/2020/06/1065902 (Accessed: 18 September 2020).

CMA (2016) Code of Corporate Governance for Public Listed Companies (The 'Code'). Available at: https://e.cma.gov.om/Content/PDF/CorporateGovernanceCharterEn.pdf (Accessed: 14 September 2020).

Gafni, N. (2020) How companies can help society during Covid-19 pandemic | Rutgers Business School, business.rutgers.edu. Available at: https://www.business.rutgers.edu/business-insights/how-companies-can-help-society-during-covid-19-pandemic (Accessed: 18 September 2020).

Gregory, A., Tharyan, R. and Whittaker, J. (2014) 'Corporate Social Responsibility and Firm Value: Disaggregating the Effects on Cash Flow, Risk and Growth', Journal of Business Ethics. doi: 10.1007/s10551-013-1898-5.

Hariharan, A. (2020) 'Oman Government measures to address COVID-19 - KPMG Oman', kpmg/om. Available at: https://home.kpmg/om/en/home/insights/2020/04/Oman Government measures to address COVID-19.html (Accessed: 19 September 2020).

Hassan, A. (2020) Businesses Corporate Social Responsibility (CSR) Duties Towards Communities in the Covid-19 crisiS | EAUC, eauc.org.uk. Available at: https://www.eauc.org.uk/7017 (Accessed: 18 September 2020).

He, H. and Harris, L. (2020) 'The impact of Covid-19 pandemic on corporate social responsibility and marketing philosophy', Journal of Business Research. Elsevier, 116(May), pp. 176–182. doi: 10.1016/j.jbusres.2020.05.030.

Hessekiel, D. (2020) Companies Taking First Steps To Support COVID-19 Response Efforts, forbes.com. Available at: https://www.forbes.com/sites/davidhessekiel/2020/03/11/companies-taking-first-steps-to-support-covid-19-response-efforts/#463c60d16f8f (Accessed: 18 September 2020).

IMF (2020) 'World Economic Outlook, June 2020', World Economic Outlook Update.

Jamali, D. (2008) 'A stakeholder approach to corporate social responsibility: A fresh perspective into theory and practice', Journal of Business Ethics. doi: 10.1007/s10551-007-9572-4.

Jhawar, N. and Gupta, S. (2017) 'Understanding CSR- Its History and the Recent Developments', 19(5), pp. 105–109. doi: 10.9790/487X-190506105109.

Jones, D. A., Willness, C. R. and Glavas, A. (2017) 'When corporate social responsibility (CSR) meets organizational psychology: New frontiers in micro-CSR research, and fulfilling a quid pro quo through multilevel insights', Frontiers in Psychology, 8(MAR), pp. 1–14. doi: 10.3389/fpsyg.2017.00520.

Khalid, T. (2020) Oman's Sultan orders the formation of supreme committee to deal with coronavirus | Al Arabiya English, english.alarabiya.net. Available at: https://english.alarabiya.net/en/News/gulf/2020/03/10/Oman-s-Sultan-orders-the-formation-of-supreme-committee-to-deal-with-coronavirus (Accessed: 18 September 2020).

Khojastehpour, M. and Johns, R. (2014) 'The effect of environmental CSR issues on corporate/brand reputation and corporate profitability', European Business Review. doi: 10.1108/EBR-03-2014-0029.

King, B. (2020) Unemployment rate: How many people are out of work? - BBC News, bbc.com/news. Available at: https://www.bbc.com/news/business-52660591 (Accessed: 18 September 2020).

Madrakhimova, F. (2013) 'History of Development of Corporate Social Responsibility', Journal of Business and Economics, 4(6), pp. 2155–7950.

Marom, S. and Lussier, R. N. (2020) 'Corporate Social Responsibility during the Coronavirus Pandemic: An Interim Overview', Business and Economic Research, 10(2), p. 250. doi: 10.5296/ber.v10i2.17046.

Mohtsham Saeed, M. and Arshad, F. (2012) 'Corporate social responsibility as a source of competitive advantage: The mediating role of social capital and reputational capital', Journal of Database Marketing and Customer Strategy Management. doi: 10.1057/dbm.2012.19.

Moura-Leite, R. C. and Padgett, R. C. (2011) 'Historical background of corporate social responsibility', Social Responsibility Journal, pp. 528–539. doi: 10.1108/1747111111117511.

Murphy, P. E. (1978) 'An Evolution: Corporate Social Responsiveness', University of Michigan Business Review.

NBO (2020) National Bank of Oman COVID-19 Updates, nbo.om. Available at: https://www.nbo.om/en/Pages/COVID-19-Updates.aspx (Accessed: 19 September 2020).

OECD (2020) 'COVID-19 and Responsible Business Conduct', OECD Policy Responses to Coronavirus (COVID-19). doi: 10.1787/7969896b-en.

Oman Arab Bank (2020) CEO Message - Covid-19 | Oman Arab Bank, oman-arabbank.com. Available at: http://www.oman-arabbank.com/home/ceo-message-covid-19/ (Accessed: 19 September 2020).

ONA (2020a) Covid-19 Supreme Committee Approves Raft of Incentives for Private Sector Firms and Workers, omannews.gov.om. Available at: https://omannews.gov.om/NewsDescription/ArtMID/392/ArticleID/11669/Covid-19-Supreme-Committee-Approves-Raft-of-Incentives-for-Private-Sector-Firms-and-Workers (Accessed: 19 September 2020).

ONA (2020b) Oman LNG Pledges RO 6 Million to Support COVID-19 Efforts, Job Security Fund, omannews.gov.om. Available at: https://omannews.gov.om/

NewsDescription/ArtMID/392/ArticleID/11169/Oman-LNG-Pledges-RO-6-Million-to-Support-COVID-19-Efforts-Job-Security-Fund (Accessed: 19 September 2020).

Ooredoo (2020) Ooredoo Joins Hands with Ministry of Education to Launch E-Learning Platform for Academic Year 2020-2021, ooredoo.om. Available at: https://www.ooredoo.om/AboutOoredoo/Media/PressReleases/DetailPressRelease/tabid/2375/ArticleId/4360/Ooredoo-Joins-Hands-with-Ministry-of-Education-to-Launch-E-Learning-Platform-for-Academic-Year-2020-2021.aspx (Accessed: 15 September 2020).

Parekh, N.J. (2020) CSR in times of COVID-19 - The Financial Express, financialexpress.com. Available at: https://www.financialexpress.com/brandwagon/csr-in-times-of-covid-19/1983907/ (Accessed: 19 September 2020).

Shell Oman (2020) Oman Shell Supports the Ministry of Health to Combat Covid-19 | Shell Oman Marketing Company Oman Marketing Company, shelloman.com.om. Available at: https://www.shelloman.com.om/en_om/sustainability/corporate-social-responsibility/oman-shell-stands-with-the-nation.html (Accessed: 18 September 2020).

Stahl, G. K. et al. (2020) 'Enhancing the role of human resource management in corporate sustainability and social responsibility: A multi-stakeholder, multidimensional approach to HRM', Human Resource Management Review. doi: 10.1016/j.hrmr.2019.100708.

The Arabian Stories News (2020) Supreme Committee: 70% of Oman's government employees to work from home - The Arabian Stories News, thearabianstories.com. Available at: https://www.thearabianstories.com/2020/03/22/supreme-committee-70-of-omans-government-employees-to-work-from-home/ (Accessed: 18 September 2020).

Valeri, M. (2019) 'Sustainable Development and Corporate Social Responsibility', in. doi: 10.1007/978-3-319-97649-5_2.

World Health Organization (2020) WHO Coronavirus Disease (COVID-19) Dashboard, World Health Organization.

Yousuf, K. (2020) PACP intensifies raids as consumer complaints jump, omanobserver.om. Available at: https://www.omanobserver.om/pacp-intensifies-raids-as-consumer-complaints-jump/ (Accessed: 19 September 2020).

Zawya (2020) Millions of jobs lost in coronavirus pandemic may not return: IMF | ZAWYA MENA Edition, zawya.com. Available at: https://www.zawya.com/mena/en/economy/story/Millions_of_jobs_lost_in_coronavirus_pandemic_may_not_return_IMF-ZAWYA20200712072305/ (Accessed: 19 September 2020).

CHAPTER

6

COVID-19 Pandemic: Threat or Accelerator? The case of Romanian Book Publishing Industry

Cezar SCARLAT, Gabriela Doina STĂNCIULESCU

Covid-19 Pandemic: Threat or Accelerator? The case of Romanian Book Publishing Industry

Cezar SCARLAT, Gabriela Doina STĂNCIULESCU

ABSTRACT

This chapter presents some results of a research project that happened to be overlapped by the corona-crisis. Thus, the scope of work is limited to investigate the impact of this pandemic on the Romanian book publishing industry. Although the book publishing was not among the most resilient industries that recovered after corona-crisis impact, many companies active in this industry had the vision and ability to turn the pandemic threat into an opportunity: their executives developed sustainable strategies, investing in newer technologies (more productive but less labour- and energy-intensive). The chapter focus is on the current situation of the Romanian book publishing industry, in European and global context, impacted by the corona-virus crisis. This industry is a typical example of adaptation and transformation from the traditional labour-intensive printing to technology-based book publishing (e-books included). The role of the "book" product in education is changing too, as the education itself changes under the impact of corona-crisis. The authors conducted interviews with a number of entrepreneurs and mangers from book publishing industry over a six-month period. The results are somehow surprising – in that sense that strategy manuals do not exclude but rarely is seen in extreme situations: this industry's selective answer was to turn the COVID-19 pandemic threat into a strategic opportunity: to invest in newer, sustainable technologies. The corona-crisis acted as strategic decision accelerator, actually. As part of larger research-in-progress, the inherent limitations and further research areas are presented. The conclusions and managerial implications are relevant for both scholars and practitioners.

Keywords

Coronavirus crisis, COVID-19 pandemic threat, Strategic opportunity, Technology-based sustainable strategy, Strategic decision accelerator, Romanian book publishing industry

1. INTRODUCTION

The current coronavirus situation is increasingly becoming not only a current concern for each individual, government, and international organization but also general sectorial problem to be solved for healthcare sector firsthand, then, on longer term, economy; and the impact on the whole society – how we, people, are going to live and interact – is still a matter of mixed interest, concern and uncertainty. A Google search exercised on 23 September 2020 displayed 6.07 billion results for "covid" and 5.71 billion results for "covid-19", in just fractions of a second, which is almost 1 result for each human living on earth in this very moment! Academia, scholars and researchers are gradually showing a professional interest, mostly in two directions related to the new corona-virus: *healthcare sector* (search for "treatment of the coronavirus pandemic" has displayed "only" 67,700 results) and its *socio-economic impact* (72,900 results for "impact of the coronavirus pandemic"). As we currently are in full pandemic, the amount of scientific production itself is going up. Just keep in mind that these two topics are nowadays on top of interests. It would be interesting to find out *how much* of the "socio-economic impact" is *social impact* and how much is *economic impact* (focus on Romania), although they interact to each other and cannot be separated.

Remember that the first cases of coronavirus were identified in China in December 2019. On 25 January 2020 the first case of Coronavirus was confirmed in France, while the first case reported in Romania was a month later (26 February 2020). If the world powerhouses and major European countries enjoy more attention paid from researchers, *average countries like Romania are less the research object*. On the *13th of March 2020* Europe became "the epicenter of the #COVID19 pandemic, with more reported cases and deaths than the rest of the world combined, apart from #China" and more cases were reported in Europe daily "than were reported in China at the height of its epidemic" as written by Fredericks (2020) on 13 March, quoting a declaration of the World Health Organization (WHO) Director-General. The same day of 13 March, the European Commission (EC) has launched a coordinated answer to mitigate the socio-economic impact of the COVID-19 pandemic. From that day of March 13 on, a survey of a set of press releases issued by the European Commission (EC AV Portal, 2020) and e-mailed by the EC office in Romania, in about six month (13 March – 22 September), displays the weight of the interest for coronavirus (*Table 1*).

Table 1. The weight of the coronavirus topics in the EC/Ro press releases, over a period of six months

Issues by topic	Months							Total
	March*	April	May	June	July	August	September*	
Total	16	23	24	66	58	20	37	244
Coronavirus	14	21	20	18	18	16	14	121
[%]	87.5	91.3	83,3	27.3	31.0	80.0	37.8	49.6
• Health	6	9	6	10	6	7	9	53
• Social	4	9	8	4	4	5	5	39
• Economic	4	3	6	4	8	4	-	29
- companies	2	2	1	3	6	3	-	17
- country	2	1	5	1	2	1	-	12

* The months of March (from 13th) and September (till 22nd) are incomplete periods.

The upper part of the table shows: (i) dominance of coronavirus topics (about half of total number of topics); (ii) quite constant number of issues dedicated to the subject (a monthly average of 20) along the analysed period (in spite of large variation in number and percentage); (iii) two percentage peaks (March-May and August-September). The main conclusion is the constant interest of the EC in the topic of coronavirus; specifically considerably EU funds are converted in programmes and projects to mitigate the impact of the coronavirus pandemic – not only in the EU member states but also in the world most affected countries.

The lower part of the Table 1 depicts: (i) the dominance (almost half: 53 out of 121 press releases issued, which represents 44%) of the "health" topic (i.e. majority of funds going to health research, services, infrastructure, and pharma products), which is understandable; (ii) amid debates health versus economy, social issues (education, culture, labour force and vulnerable social categories among them) emerges as winner over economy (39 against 29); (iii) focusing on companies only, the weight of economic topics (i.e. varied forms of financial support for companies – small and medium-sized enterprises and large companies together) is even smaller (17 out 121 is about 14%).

The conclusion is that business sector (companies, actually the business core, producer of all goods and provider of all services) is not a top priority during this period of corona-crisis, apparently. Therefore, the author's focus is on the business sector from Romania, specifically on companies from a particular industry –

namely the book publishing industry, with the aim to investigate the impact of global crisis of coronavirus pandemic on the latter – from its onset in Romania to-date (mid-March – mid-September 2020).

Consequently, the rest of this chapter is structured as follows: background information about the lead-role played by the corona-crisis in the current business environment; focus on the book publishing as a technology-based industry as well as on this industry in Romania; this industry's selective answer (turning the threat of corona-crisis into an investing opportunity); results and discussion; conclusions and managerial implications as well as limitations and further research paths.

2. A KEY-ELEMENT IN THE NEW BUSINESS ENVIRONMENT: CORONA-CRISIS

The very same day of March 13, Gambrell (2020) published the results of a study on the US labour force, showing that older workers (particularly vulnerable to the coronavirus) make an increasing part of the American workforce: over 20% increase in a decade (2008-2018). Other than labour market, the financial and capital markets have suffered significant impact as result of corona-crisis. A gloomy picture of the post-COVID finance world is described by Sands (2020).

According to Holmes (2020) corona-crisis is impacting "companies, employees and consumers" as well as the global megatrends themselves (Angus, Evans, 2020). GDP contractions in low-income countries – as India and Mexico – demonstrate that "covid-19 curbs do not worth economic pain" or, in other words, "severe lockdowns [produce] economic damage" (Wheatley, 2020). Pandemics on top of "rising political and economic risks in some markets have seen [… investors] flee for the first time in what could be a growing problem for governments struggling to fund budgets bloated by anti-crisis spending" (Aris, 2020a). Unfortunately, the unexpected corona-crisis has brought unexpected effects. In addition to these, Chavarria, Walker and Bahamon (2020) reveal the illicit trade in times of corona-crisis.

In Europe, the economies of the EU member states react slightly differently to coronavirus. In Germany, a recent study (Sita, Dutton and Ha, 2020) shows a rapid evolution amidst the crisis as far as changing the consumer landscape, how consumers shop and pay. The technology plays a mounting role, changing the balance between leisure and experiences "out of home" versus "in the home". In Central and Eastern Europe the news are mixed: while "post-lockdown recovery of Poland's industrial production falters in August (Aris, 2020b), there are better news from Romania – where several industries have recovered: IT and constructions sectors (Aris, 2020c), car manufacturing (Ernst, 2020), finance and banking (book publishing industry was not among them).

As result, on September 21, Romania's Bucharest Stock Exchange has been upgraded from a frontier market to an emerging market and "held its first session as an emerging market". The very first two Romanian companies were included in the FTSE GEIS (Global Equity Index Series). From the macroeconomic standpoint, Euromonitor International Analytics (Euromonitor, 2020a, 2020b) offers short-term or longer term evolution scenarios ("what if"-type), based on its Macro Model. According to Euromonitor (2020a, p.3), "Covid-19 has transformed the economic and consumer landscape. It has changed the way we as consumers live, work and shop. Uncertainty remains high." Among the five consumer markets analysed, home & technology was highly impacted by corona-crisis – as far as "where and how consumers shop" and mostly how "hometainment and the new experiential consumer markets": "The trend towards digital education and pastimes is further enhanced, including further growth of gaming and online esports" (*Ibid.,* p.13). The companies and industries (book publishing industry included) that timely understand this trend will adapt, survive and succeed in the future business environment.

From microeconomic standpoint, at the company level, corona-crisis is definitely a threat, and company's strategies are challenged. However, companies (and their executives) behave differently facing threats. Turning threats into opportunities (Scarlat, 2015) demonstrate not only leadership skills (assuming strategic changes) but also an entrepreneurial behaviour (Sisu and Scarlat, 2020). In line with the positives, Evans (2020) investigates the reasons behind the surge of e-commerce during pandemic period.

The previously documented arguments support the idea that the publishing book industry is in facing the corona-virus-provoked challenges that open a technologized set of opportunities (e-commerce, online education, e-books, pastime, all supported by newer technologies) in business, education, culture – all impacting the society on longer term. In Romania the book publishing industry has its own peculiarities (Stănciulescu, 2020). Amid unprecedented research efforts and production of articles on covid-19 and its effects, the *literature on coronavirus impact on companies is rather limited – especially the book printing industry in Romania* – as the pandemic seems to be close to its apex.

3. BOOK PUBLISHING AS A TECHNOLOGY-BASED INDUSTRY

The book is the basic material support of education, written culture, training and information of citizens. The book publishing industry is an essential vector for maintaining and developing any national culture in front of the onslaught of the phenomenon of globalization. In this age of globalization and rampant digitalization, the book publishing industry is facing major challenges. The biggest challenge is the development of the technology used in the field, which is evolving much faster than the needs and adaptability of the book industry and sometimes even most end-users (readers). Actually, both publishers and readers are forced to adapt to new trends and technologies; specifically, industry players should make costly investments in new technologies and adapt their strategies to a dynamic and unpredictable market (Niculescu, Stănciulescu, Niculescu, 2020).

The spectacular development of digital technology during last decades has forced strong transformation of the book publishing industry due to the opportunities offered by innovations in the field of book production. The stages of the "classic" book production chain have benefited from new technologies, have been simplified and have gained greater facilities to increase the informative and aesthetic quality of publications, to multiply production capacity and to modernize and streamline distribution, marketing and of sales. In each stage of the production chain (also seen as value chain), state-of-the-art digital technology is used: hardware and specialized software as well as the Internet's contribution through social networks and communications (Niculescu, Stănciulescu, Niculescu, 2020).

E-books have emerged as optimal option for the market segment of users of digital and communication technologies, giving them quick and easy access to wide publishing production. A notable leap was determined by the small and cheap e-displays, which led to the development of smart devices. These have shortened the book's value chain by eliminating paper as a traditional publishing medium, leading to profound changes in the behaviour of "busy readers", who have immediate access to an entire library via their own smartphone, but also for authors – who can "self-publish" their works through the Internet and social networks, without publishing (Niculescu, Stănciulescu, Niculescu, 2020; Stănciulescu, Scarlat, 2020).

The recent years were marked by a profound interlink between the development of smart devices and the evolution of e-books, each driving the other and leading to the development of new markets and "low-end" markets with low prices (Stănciulescu, Scarlat, 2020), these recent trends demonstrate that book publishing industry is closely connected with high technology and it is open to adopt any useful innovation in this field.

4. BOOK PUBLISHING INDUSTRY IN ROMANIA

The Romanian book market (Figure 1) is one of the smallest in the European Union, being strongly influenced by structural reforms in recent decades, which has led to social polarization, unemployment, labour migration and drastic decline in living standards (Stănciulescu, 2020; Stănciulescu, Scarlat, 2020). On top of this complex process of reforms, the development of cable and satellite television networks has led to a decrease in the reading appetite of ordinary Romanian, the average book consumption being about 4€/inhabitant.year (Stănciulescu, 2020).

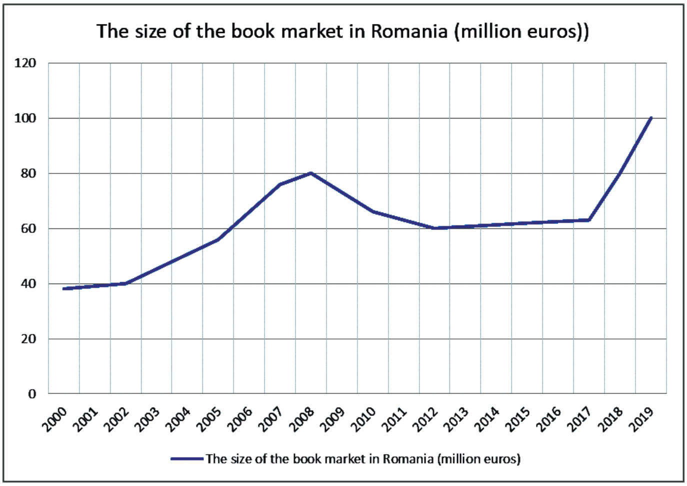


Figure 1. The size of the book market in Romania (million euros) (Stănciulescu, 2020)

Figure 1 pictures the sharp decline in the book market during the economic crisis (2008-2011), followed by slow recovery, and faster growth (2017-2019). The Romanian publishing industry counts 6175 registered publishing houses (INCFC, 2000a,b), most of them (60%) concentrated in Bucharest (capital-city). Starting March 2020, corona-virus crisis affected Romania and its book publishing industry. And so the authors' research project on the book publishing industry was impacted. Thus, research objectives were enriched, trying to identify main threats faced by the book publishing industry as result of the corona-crisis, and find out which were the companies' answers.

The authors conducted interviews with several entrepreneurs and mangers from publishing industry over a period significant for the corona-crisis (six months, from its onset in Romania to-date: mid-March – mid-September 2020). The circumstances of the study were negatively affected by the conditions of isolation and social distancing, and mostly by the managers' lack of time for interviews, while fighting with new problems. Some of the results are presented in the next section. The main result is rather surprising – in that sense that strategy manuals do not exclude but rarely is seen in extreme situations: this industry's selective answer was to turn the COVID-19 pandemic threat into a strategic opportunity: to invest in newer, sustainable technologies.

5. CORONA-CRISIS IMPACT: TURNING A THREAT INTO AN OPPORTUNITY

The onset of the coronavirus pandemic has generated an economic and social crisis unprecedented by humanity in modern times. The crisis effects were extremely strong in most economic and social sectors in all countries of the world, especially the heavily industrialized. Among causes of self-aggravation of the socio-economic situation is the anxiety among the population (consumers) – who, in the absence of clear information on the duration and effects of the pandemic, facing the specter of a major economic crisis, adopt solutions – some suggested by specialists and influencers, others resulting from the level of material possibilities and their perspective in the future. Within certain social categories, aberrant responses to corona-crisis appear, presented excessively by the media in the pursuit of sensationalism. And Romania was not an exception in behaving according to this schematic model (Figure 2).

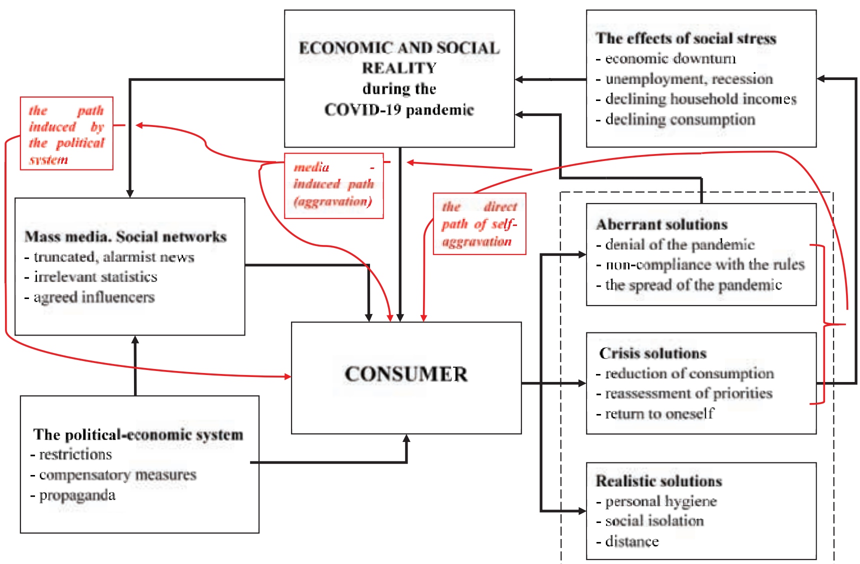


Figure 2. Self-aggravation of the economic-social reality due to the pandemic

The Figure 2 depicts how crisis solutions and consumer's behavior change lead to economic collapse by unemployment and declining incomes, which project grim prospective, forcing consumers to drastically amend the consumption, with aggravating effects in many economic sectors. This vicious circle depicts how the socio-economic situation worsens. There is also a path of aggravation induced by the media by projecting an apocalyptic picture of the socio-economic situation under pandemic, which leads to increased stress and uncertainty, as well as adopting aberrant crisis solutions with destabilizing effects on economic balances.

The restrictions imposed by government have worsened the state of the national economy, with negative effects on the incomes and hopes of the population that is forced to adopt crisis solutions for survival. This is the way to aggravate the economic and social reality generated by the political factor, in the fight to limit the consequences of the pandemic. The most important change, probably with long-term consequences, is the behavior: employees will be open to working from home, and consumers will drastically prioritize their spending, reduce the purchase of non-essential and occasional goods and services.

The cultural sector was the first to be affected and will probably be the last to emerge from the crisis due to the crisis effects on the economic sector. The cultural offer has largely moved to online environment (Figure 3) – as "non-public consumption" (INCFC, 2020a).

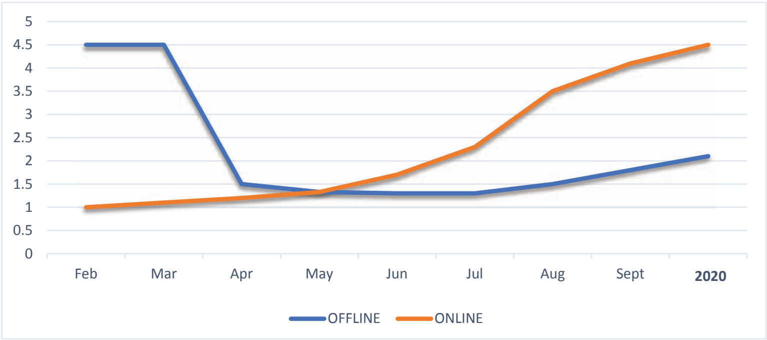


Figure 3. Adapting cultural consumption during the crisis (Amended from INCFC, 2020a)

The publishing industry is one of the sectors hardest hit by the coronavirus crisis. The effect is the drastic decrease in both book publishing and production orders, and sales to population and institutions – a fact underlined by most of the interviewees. A first solution to counteract the decrease in activity was to develop the online business segment, namely the presentation of book offers and sale in its own online stores. For many small companies, this was an opportunity to invest in digital technology. The online publishing solution didn't lead to expected results; therefore, the companies had to make important re-evaluations of medium and long-term strategies, changes in business practices, operating contract suspensions, especially among employees, technical unemployment for certain categories staff or rotating leave of absence among employees. The development of e-book production and the need for digital textbooks for online schooling are directions that a large number of publishers have focused on – with twofold immediate benefits (meeting stringent pandemic requirements; giving up paper). Thus, publishers with e-book production have increased their efforts on the e-book offer, although its impact among readers was rather limited (Figure 4). E-book production is perceived as a solution for the future but the expected revenues are low compared to the development of an online bookstore.

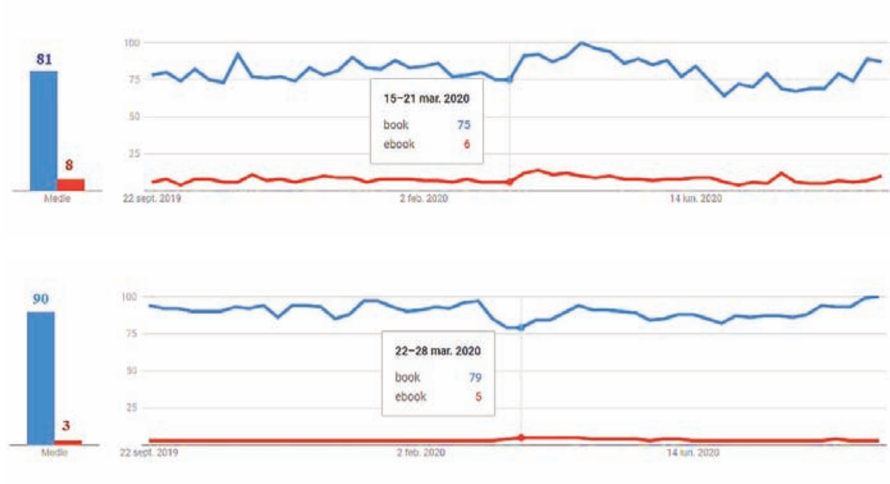


Figure 4. The search trend in the world: book versus e-book (Google Trends, 2020)

Managers claim that e-book buyers are not yet an important market and a large audience – as it is shown in Figure 5: access to e-books increased during the isolation period (April-May 2020), gradually declining thereafter to pre-pandemic levels.

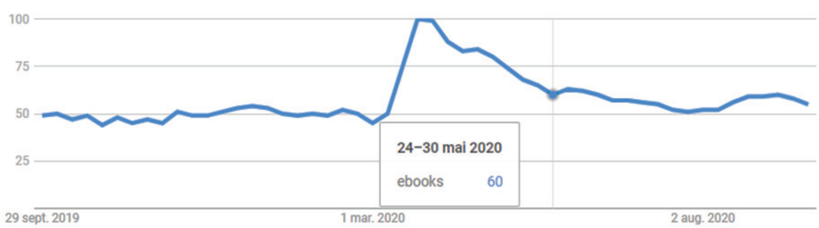


Figure 5. Consumer interest and the evolution of e-book searches in the world (Google Trends, 2020)

Most actors in the field have placed an increased emphasis on marketing, carefully studying the changes of the book consumers' preferences and expectations:

- varied editorial production covering the whole range of needs;
- new and attractive forms of book presentation – both printed and electronic;
- quick access and affordable price for all categories of readers.
- All managers agreed to focus on promotion, advertising and sales.

Investing in state-of-the-art technology to achieve digital connectivity with different groups of readers, between company departments in order to comply with "work from home" and "social distance" requirements as well as automation of certain production processes is of intense concern for executives. This functions as post-COVID strategy and an opportunity to reduce the technological gap in book industry. However, many respondents say they will not make substantial investments during this period due to lack of liquidity and uncertainties regarding the duration of the pandemic and the effects of the economic crisis.

Besides investing in newer technologies, the COVID-19 pandemic and subsequent socio-economic crisis caused restructuring the portfolio of products and services, as well as their design to meet the demands of current and post-COVID-19 consumers – considering the change in human behaviour, shaped by reckoning the fragility of human life, the aberration of consumerism based on irrational exploitation of resources, and increasing pollution. The book industry understood the clients' tendency to prioritize their expenses due to the anxiety caused by an uncertain future and started to make strategic changes to restructure the activity, invest in new technologies and new products, towards activity in the virtual environment (e-commerce).

Although the book industry was not among the most resilient industries that quickly recovered after corona-crisis impact, a number of companies active in this industry, paradoxically, proved the ability and vision to turn the pandemic threat into an opportunity: their executives developed sustainable strategies, investing in newer sustainable technologies, more productive (but less labour-, energy- and materials-intensive), suitable for e-books production and e-commerce. Even in pandemic conditions, the expectations of industry executives are optimistic, foreseeing rapid return of the sector to the pre-crisis situation, reduced technological gaps in the book publishing industry, and stronger orientation of the population towards the written culture.

6. DISCUSSION

The delay in publishing official statistics in the culture sector have produced delays in making decisions to counteract the crisis' effects; and decisions' results were published after another 1-to-3 months (INCFC, 2020b) – which made quick reactions more difficult. Gathering primary data on the problems facing the book industry during this period was difficult due to the lack of time of those called, evasive answers or reluctance to transmit concrete data by telephone. Respondents stated that pandemic period strongly affected the sales of printed books – ranging between 40-80% as compared to the previous period. The most affected were the companies with publishing as main activity. However, given the small number of interviews in the surveyed industry, conclusions are qualitative mostly.

As far as the solutions for the future, the managers, active in the book publishing industry, are in general agreement that:

(i) Digitalization in the online environment is the lifeboat of businesses both in business communication and books content, accessible and adapted to consumers' preferences. At the same time, digital technology, the Internet, social networks and communications ensure a reduction in social distance, alleviating the stress and anxiety produced by isolation. This facility can lead to a segregation of the population by skills and access level, knowing that over 40% of Romanian population do not have technology and/or Internet access, and many rural schools could not hold online courses because of this.

(ii) Finding innovative ways to present and promote the book to attract new categories of readers is a pressing concern for all managers but especially for "niche" publishers who must keep their market segment, while facing fierce competition from various forms of entertainment available online.

(iii) Reassessment of the company strategies, in terms of customer portfolio, portfolio of products offered to the reader, their quality and accessibility in terms of changes in consumer behaviour in general, prioritizing spending as a result of stress and anxiety given by financial insecurity, is the main direction to focus.

The expectations of the book publishing industry for the next period are essentially political and organizational, aiming at receiving support from policy makers in the area of the national culture: (i) Creation of a Register of the National Cultural Sector; (ii) legal obligations of public institutions to make firm orders for editorial production; (iii) government support for industry actors to facilitate their participation at international book fairs in order to promote exports as well as the national culture and image.

7. CONCLUSIONS AND MANAGERIAL IMPLICATIONS

COVID-19: AN ACCELERATOR OF DEVELOPING SUSTAINABLE STRATEGIES

The book industry, like other sectors as culture and education, has been severely affected by the COVID-19 pandemic, mainly due to restrictions on social isolation and distancing, but also by declining the income of certain categories of farmers and consumers. The management implications are primarily at the level of attitude towards business practices, in the re-evaluation of strategies and offers, which would satisfy the new requirements of the book consumer, extremely demanding and forced to prioritize expenses due to new economic conditions.

The large part of editorial industry aimed at measures to limit production costs, as well as online re-orientation. Yet several companies were successful by quick reaction, designing and implementing more sustainable strategies, investing in more productive – but less labour-, energy- and materials-intensive – newer technologies. Today they are the early adopters; tomorrow only the companies guided by sustainable strategies will survive. This was the major management lesson to learn: the COVID-19 pandemic was actually an accelerator of adopting sustainable strategies, newer technologies-based. This conclusion is probably true for a number of industries, and not only in Romania.

The paper conclusions and implications are important for theorists as well as business owners, investors, and managers – helping them to make appropriate strategic decisions. A key-area of concern for the industry executives is to develop new strategies in order to increase the number of readers, targeting different generations (Millennials, X, Z, and future generation); to design innovative models for book production, distribution and presentation; to investigate novel ways to involve the book industry in supporting online education. The book publishing sector should re-evaluate its strategies yet supporting the cultural values and education.

8. LIMITATIONS AND FURTHER RESEARCH

Isolation and social distancing made it difficult to collect data through interviews, online surveys or telephone interviews. Therefore, besides inherent limitations as research work-in-progress, there are limitations caused by relative low number of respondents and, mostly, their truncated answers, hesitating to address all issues by phone. A serious research restriction was the lack of timely official data – recognized by the National Institute of Statistics, which considers that, in the cultural field, the results of managerial decisions are visible after 1-3 months and statistics generated after them appear after another 2-6 months. This severely affected the companies' capacity to make prompt decisions to mitigate the effects of corona-crisis. This conclusion that COVID-19 pandemic was an accelerator of adopting sustainable strategies is probably true for a number of industries, and not only in Romania. This would be a main path for further research. The authors strongly believe that further research is needed to investigate the evolution of book publishing industry in the post COVID-19 world.

9. REFERENCES

Angus, A., Evans, M. (2020) Coronavirus: Implications on Megatrends. Euromonitor International, May 2020.

Aris, B. (2020a) International bond investors are selling off local EM debt in all but the best markets. bne Intellinews online, September 21, 2020. Retrieved from: http://www.intellinews.com, Accessed 22 September 2020.

Aris, B. (2020b) Post-lockdown recovery of Poland's industrial production falters in August. bne Intellinews online, September 21, 2020. Retrieved from: http://www.intellinews.com, Accessed 22 September 2020.

Aris, B. (2020c) Romania's construction sector shows strong growth in 7M20 despite pandemic. bne Intellinews online, September 17, 2020. Retrieved from: http://www.intellinews.com, Accessed 18 September 2020.

Chavarria, L., Walker, Q. and Bahamon, D. (2020) Illicit Trade in Times of Coronavirus. Euromonitor International. August 2020.

EC AV Portal (2020) Press releases by European Commission Audiovisual Portal: audiovisual.ec.europa.eu An official EU website. Accessed March-August 2020.

Ernst, I. (2020) Romania's car production rebounds post-lockdown. bne Intellinews online, September 11, 2020. Retrieved from: http://www.intellinews.com/romania-s-carproduction-rebounds-post-lockdown-191720/ Accessed 15 September 2020.

Euromonitor (2020a) The Coronavirus Era: How Will Consumer Markets Evolve? Euromonitor International Passport, May 2020.

Euromonitor (2020b) Global Economic Forecasts: Q3 2020. Euromonitor International Passport, August 2020.

European Commission (2020) Press releases by European Commission in Romania: http://ec.europa.eu/romania Accessed March-September 2020.

Evans, M. (2020) The Digital Consumer Journey. Who is behind the crisis-inspired e-commerce surge? Euromonitor International, September 2020.

Fredericks, B. (2020) WHO says Europe is the new epicenter of coronavirus pandemic. New York Post, 13 March 2020.

Gambrell, D. (2020) How Covid-19 affects the US workforce, by income and industry. Bloomberg Businessweek online, 13 March 2020. Retrieved from: https://

www.bloomberg.com/news/features/2020-03-13/how-coronavirus-affects-u-s-workforce-by-income-and-industry, Accessed 23 September 2020.

Holmes, L. (2020) Voice of the Industry: Coronavirus Impact on Companies, Employees and Consumers. Insights from global industry professionals. Euromonitor International, September 2020.

INCFC (2020a) Monitoring the Cultural Domain during the Covid-19 crisis. Section: Culture in Quarantine, April 2020. Retrieved from: https://www.culturadata.ro/culturadata-interactiv-lansarea-sectiunii-cultura-in-carantina-monitorizarea-domeniului-cultural-in-timpul-crizei-covid-19/ Accessed 19 September 2020.

INCFC (2020b) Online debate on Europe Day - Cultural Sector post Covid-19, May 2020. [Romanian] National Institute for Cultural Research & Training. Retrieved from: https://www.culturadata.ro/dezbatere-online-de-ziua-europei-sectorul-cultural-post-covid-19/ Accessed 21 September 2020.

Niculescu, S., Stănciulescu, G.D., Niculescu, A. (2020) Management conflicts during succession process in technology-based family businesses. FAIMA Business and Management Journal (in print).

Sands, K.D. (2020) Shifts in Consumer Finance after Coronavirus. Euromonitor International, June 2020.

Scarlat, C. (2015) Organization and its limits: three major managerial implications. Conference Volume for the 7th International Conference on SEA events (Sharing, Empower, Awareness) International Conference – "Interdisciplinary approaches between traditional and modern methods". The Romanian Academy, Iași, Romania, pp.67-74.

Sisu, M. and Scarlat, C. (2020) Entrepreneurial behaviour: Strategic changes and initiatives of the SMEs, members of an international group. FAIMA Business & Management Journal, Volume 8, Issue 4, December 2020 (in print).

Sita, R., Dutton, S. and Ha, L. (2020) The German Consumer. Rapid Evolution amidst the Crisis. Euromonitor International, September 2020.

Stănciulescu, G.D. (2020) Industria editorială din România ca afacere de familie, bazată pe tehnologie [Book publishing industry in Romania, as family, technology-based business]. PhD research progress report no.3, June 2020. University "Politehnica" of Bucharest, Romania.

Stănciulescu, G.D., Scarlat, C. (2020) "Present and future in family-owned technology-based businesses in Romanian book publishing industry". Proceedings of the 15th European Conference on Innovation and Entrepreneurship (ECIE 2020), Roma, Italy, 17-18 September 2020. Edited by Alessandro De Nisco. Reading, UK: Academic Conferences International Limited, pp.824-833.

Wheatley, J. (2020) Covid-19 curbs 'not worth economic pain' for low-income countries. Financial Times, September 6, 2020.

CHAPTER

7

Reimagining and Redesigning a Post-COVID Sporting Events: Mapping Global Sporting Experiences

Malvika Sagar, Nithin Kalorth

Reimagining and Redesigning a Post-COVID Sporting Events: Mapping Global Sporting Experiences

Malvika Sagar, Nithin Kalorth

ABSTRACT

The spread of Coronavirus has not only affected the countries and their economies at large but has also impacted a lot on the professional sports like IPL 2020. This chapter tries to study the role of media management in rediscovering, redesigning and reinventing the strategies to overcome this crisis in IPL 2020. To this end, the general effects of the pandemic on sports and the role of media managers will be briefly outlined, followed by a discussion of matches played behind closed doors. Based on the major sports events affected due to Pandemic COVID-19 sporting events of which some were held, and some being cancelled are being discussed in the perspective of how they manage the events during COVID-19 crisis through reportage and coverages. As a result, the stakeholder interest and professional sports bodies came up with solutions to maintain social distancing and bio bubble as a solidarity and certain measures of possible self-regulations.

Keywords

COVID -19, Media Management, IPL, Cricket, Media Events

1. INTRODUCTION

In March 2020, concerns were raised about the possible impact of the COVID-19 outbreak on various sports events around word. IPL (Indian Premier League) is an annual professional Twenty20 cricket league administered by Board of Control for Cricket in India (BCCI) in India during Indian summer (March or April and May) which attract sponsors, stakeholders, global viewership, and media attention. The COVID-19 outbreak followed national lockdown in India raised doubts on conducting the league in India as planned. Apart from COVID-19, the chaos created around title sponsorship from VIVO over India – China border issues. By August 2020 it was declared that fantasy sports platform, dream 11 as the title sponsor of IPL which was hosted by United Arab Emirates. The league was scheduled between 19 September and 10 November 2020 at Dubai (Dubai International Cricket Stadium), Sharjah (Sharjah Cricket Stadium) and Abu Dhabi (Sheikh Zayed Cricket Stadium). The matches were held in closed gates and empty stadiums by following strict COVID-19 health protocol including bio bubbles. It was a huge challenge for IPL organizers, team management, media managers, and stakeholders to conduct an event with balancing the viewership. This chapter aims to discuss the impact on COVID-19 on sports and media management on sporting events with focus on cricket's biggest carnival IPL and few other major sporting events around the globe. This chapter tries to explain the role of media management Post- COVID-19 in the field of sports and its events happening around the world. In this chapter we will be discussing the model of rediscovering, redesigning and reinventing strategies to overcome this difficult situation faced by sporting organizations. The available literature is being reviewed which is in the form of newspapers, interviews of the experts, media managers.

2. MEDIA AND MEDIA MANAGEMENT

Mass media is a multidimensional functional organisation that performs in various parameters and aspects of existence of human life and welfare of the society. It not only informs, educate, motivate and persuade people towards achieving a goal but also helps them by keeping them aware about their environment. It is imperative to know that media is a part of society and no other than it. (McQuail, 1997). In discussing the scope of media in society McQuail noted that "the media are widely believed to have gained in their centrality and potential influence for good or ill in society" (1997, p.511). The role of media managers in controlling media and its functionaries are vital in deciding the content and has a huge impact on the business side of media as an organization. Its impact on society is also a matter of concern. Defining media management is always a difficult task (Kung,2008), however media management can be understood as managing of media content and distribution by managers within media houses and the relationship with media managers and media itself. In Practice the function of media manager is different from managers of other organizations. Mierzejewska (2011) states the reason for this difference as "media products have extremely high social externality value because of the central role information and media content plays in economic, political, and social processes" (p.14). The role of media manager is often beyond economical and organizational management since media's outreach is deeply integrated with society.

3. SPORTS AND SOCIETY

Sports are often regarded as a recreational activity. Sports does not only help is keeping the fitness level up but also has a significant value in boosting up the happiness hormones in everyone (Stryer et al, 1988) and it is more useful in children and youth (Brady, 2004). Any type of a sport plays a vital role in holistic development of human being since childhood. Even in schools and colleges the admission's criteria is also kept as a sport being a category itself most of the times (Shulman and Bowen, 2011; Bowen and Levin, 2011). Sports helps in keeping the society together as any game is obviously not played alone, you need an opponent and sometimes a team altogether to defeat the other. The nations in order to keep healthy relations with each other use sports as a medium to display their soft power. The events like Commonwealth, Olympics and professional games like IPL, ISL, Badminton League, Pro Kabaddi, French Open, World Aquatics Championships and many other's helps a nation to display their talent infant of the world and prove their fitness level as a soft power.

4. COVID- 19 AND SPORTING EVENTS

The global emergency faced by world was started in early 2020 and in second week of March it was declared by WHO as a "pandemic". COVID -19 or coronavirus attack on the world has made the governments of various countries to take a swift and strict action to control the situation, so as there is can be a possible way of stopping the virus to spread in masses. The seriousness of the situation was understood by the various governments and is evidenced by the rules and regulations imposed on its citizens like a complete lockdown or curfew for few days. In second week of March, Italian government took this first step to put a halt on the spread of coronavirus by making its people aware about the need to practice the social distancing. At that time, the government also came up with imposing restrictions on working of businesses, factories, schools and colleges, limited entry in stores and supply of essentials only. This act helped in people to remain at their homes and move out only at the time of medical emergencies or for essential work only. This act not only restricted the movement of people for their regular jobs but also have affected the gatherings for sporting activities and decreased the opportunities for social gatherings. There was seen a sharp increase in the acute respiratory failure cases (severe acute respiratory syndrome coronavirus 2 (SARS-COV-2)) and acute respiratory distress syndrome requiring hospital admission and intensive care treatment.

It is needless to say that COVID-19 has impacted all the countries and their economies at massive levels. 2019-nCoV is a new strain that has not been previously identified in humans and causes COVID19/coronavirus disease. Therefore, due to massive spread of coronavirus summer Olympics in 2020 to held in Tokyo has been postponed to 2021. But it has been reported that countries like Hong Kong, Turkmenistan, Belarus and Nicaragua have not stopped their professional sporting matches (Wagner, 2020; Wong et al. 2020). Parnell et al. (2020) has tried to put forward a report by analyzing the impact of COVID -19 on Sporting mass gatherings. In this paper he has brought forward the commentary that is helpful in doing an instant analysis of the impact of coronavirus disease 2019 on the sporting events with a mass gathering. In his study he has tried to put forward a strategy for mass gatherings with a special reference on the UEFA EURO 2020 competition. In his report he has special mention about the Olympics 2020 and community recreational football matches. In his paper he has also a special mention about how sports managers and practitioners must be prepared for future sporting events in order to make it a 100% success.

It's of no doubt that the pandemic caused by COVID-19 has brought every sporting event to a pause. A lot of events preplanned went through a silent attack for a while as the travelling and mass gatherings were prohibited. It's not just about audience who wish to come and view the matches, but it has now come upon the lives and security of its players too. Due to health crisis the wise decision to delay or postpone the games have been taken but what about the money involved and spent? When this is known that this virus spreads with human contact, a method to keep up with the situation came into play and social distancing being the new norm came into practice. How will it be possible to play a sport without touching or maintaining a social distancing. Baggish et al. (2020) in his paper mentions that there is a possible concern during the champions league match between Atlanta and Valencia in Milan may have influenced the trajectory of COVID -19 cases in

Europe. Therefore, the only option adopted in welfare of mankind at the time of pandemic till vaccine is invented is to maintain social distancing and cancelling the events with large crowds and mass gatherings. Therefore, such models were adopted by various sports and government authorities to make sporting events happen.

It is to be believed that the businesses all over the world have gone through very lows, many companies have to cut down on their staff and many were not paid with their salaries on time. many businesses have had to shut themselves due to lack of capital and it is true that it is not just one area or any one type of business, but COVID-19 have had its major adverse impact globally on economy as a whole. Also, it has also brought in front that few businesses have had a major hit due to many restrictions because of this disease, one of them is Sports as a sector. Rattan (2020) in his paper tries to study about the never seen before crisis affecting sports as a sector and the need for changing business models to its survival. The methods that are needed to be adopted for sport agencies, federations and for professional sporting tournament bodies to cope with the changing demand and social distancing norm in the times of COVID-19. In this paper, author has tried to understand and find out in detail how sport as a sector can use entrepreneurship as a way of combatting uncertainty whilst promoting the recognition of new opportunities. The finding in his paper states that all sport businesses, athletes, managers, fans and consumers need to utilise entrepreneurial thinking in order to act creatively. This will not only help combat the unease and uncertainty, associated with the COVID-19 crisis, and create more entrepreneurial ecosystems to develop.

Corsini et al. (2020) in their paper have described that during the early days even during the outbreak, the professional sports were not stopped, "and on 11 March 2020, the first football player belonging to Italian Serie A tested positive to coronavirus. The day after other five players and a team doctor have been declared affected. Since 8 March 2020, the Italian Serie A has been stopped until at least 3 April 2020, but, in the meanwhile, some clubs are requesting to resume the training activities not to lose physical fitness. There is a strong opposition to this from Serie A team doctors: recently, unanimously, they have sent a letter to Lega Serie A to strongly advise not to resume football activity before the COVID-19 emergency has clearly improved. According to a 1995's Italian law, team doctors are in charge of his team footballers' health, therefore, with this letter, the whole category wanted to take a strong position about this issue. Even though football players might have a low risk of death as a consequence of an infection by COVID-19 because of their young age, they could nevertheless develop severe respiratory failure requiring hospital admission. Furthermore, football is a contact sport and football players are often in close contact with the teammates during their daily activities and camps. These factors put the players in a high risk of disease transmission. Moreover, a significant number of insiders participate in daily training, greatly increasing the chances of infections as well. For these reasons, the profession of footballer does not allow compliance with the normal protection rules recommended by WHO." (Corsini et al. 2020, p.1).

Not only sports authorities and affiliated bodies are interested in resuming the sports in the times of COVID-19, there are other fragments of bodies apart from them who are also interested and are thinking about sports to resume along with COVID-19, Dores and Cardim (2020) in their paper have given a viewpoint from the perspective of a cardiologist. In this paper they have tried to explain requirement of essential quality check and safe conditions for a player to play whether if they have been exposed to this disease or not. "It is essential to assure equity and safe conditions for the protection of all stakeholders to resume sports activities—a single athlete can be a vector of transmission. For this purpose, physicians should be involved in the decision and contribute to establish specific protocols to evaluate athletes affected by COVID-19. Cardiac evaluation is of utmost importance due to the direct complications of the disease and the potential adverse effects of some medications used for the treatment of COVID-19 (eg, steroids; antibiotics; and antimalaric, antiviral, anti-inflammatory or immunosuppressant drugs), with implications for exercise training."

It is to be noted that the Covid-19 is not going to disaster at least for quite a time and we need to learn how to live with it, therefor the interested stakeholders in sports and sporting authorities are interested to resume the championships within the parameters of this pandemic. Ludvigsen and Hayton,(2020) in their paper have talked about various "organizational prospects of "post-pandemic" sports mega-events by focusing predominantly on the topics of volunteering and security management. Importantly, these are two central facets of mega-event organization that are likely to be impacted by the current crisis in some way as the world of sports aims to resume. By considering a number of emerging questions, this commentary calls for an engagement with some of the individual and social implications related to future mega-event organizations. It sheds light on some of the potential organizational challenges and management issues related to "restarting" sports and provides some directions for future interdisciplinary work."

5. SPORTS EVENTS POST COVID: THE GLOBAL RESPONSE

In 2019, beginning in Wuhan, Hubei region, China, the pandemic has reached out over all the territories of the nation, yet in addition influencing circumscribing nations, for example, Vietnam, Russia, Nepal, and other firmly associated districts, for example, Thailand, Singapore, Malaysia, the Philippines, South Korea, and Japan, among others in Asia and abroad. In 2020 because of viral, zoonotic microbe (SARS-CoV2) causing a flare-up of Coronavirus illness (COVID-19) that has led the World Health Organization (WHO) to pronounce a Public Health Emergency of International Concern (PHEIC). The worldwide concern and the quantity of cumulated cases has expanded. Although most cases have happened in terrain China, a developing number has been accounted for in different regions, with the majority of these in Japan. This circumstance is upsetting, true to form, the wellbeing and economy of China and other countries. For instance, in Shanghai, China, the Chinese Grand Prix has been delayed as a result of the episode of COVID-19, as the Formula One and the game's overseeing body, the FIA, as of late proclaimed. The race was scheduled to be held in Shanghai on April 19, 2020 is described in paper of Gallego et al. (2020). Likewise, the expected effect of COVID-19 on Japan, including the 2020 Summer Olympic and Paralympics Games which were supposed to be held from 24 July to August 9, 2020 and 25 August to September 6, 2020 in Tokyo. At this moment, the tentative dates for Summer Olympics scheduled to begin form Friday, 23 July 2021 to Sunday, 8 August 2021 and Summer Paralympics will begin on Tuesday, 24 August 2021 and ends on Sunday, 5 September.

There is a huge impact on economic situation of sports specially seen on professional soccer Drewes et al. (2020) in their paper have specifically mentioned about the effect of the Covid-19 crisis on soccer and the matches which have been played without the audience to cheer for their favourite team or player and empty stadiums. they have also suggested some possible solutions from the perspective of economy for the sports industry to combat the issues being raised from the world health crisis due to covid-19. In their paper they have suggested, intra-industry market-based solutions such as a solidarity fund or measures of self-regulation to possible state subsidies for regaining the best position of sports in the market in the best interest of the stakeholders.

Pavitt, M., (2020), in his article mentions that due to rescheduling of the dates of Tokyo 2020 to 2021, the refund process for Olympic will be officially begin from November 10 till the end of the month for the residents of japan and for Paralympics the process will start in the month of December and will be available till 21st of December. There is a difference in the refund process of the ticket holders outside of Japan, those who have purchased the tickets through the Authorized Ticket Resellers (ATR's). It is also mentioned that each ATR will have an individual process for refund. As per the report "Around 4.48 million tickets for the Olympics have already been sold, as well as 970,000 for the Paralympics, through the official ticketing website and various lotteries. It is also to be noted that the venue for the events will remain the same. The forecast of ticket sales revenue was ¥90 billion (£657 million/$857 million/€727 million). "The sale of tickets for the Games are currently suspended. It has also come to be noticed that several Japanese sporting events have taken place in recent months with spectators permitted, albeit with limited numbers.

Both Tokyo 2020 and the International Olympic Committee have expressed hope spectators will be able to attend, and fans are included in planning for the rescheduled Games. Attendance of spectators is one of the main topics being discussed by a three-party council, consisting of the Japanese Government, Tokyo Metropolitan Government and the Tokyo 2020 and which is helping to devise coronavirus countermeasures for the Games. The return of spectators has sparked hope that next year's Olympic and Paralympic Games will not be held behind closed doors."

6. THE ROLE OF MEDIA MANAGEMENT: THE IPL EXPERIENCE

When IPL was shifted to UAE which was planned to conduct in an empty stadium, the media management team of IPL and broadcasting partner (Star Sports) decided to create a virtually presence experience for the audience. With the of augmented reality and artificial intelligence technology, the virtual audience were created on the screen. The cheers from fans, claps and excitement were created virtually which is only audible to the television viewers. These models are supporting the claims of media events which are tailor made for media audiences irrespective of ground realities (Mitu and Poulakidakos, 2016; Couldry et al, 2009). For example, when a player takes a run or a wicket falls off, it's only the audience that can hear sound effects like fireworks , music in background or hooting of the names of the players along with cheers while in real, the player is not able to hear any of the sound effects created by the editor sitting in the studio while the broadcast is live. engrossing in solitude. The reuse of IPL signature tune and other music helps audience to remember and recollect the past mediated experience.

The virtual audience screens were displayed on ground which is affiliated with sponsors. Through this, the management made sure of the revenue and presence of stakeholders in the game. The TV replays and repeated telecast on TV and digital platforms kept audience to stick with the game and its progression. The social media activity of IPL and individual teams and players were also commendable. The social media posts were personalized and engaging with the audiences by providing real time updates from on ground, practice sessions, dressing room and hotel. Apart from the experiences given to the audience, the management team ensured the safety and security of the players and supporting staffs. The players needed more practice time since most of them were in self-isolation during national lockdown in their respective countries. The question on fitness, confidence were key issues. But the IPL management with ICC Academy ensured enough practice sessions for players to practice and keep them in fit.

There were many changes in cricket as a game in IPL under COVID-19 scanner. Few of the rules are being discussed as follows:

a. Saliva being the important carrier for coronavirus and in order to curb coronavirus infection among the players, It has often been seen as a practice of the bowlers to shine the ball with their saliva, therefore there is a restriction on it, now during the game it is important for bowlers to make sure that they do not use their saliva for a proper grip strategy or to shine the ball.

b. General audience being the important factor in any match in order to support the teams and cheer the players up, in their highs and lows have been sacrificed at this point because the mass gatherings have been suspended by the government and in order to make the matches happen this step has been taken that the audience can enjoy the matches on their television screens but are prohibited to visit the stadium where the matches are being held.

c. Earlier in order to maintain sportsmanship and wishing each other luck the captains of both the playing teams used to shake hands with each other but this time in order to maintain the social distance the captains are restricted to shake hands after the toss.

d. Lastly, if in case any of the players is tested positive for COVID-19, the playing teams will be privileged for keeping the replacements.

With the effort of hundreds of people behind the curtain made sure that the IPL 2020 was conducted and broadcasted successfully which paved the models of rediscovering, redesigning and reinventing sporting experience. The key difference in IPL and other major sporting events are surrounded with the matter of sustainability. The IPL 2020 was successful not only in terms of media management and sporting but also in terms of economical sustainability.

7. REFERENCES

Baggish, A., Drezner, J. A., Kim, J., Martinez, M., and Prutkin, J. M., 2020. Resurgence of sport in the wake of COVID-19: cardiac considerations in competitive athletes.

Brady, F., 2004. Children's organized sports: A developmental perspective. Journal of Physical Education, Recreation and Dance, 75(2), 35-41.

Bowen, W. G., and Levin, S. A., 2011. Reclaiming the game: College sports and educational values (Vol. 60). Princeton University Press.

Corsini, A., Bisciotti, G. N., Eirale, C., and Volpi, P., 2020. Football cannot restart soon during the COVID-19 emergency! A critical perspective from the Italian experience and a call for action.

Couldry, N., Hepp, A., and Krotz, F. (Eds.)., 2009. Media events in a global age. Routledge.

Dores, H., and Cardim, N., 2020). Return to play after COVID-19: a sport cardiologist's view.

Drewes, M., Daumann, F., and Follert, F., 2020. Exploring the sports economic impact of COVID-19 on professional soccer. Soccer and Society, 1-13

Gallego, V., Nishiura, H., Sah, R., and Rodriguez-Morales, A. J., 2020. The COVID-19 outbreak and implications for the Tokyo 2020 Summer Olympic Games. Travel Medicine and Infectious Disease.

Küng, L., 2008. Strategic management in the media: Theory to practice. Sage.

Ludvigsen, J. A. L., and Hayton, J. W., 2020. Toward COVID-19 secure events: considerations for organizing the safe resumption of major sporting events. Managing Sport and Leisure, 1-11.

Mierzejewska, B. I., 2011. Media management in theory and practice. Managing media work, 13-30.

Mitu, B., and Poulakidakos, S., (Eds.). 2016. Media events: A critical contemporary approach. Springer.

McQuail, D., 1997. Audience analysis. Sage publications.

Parnell, D., Widdop, P., Bond, A., and Wilson, R., 2020. COVID-19, networks and sport. Managing Sport and Leisure, 1-7.

Pavitt, M., 2020. Tokyo 2020 confirms refund process for Olympic and Paralympic Games. Retrieved October 30, 2020, from https://www.insidethegames.biz/articles/1100156/tokyo-2020-refunds-olympics-paralympics

Ratten, V., 2020. Coronavirus disease (COVID-19) and sport entrepreneurship. International Journal of Entrepreneurial Behavior & Research.

Shulman, J.L. and Bowen, W.G., 2011. The game of life: College sports and educational values (Vol. 62). Princeton University Press.

Stryer, B.K., Tofler, I.R. and Lapchick, R., 1998. A developmental overview of child and youth sports in society. Child and Adolescent Psychiatric Clinics, 7(4), pp.697-724.

Wagner, J., 2020. Looking for a Full Sports Calendar? Try Nicaragua. The New York Times. Retrieved on September 18, 2020 from https://www.nytimes.com/2020/04/14/sports/coronavirus-nicaragua-sports-events.html

Wong, A.Y.Y., Ling, S.K.K., Louie, L.H.T., Law, G.Y.K., So, R.C.H., Lee, D.C.W., Yau, F.C.F. and Yung, P.S.H., 2020. Impact of the COVID-19 pandemic on sports and exercise. Asia-Pacific journal of sports medicine, arthroscopy, rehabilitation and technology, 22, pp.39-44.

Enterprises

CHAPTER

8

Realigning of priorities in corporate Financial Planning – A perspective to be weighed considering the crisis like COVID-19 and Post COVID

Rengarajan Veerasamy, Amer Al Hajri

Realigning of priorities in corporate Financial Planning – A perspective to be weighed considering the crisis like COVID-19 and Post COVID

Rengarajan Veerasamy, Amer Sultan Al-Hajri

ABSTRACT

Traditional Financial Management objectives must be revisited by corporates as crisis like COVID-19 has affected their performance inversely. Organizations have been strictly adhering to the principle of investing their funds on projects that are expected to be highly rewardable. Unfortunately, the COVID-19 crisis has made a big impact on the consumer surplus and disposable savings of individuals, which in turn has affected the sales revenues and net incomes of companies worldwide. Corporates might not have thought about this crisis in their estimation processes, as a result, this crisis has turned the performance of various organizations upside down. Return on Investment (ROI), which is regarded one of the major indictors of performance, of various organizations had been negative due to downward trends they have observed in Sales and Demand levels of their products. Organizations during such periods will have to think about revising their strategic objectives as these were formulated before such crisis. Organizations are forced to revisit their objectives in accordance with the resources they have. A contingency plan formulated for achieving the modified objectives could have been ideal for organizations to revise their estimations about revenues, expenses, and profit. Thus, an unexpected event is pushing organizations to restate their objectives, reformulate action plans and re-estimate profits. It is evident that organizations will have to keep up the principle expect the unexpected while making estimations and plans about their future operations. Crisis like COVID is forcing organizations to make changes in investment and funding patterns they have been conventionally adhering to. This is also pushing organisations to revisit their priorities. Challenges like COVID-19 is pushing organizations to neutralize the resources with the modified corporate objectives. Whey they revisit their objectives, funding and investment growth aspects will have be carefully analysed and considered so that desired objectives could be achieved without many variations. It is essential that organization revisit their priorities and align rules of decision making in accordance with the challenges posed by an unexpected event like COVID-19.

Keywords

Corporate Finance, Resource Allocation, Financial Planning, Crisis, Priorities

1. INTRODUCTION

Priorities are their vital areas on which investments and allocation of funds are of greater importance as they are the key success factors through which an organization has been receiving greater number of returns. Spicker (2009) argues that a priority can be determined in accordance with the goals and objectives that companies would like to achieve within the scope of their resources' availability. It is essential that organizations will have to realign their priorities in accordance with the resources they have. Secondly, resources, organizations possess, are also subject to variations depending on the environmental scenario prevailing in an economy. Conventionally, organizations would prefer to invest on projects that offer higher ROI and like to invest on all projects that offer positive NPVs. This has been widely followed by organizations worldwide. This criterion has been quite attractive for organizations as they had enough resources to spend and their estimations concerning revenues and profits has been quite encouraging. COVID-19 crisis has posed a biggest challenge for the organization in mobilizing the required resources as the market has gone upside down in terms of decreased demand and reduced sales potential. Now the challenge for the organizations is achieving the desired objectives with the available resources. That makes organizations to do a careful planning about their resource allocation and strategizing the priorities.

2. METHODOLOGY ADOPTED - CONCEPTUAL RESEARCH

Conceptual research was employed to carry out this study. Conceptual research is presenting the ideas and philosophies in tune with existing theories and models. This approach has been used by the researcher to present the ideas and models for the organizations to adopt during crisis period. Organizations need to adopt themselves to any prevailing environmental conditions through adjusting themselves. Crisis is one of the situations, which is beyond anyone's control, so during such periods, organizations will have to adopt themselves to cater to the needs of the people. This must have been the key for organizations to sustain their business during such crisis periods. Regarding financial policies, organizations will have to modify their existing financial management philosophies in order to strive growth and ensure sustainability. This is the common approach adopted by organizations. This is perceived by the researcher as the focal point of research and for analyzing the impact of any crisis on the financial management policies of an organization. Modifications in financial policies have been taken as the focal point by the researcher and proposed changes in those policies to cope up with the challenges posed by crisis like COVID -19. A conceptual theoretical base has been taken as the basis for this research and accordingly certain recommendations are given in line those accepted concepts and theories. this conceptual approach is the methodology used for analyzing and presenting recommendations in this work.

3. CORPORATE FINANCIAL PLANNING AND REVISITING THEM DURING CRISIS

Financial Planning is an estimation process wherein financial resources are estimated in accordance with the strategic objectives of an organization. Management study guide (2020) state that financial planning is the process of estimating the financial resources needed for meeting the short-term and long-term goals of an organization. It is the process of framing financial policies in relation to

i. procurement of funds

ii. Investing funds on projects that would yield higher Net present Value

iii. Administering funds so working capital requirements are well taken care.

During crisis like COVID-19, organizations need to revisit their financial plans to revise the targets and policies as the plan could have been made before the crisis on the assumption that market would be highly favorable for investments and assuring returns provided offerings had the capability of adding good amount of value to the customers. Revisiting corporate financial planning would help organizations to restate the objectives and targets in accordance with the current market situations and under the umbrella of challenges posed by COVID crisis. Such re-visiting and revising targets would help organizations to work more realistically under the unexpected scenario and expect returns convincingly. Variances could very well be minimized, and such re-visits would help organizations to make plans about subsequent years more credibly. Cleary et.al (2009) points out that revisiting corporate financial planning ensures restated objectives and strategies, there arises a big need for management of resources where in objectives like efficiency and effectiveness could have been included.

4. THE ESSENCE OF PRIORITIZATION IS ESSENTIAL IN FINANCIAL PLANNING

Basically, Financial Planning is just about effective prioritizing i.e., deciding what is most important for the organization and listing them according to their respective importance. Financial resources are allocated to those activities according to the importance assigned and profitability to be achieved from those actions. Prioritising is so vital for organizations due to the following reasons:

a) Limited Resources organizations tend to possess

b) To focus on most profitable avenue intensively to maximize profits.

c) To invest on strengthening Key Success Factors to enjoy long-term returns.

The below model explains the essence of prioritization in corporate financial planning. Organizations should plan to allocate resources according to the priorities been identified.

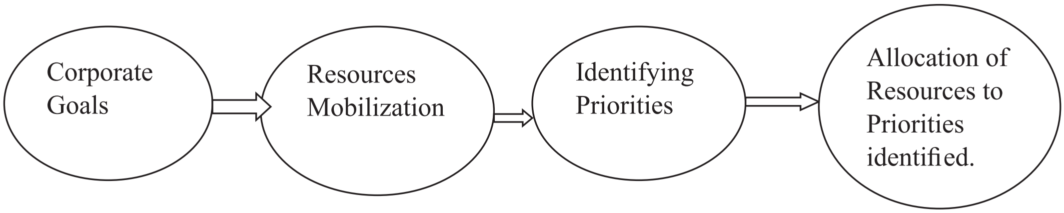


Diagram 1: Resources allocation Model after prioritization been identified

Corporate goals are set according to the environmental conditions prevailing for the organization. Setting goals under the prevailing environment has been the core function of an organization as this process sets out the realistic objectives to be achieved. Organizations must start allocating the available resources as per the priorities identified. This process would help organizations to identify the various revenue and cost drivers and accordingly plan to make investments to reap the benefits such prioritization. Such Prioritization policy plays a major role in organization to chart out plans and policies to be adhered to during crisis period wherein resources become an absolute scarce. Prioritization done during crisis period would throw light on most and least important aspects of the business. Prioritizations is decided based on the cost and benefits that an organization would receive from the revised cost and revenue drivers. Changes in those drivers target to achieve a different level of performance by an organization.

The drivers of change include various factors which directly affect the growth and performance. There are numerable factors affect the performance of an organization which include costs, globalization, open economic policies of government, market forces etc. The key drivers are likely to affect the structure of an industry, sector or market (Preston, 2000). These key drivers need to be studied carefully by an organization as they are directly affecting the performance in the market. These key drivers' study will also help an organization in formulation and implementation of strategies. (Porter, 1996). Thus, prioritization helps organization to re-orient themselves towards desirable objectives that could very well be achieved despite crisis being prevalent

5. DETERMINATION OF PRIORITIES KEEPING FINANCE AS THE KEY DRIVING FORCE

A priority is determined based on the goals and objectives that organizations want to achieve with available resources. While prioritizing the activities, certain guidelines related to prioritization must be followed by organizations. Certain priorities are highly desirable since it would offer greater number of benefits and some are desirable but an action on that priority could be delayed for a while. Lidow D (2017) presents three types of priorities:

A critical priority is an objective that must be successfully achieved within a specified amount of time. Immediate action required to gain a benefit out of it.

An important priority, on the other hand, is an effort that can have a significant positive impact on performance. Performance based priorities that would possibly move the status of an organization from level to other level.

Desirable priority is one organization desires to have as an outcome but cannot absolutely commit specific resources over any specifiable time. A fair attempt should be made here to explore.

The diagram below explains about the importance of each of the priorities explained above:

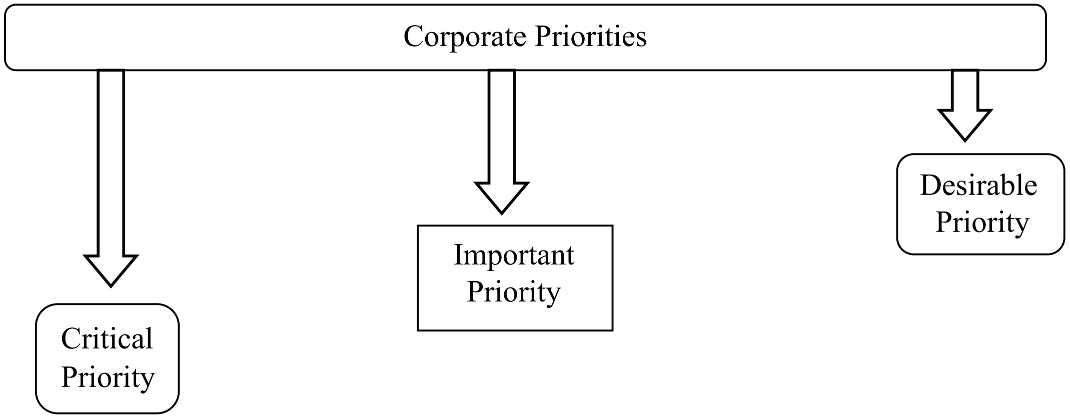


Diagram 2: Importance assigned to different types of Priority

Organizations need to carefully identify their critical, important, and desirable priorities during crisis period. This process would help organization to allocate the available resources to critical priorities, important priorities, and desirable priorities respectively in descending to maximize profits. During Crisis period, organizations must chart out their critical, important, and desirable priorities well and accordingly investment strategies will have to be formulated. Crisis poses a big challenge for the organization in achieving their previous level targets as the resources available have become very limited and at the same time, the desired profits are not compromised.

6. COMMON FINANCIAL PROBLEMS ORGANIZATIONS MIGHT FACE DURING CRISIS

Due to COVID-19 crisis, organizations have been suffering from one or more of the financial problems. Some of the common financial issues that organizations may face during any crisis include: (Smith, 2019)

- Lack of adequate Cash flow and limited working capital
- Reduced Revenue
- Borrowing funds at the best possible rates (cost of capital)
- Limited/ No Access to capital market securities to mobilize funds
- No long-term investment decisions - Since market is gloomy

Businesses cannot stop functioning because crisis is prevailing. Organizations will have keep thriving to get the best out of a crisis. Crisis is a challenge but at the same time, it opens many avenues and produces new business models that organizations can adopt. To meet up these challenges, organizations will have to keep a good financial plan so that it would throw good light despite crisis being prevalent and market looks so dark for the organization.

6.1 Project Management Approach to manage resources during Crisis like COVID -19

Priorities realignment task carried out by the organization would highlight major issues faced by an organization and provide possible solutions to overcome the challenges. One of the routes that organizations can adopt to manage the crisis like COVID -19 is managing organizational resources adopting project management philosophies. So, they can easily set cost and time targets for completion and move ahead in achieving its restated objectives. Organizations are organizing their activities as projects and manage those activities using project management techniques now days. Projects were as considered as group of activities with a common objective to achieve.

Organizations are adopting flatter organizational structure by removing all hassles of conventional structures. Management study guide (2011) portrays that every project will have its own objectives and all the resources which are required for the completion of the project are used effectively and efficiently to achieve the desired objectives of the project. Keeping the same perspective, organizations during crisis periods, they can make out various projects with well-defined objectives and make those projects responsible for achieving certain revenue and cost targets. The major challenges that organizations would face in adopting such project management philosophies include meeting out various risk factors such as receiving inventories on time from suppliers, ensuring logistics for the timely arrival of products with the intermediaries for sales. etc., in completion of the project.

These risk factors might result in cost and time overruns for the organization. To manage well the crisis and to retain company's existing sales and demand level, the project managers will have to exert maximum possible efforts to meet out the project objectives without having cost and time overruns. This way of managing resources during crisis time like COVID -19, provides a room for managers to work with certain targets to be achieved and at the same time, provides further scope for thinking big for an organization in the coming periods.

7. REALIGNING FINANCIAL POLICIES/PRIORITIES – FINANCING DECISIONS

Financing decisions are crucial for organizations as provides resources for the organization to invest and yardstick in terms of cost of capital, to evaluate an investment opportunity. Massey (2020) presents that financing decisions help to mobilize resources for achieving the objectives of the organization.

The table 7.1 given below lists down some of the alignments to be made by organizations during crisis time like COVID-19, in order to manage their financing aspects well:

Table 7.1 showing the alignments in Priorities/policies required in Financing Decisions

Objectives	Conventional Strategy	Realignment requirements
Ensuring maximum production (Units)	Obtaining Financial Assistance from a Commercial Bank at the prevailing bank rate	Minimizing bank loans and adopting bootstrapping for funding
Reducing long-term liabilities	Borrowing from a bank to payoff other loans, as long as interest rate is the same.	Paying off bank loans through swapping with other cheaper loans
Ensuring wealth of Shareholders is getting maximized	Free dividend rate policies	Restricted dividend rate policies and reinvesting profits for sustainability in long-term
Minimizing overall Cost of Capital of an organization	Employing debt to enjoy tax benefits that arise out of interest payments	Paying taxes is much better than having a liability.

This makes it clear that organizations should not be taking additional liabilities during crisis time and should try to minimize the cost of capital through replacing their existing financing routes with new ones. Organizations should also think seriously about retaining profits than declaring dividends since retained earnings is one of the sources of financing for the organization when they need funds. Dividends could be paid off later when companies revenue is somehow stabilized and assures continuity in occurrence of revenue and profits. Similarly, paying taxes to the government should be seriously considered by the organization instead of availing tax shield on interest payments. Such re-alignments would enhance corporate performance and help sustain their position despite crisis such as COVID-19 prevailing.

8. REALIGNING FINANCIAL POLICIES/PRIORITIES – INVESTMENT DECISIONS

Investment Decisions are again crucial for organization as they provide return for the organization. Organizations are looking for profits and through which they want to maximize the wealth of shareholders. Business jargons (2020) explains that the decisions are decisions that would need funds to be deployed on the investment opportunities in order to earn a good return and to make shareholders wealthy through it.

The table 8.1 given below lists down some of the alignments to be made by organizations during crisis time like COVID-19, to manage their investment decisions well:

Table 8.1 showing the alignments in Priorities/policies required in Investment Decisions

Objectives	Conventional Strategy	Realignment requirements
Investing on long-term assets that are expected to yield profits for the organization	Invest as long as benefits expected exceed costs	Invest as benefits exceed cost and there is a big resale value for that asset
Expand, modernize as and when required	Invest on assets that are due to replacements	Invest on assets that must be replaced immediately. Avoid if assets could be further used effectively.
Decision Criteria for making long-term investments	NPV is higher, then investment is recommended	NPV of worst scenario must be considered. If NPV of worst scenario expected is going to be positive, then investment is recommended.

This makes it clear that investment decisions must be carefully done by an organization. Organization must evaluate an investment opportunity well before making an investment decision. Organizations instead of using NPV, they can adopt Expected Net Present Value (ENPV) method for evaluating projects and to decide. Organizations must think about resale value before making such decisions. Crisis time is crucial and making investment in such times is riskier than ever. So, resale of such investment opportunity should be well-evaluated by an organization and it can decide to invest on a project that is expected to provide greater resale value. this would minimize the loss that company would face at the time of selling those assets. During crisis time, resale value should be one of its major considerations for making an investment decision, so the loss on any such investment would be minimized.

9. MANAGING WORKING CAPITAL REQUIREMENTS & COST CONTROL APPROACH

Working Capital requirements of an organization must be well taken care of. Businesses would die if working capital management is not managed well.

Realignment in Working management would include following strategies:

(i) Ensuring good cash flow throughout – Companies should never face a situation wherein cash outflow overdoes cash inflow

(ii) Having a control over receivables

(iii) Strong relations with suppliers for availing extensions in payment periods

(iv) Employees welfare cost must be enhanced to keep them healthy, so the work never gets disturbed.

Organizations must also formulate cost control strategies to achieve the desired level of profit. Cost targets will have to be set for each of the division that an organization has. It must give more emphasize to cost related factors. Conventionally, organizations looking for more profits through expanding sales revenue and minimizing costs. Traditional way, organizations try to maximize profits can be stated as:

Profit = Sales – Costs

During crisis time like, organizations will have to have cost targets in order to earn the desired profits. So, it can rewrite the equation as below:

Cost = Sales – Profit

Cost control and reduction must be widely practiced achieving the desired profit as an outcome except for labour cost. This gives more importance to cost targets. During crisis time, cost control and reduction must be the core area which must be investigated very seriously. Labour Cost should never be brought under cost control purview. This would reduce the burden when crisis like COVID – 19. Work would never get disturbed if people are healthy. One of the challenges would be nicely addressed.

Based on the cost estimations only any contract must be signed by. Organizations must have analysed all possible and the likely changes that may rise in the prices of the resources while estimating about the cost of the project. Technology student (2011) points out that any company manufacturing a product or a supplier supplying goods must calculate their costs very carefully. The cost of employing people to promote, manufacture, market and sell products should not be overlooked when organizations design a solution and organizations must carefully explain the costing of designs, especially when organizations select your best idea and develop it. The above point makes it clear the project managers will have to carefully estimate the possible costs of the project. They must clearly understand here the nature of both variable and fixed costs and the relevant and irrelevant costs.

10. RESULT & DISCUSSION

Risk analysis is one of the core areas to be emphasized by the organizations. Organizations will have to perceive risk factors which are avoidable and unavoidable as serious threat to their performance and sustainability. Organizations will have a long life provide they perform financially better in terms of profit, EPS, ROI etc. Risk factors such as natural disasters, crisis like COVID creating a devastating impact on the performance of an organization. Organizations expectations are all getting smashed by such crisis. It is also clear that such risks are unexpected ones and its occurrence occasionally happens but makes a big impact on the revenues, cost and profit.

Organizations will have to formalize their way of functioning. Adequate plan is the key for managing any kind of crisis. Company will not be able to have a control over COVID-19 implications and at the same time, they can plan out strategies in advance on the assumption that crisis like COVID-19 arise and can try to make a devastating impact on its performance. In such cases, companies must be having a contingency plan that provides solutions to many issues arising out of crisis like COVID – 19.

Financing aspects must be carefully looked at by an organization during crisis time, since revenues been earned by organization during such periods are not so much. Further liability must be duly avoided by an organization during crisis time. Secondly, investment decisions must be made very carefully after analysing the cost and benefits associated with an investment. Scrap value should be one of the major considerations in making investment decision as organizations are seeking for minimal loss even if the investment turned out be worthless in the future.

The working capital aspects of the company will have to be well managed so there will not be any issue related to managing and meeting day to day expenses. Cost control and reduction strategies must be part of operational activities. Organizations should be thinking positively to reduce costs of performing various activities and through which it would target to achieve the desired profits.

Crisis cannot be fully avoided, but the negative impact of such crisis can be minimized through proper corporate financial planning and control. Corporate financial management must include risk analysis as one of the key criteria to be examined well before organization makes a financing or investment decision.

11. CONCLUSION

Wealth maximization has always been the core objective in financial management perspectives of an organization. Organizations are striving hard to maximize the wealth of shareholders through investing their resources on projects that gives maximum Net Present Value (NPV) or ENPV. Conventional financial management principles are no longer suitable for the organizations to follow during times of crisis. So, organization must think about modifying their philosophies and adopting to certain practices that are expected to be beneficial for them during crisis time. Such financial management policies are making organisations stronger and easy in managing their financial resources well. Project management approach must be adopted to achieve their objectives during crisis time. Projects are the temporary set of activities which are formed with some well-defined goals and objectives and those need resources like material, labour and capital and they are expected to produce outputs. If the resources are effectively and efficiently managed in completion of certain projects without cost and time overruns, then moving towards achieving mission and vision, despite crisis like COVID been prevalent.

12. REFERENCES

Spicker, P. (2009). What is a priority? Journal of Health Services Research & Policy, 14(2), 112-116.

Management study guide (2020), Financial Planning - Definition, Objectives, and Importance, Available from https://www.managementstudyguide.com/financial-planning.htm

Booth, L., Cleary, W. S., & Rakita, I. (2020). Introduction to corporate finance. John Wiley & Sons.

Preston, D. (2013). An Introduction to Business Studies: An Introduction to Human Resource Management in Business. Open University.

Porter, (1996) “Competitive Strategies”, McGraw Hill Pubications, NewJersey, USA.

Lidow D, (2017), “A Better Way to Set Strategic Priorities Harvard Business Review, pp 137-144

Smith. P (2019), Top 5 Financial Challenges Facing Small Businesses in 2019, Available from https://fundbox.com/blog/top-5-financial-challenges-facing-small-businesses-2019 (accessed on 12th Dec 2020)

Management study guide (2011), What is Project Management? Available from https://www.managementstudyguide.com/what-is-project-management.htm (accessed on 10th Dec 2020)

Massey. N (2020), Types of Financial Decisions in Financial Management, Available from https://www.economicsdiscussion.net/financial-management/types-of-financial-decisions-in-financial-management/31652, (accessed on 10th Dec 2020)

Business jargons (2020), Investment Decision, Available from: https://businessjargons.com/investment-decision.html (accessed on 10th Dec 2020)

Technology student (2011), "How to Cost a Project" available on www.technologystudent.com, (accessed on 10th December 2020)

CHAPTER

9

Framework for e-HRM Implementation & Employee Satisfaction in Sultanate of Oman

Mohammed Al Haziazi,
Subrahmanain Muthuraman,
Nasser Al Yahyaei, Amani Al Balushi

Framework for e-HRM Implementation & Employees Satisfaction in Sultanate of Oman

Mohammed Al Haziazi, Subrahmanian Muthuraman, Nasser Al Yahyaei, Amani Al Balushi

ABSTRACT

Use of technology in facilitating the human resource management (HRM) function has increased significantly. e-HRM has received more and more attention in the past decade. It is an umbrella term covering all possible integration mechanisms and contents between HRM and information technologies aiming at creating value within and across organizations. The purpose of the study is to analyze the employee satisfaction on the e-HRM system in relation to its factors such as e-recruitment & e-selection, e-training, e-communication, e-performance appraisal and e-productivity. The study adopted the quantitative research and it was applied to various organization across the Sultanate of Oman. Convenience sampling method was used to draw 154 samples from various sectors in the Sultanate of Oman. The descriptive and statistical analysis was performed using SPSS software version 26.0. The study evident that the impact of e-HRM practices and employee job satisfaction are positively correlated. Based on the multiple regression the factors of the study represent the partial effect on increase in employee satisfaction on e-HRM System and the framework developed found fit statistically. This study is laying foundation for our new research study that attempts to influence of HR Digital Transformation in the Cognitive Technology Era of the Sultanate of Oman as part of TRC funded research. The future study will give scope for studying the implementation of digitalization which involves the process of adoption and appropriation of HR functions in the Omani organizations.

Key Words

e-HRM, Digitalization, Employee Satisfaction, Information Technology, Transformation, Performance

1. INTRODUCTION

The ways in which human resources (HR) are managed have changed dramatically in recent years (Parry, 2011). As the latest advanced technologies offer the potential to streamline many HR functions, businesses increasingly are utilizing information technology to design and deliver their HR practices (Bell et.al, 2006). In recent years, the use of technology in facilitating the human resource management (HRM) function has increased significantly (Poisat and Mey, 2017). Information technology has been cited as a critical driver of HR's transition from a focus on administrative tasks to a focus on serving as a strategic business partner (Bell et.al, 2006). Here, use of e-HRM is critical in achieving both efficiency and freeing up the administrative work in order to become more strategic. This would help employees to appreciate the use of technology i.e. e-HRM and benefit from it (Emma & Tyson, 2008). E-HRM has been defined as 'a way of implementing HR strategies, policies and practices in organizations through a conscious and directed support of and/ or with the full use of web-technology-based channels' (Ruel, Bondarouk & Looise 2006, p. 281). The use of E-HRM has increased greatly over recent years with most large organizations (Parry and Tyson, 2011). Though e-HRM has been identified as a catalyst towards achieving business strategies, there is little interest among companies to adopt it. Some claim that this phenomenon will reduce the number of employees in the HR department. While some view that e-HRM would reduce costs and stimulate a more strategic approach in human resource management (Hooi, 2006).

2. PURPOSE OF THE STUDY

The purpose of this study is

1. To understand the awareness of e-HRM implementation in the organization
2. To analyze the employee satisfaction on the e-HRM system in relation to its factors such as e-recruitment & e-selection, e-training, e-communication, e-performance appraisal and e-productivity
3. To examine the extent e-HRM system on enhanced performance

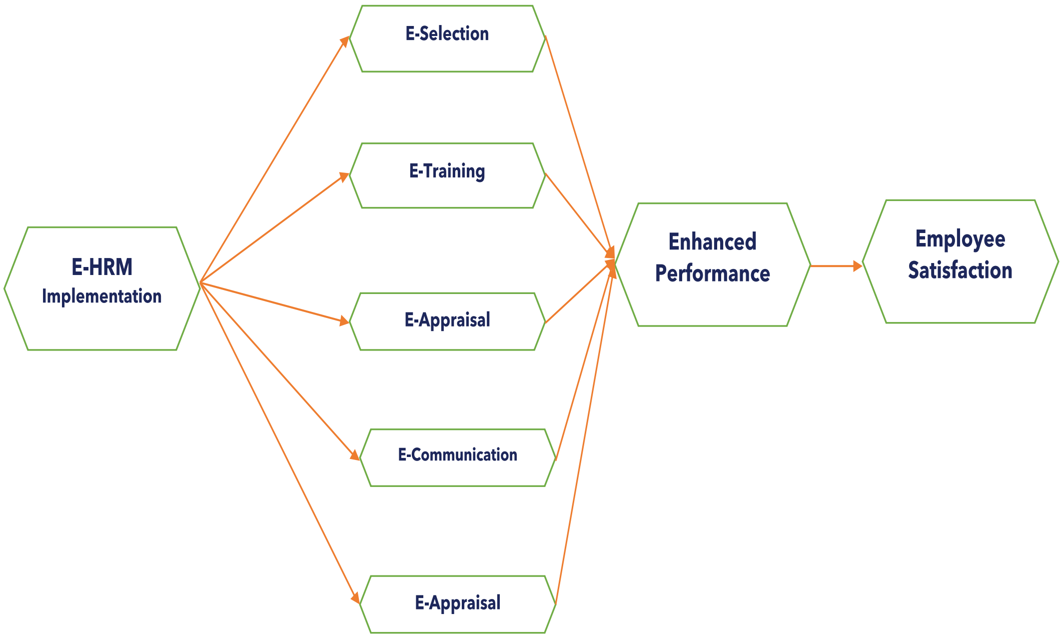
3. LITERATURE REVIEW

In the recent years, with the progresses in science and technology, especially in the field of IT, we have seen massive transformations through the management methods of organizations and human resources. With the evolution of Human Resource Management, it has become a challenge for HR to transform from HR to electronic HR. The term e-HR first came into use in the 1990s when e-commerce started dominating the business world. Several definitions of e-HRM exist in the academic literature. The e-HRM is the use of web-based technologies to provide HRM services within employing organizations (Popescu and Popescu, 2016). e-HRM has received more and more attention in the past decade. It is an umbrella term covering all possible integration mechanisms and contents between HRM and information technologies aiming at creating value within and across organizations for targeted employees and management (Bondarouk and Ruël, 2009). Strohmeier (2007) presented an overview of e-HRM research from 1995-2006 and identified 57 relevant e-HRM studies published in refereed international journals. As a sign of the strong growth in the number of published studies, Strohmeier (2007) notes that almost half of the studies were published in the last four years. E-HRM as 'a way of implementing HR strategies, policies and practices in organizations through a conscious and directed support of and/or with the full use of web-technology-based channels' (Ruel et al., 2004: 365).

Research into the consequences or outcomes of e-HRM is of a relatively recent date. This is remarkable as the positive claims of e-HRM in the business press already took off more than a decade ago. Strohmeier (2007) distinguishes four types of consequences: individual, operational, relational, and transformational. Thite and Kavanagh (2009) divided E.HRM activities into: transactional activities, that involve day-to-day transactions and record keeping; relational HRM activities, such as recruitment, selection, planning, training, compensation and performance management; and transformational activities, that add value to the organization, such as organizational development, talent management and learning. Based on a systematic literature review, it is concluded that individual consequences are regularly subject to research; that findings concerning the transactional consequences are limited and mixed; that there is a clear gap in effectiveness research; that relational consequences for the most part are unexamined; and that robust results that clearly demonstrate persistent transformations are missing. Organizations where the HR function already plays a strategic role are more likely to turn e-HRM into a competitive advantage.

4. CONCEPTUAL FRAMEWORK

Based on past research outcome, the researcher has developed the conceptual framework that will fit to the Oman context.

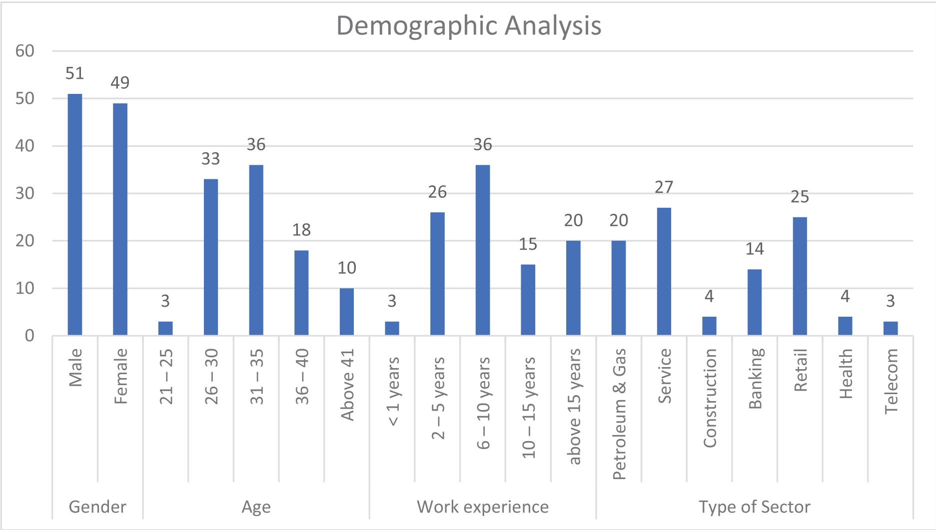


5. METHODOLOGY

The focus of this research is to analyze the employee satisfaction on the e-HRM system in relation to its factors such as e-recruitment & e-selection, e-training, e-communication, e-performance appraisal and e-productivity. The post tested survey questionnaire was developed in conjunction with the literature review aimed at understanding respondents' perception and attitude towards entrepreneurial intent. The study adopted the quantitative research and it was applied to various organization across the Sultanate. The data collection procedure was collected through a closed ended structured questionnaire. The questionnaire was distributed to few sample populations for the pilot study and the reliability. Cronbach Alpha value was calculated, and it was found to be 0.872 and the total numbers of questions were 48. The values were found to be in the range of 0.60 and 0.90, hence it might be suggested that all the scales met the reliability condition (Hair et al., 1998, p.118). Convenience sampling method was used to draw 154 samples from various sectors in the Sultanate of Oman.

6. RESULTS AND DISCUSSION

The data that was collected for this study was processed manually through coding and then entered electronically. The descriptive and statistical analysis was performed using SPSS software version 26.0. The use of statistical distributions such as tables showing frequencies and percentages were adopted in the study. The weighted average method was adopted for all the stimulants of e-HRM. The hypotheses stated in the study were analyzed with the help of Correlation and Multiple Regression.



From the above graph, it was revealing that majority of the respondents 51% were male and the remaining 49% were female. In respect to the age of the respondents, 36% of them fall between the age bar of 31 to 35 and the next high frequency 33 % between 26 to 31 years. It also shows that 18% of respondent were in the age bar of 36 to 40 years. In the experience categorization, the current work experiences of the respondents were analyzed, and it was found that 36% of respondent were having experience of 6 to 10 years. It is also evident that 26% of the respondents were 2 to 5 years of experience and 20% of the respondents have experience of above 15 years. In concern to the sector which the respondents belong, the 27% sample respondents were from Service, Retail 25%, Oil and Gas 20 and Banking 14% sector respectively, very few from Construction, Telecom and Health Care sector.

Awareness of e-HRM Practices

S.No	Opinion	Rank
1.	I am aware about E-HRM system in our organization	1
2.	E-HRM system is user-friendly and easy to use	3
3.	Training is provided to me on how to use E-HRM portals	5
4.	I get accurate information in time through this system	4
5.	E-HRM system has been successful in improving accuracy and efficiency of HR functions	2

The Awareness of e-HRM Practices was analyzed using weighted average and it was evident that most of the responded were aware about E-HRM system in our organization was ranked one and followed by E-HRM system has been successful in improving accuracy and efficiency of HR functions. The third rank was E-HRM system is user-friendly and easy to use.

Extent e-HRM Practices are being implemented in the organization

The weighted average analysis was conducted for all the independent variable E-Recruitment and E-Selection, E-Communication, E-Communication, E-Performance Appraisal and E-Productivity

S.No	Opinion	Rank
	E-Recruitment and E-Selection	
1.	Advanced tools & techniques will enhance success rate of recruitment & selection process	1
2.	Usage of electronic model in selection process may bring transparency in recruitment & selection process	2
3.	Presence of online recruitment and selection policy in my company	3
	E-Compensation	
4.	The use of electronic devices for salary calculation enhances speed and accuracy	1
5.	I agreed that salary calculation is no longer done manually	2
6.	E-HRM tools enable increased integration of HR processes	3
	E-Training	
7.	I prefer using e-learning tools to traditional methods in order to learn	1
8.	Use of Online Training Facilities	2
9.	Most of the training and development in my companies is done through e-learning	3
	E-Communication	
10.	Use of electronic communication systems for Employees	1
11.	Having a publicly accessible website and intranet is available to all employees in my company	2
12.	E-HRM tools have allowed me to better communication through my colleague (more analytical information)	3

S.No	Opinion	Rank
E-Performance Appraisal		
13.	Provision of employee self-service to keep employee personal files in an electronic form	1
14.	Use of online portal for my performance reviews	2
15.	My company is using performance appraisal software for evaluation purposes	3
E-Productivity		
16.	E-HRM tools improve quality of services	1
17.	E-HRM tools allow me to work more productively	2
18.	HR services have been streamlined and standardized using information technology	3

The E-Recruitment and E-Selection was analyzed using weighted average and it was evident that Advanced tools & techniques will enhance success rate of recruitment & selection process was ranked one and followed by Usage of electronic model in selection process may bring transparency in recruitment & selection process. The E-Compensation was analyzed using weighted average and it was evident that the use of electronic devices for salary calculation enhances speed and accuracy was ranked one and followed by salary calculation is no longer done manually. The E-Training was analyzed using weighted average and it was evident that prefer using e-learning tools to traditional methods in order to learn was ranked one and followed by Use of Online Training Facilities. The E-Communication was analyzed using weighted average and it was evident that Use of electronic communication systems for Employees was ranked one and followed by Having a publicly accessible website and intranet is available to all employees in my company. The E- Performance Appraisal was analyzed using weighted average and it was evident that Provision of employee self-service to keep employee personal files in an electronic form was ranked one and followed by Use of online portal for my performance reviews. The E-Productivity was analyzed using weighted average and it was evident that E-HRM tools improve quality of services was ranked one and followed by E-HRM tools allow me to work more productively.

Employee Satisfaction towards E-HRM Practices

S.No	Opinion	Avg	Rank
1.	Satisfied with E-HRM system of my organization	3.34	3
2.	Satisfied with updating of E-HRM system in my organization regularly as per needs	3.30	5
3.	Satisfied as my knowledge and skills up to date through E-HRM system	3.34	3
4.	Satisfied with the use of E-HRM tools has led to the automation of routine HR work	3.36	2
5.	Satisfied with the use of E-HRM tools is more cost effective than traditional, manual HR practices	3.56	1

The Employee Satisfaction towards E-HRM Practices was analyzed using weighted average and it was evident that Satisfied with the use of E-HRM tools is more cost effective than traditional, manual HR practices was ranked one and followed by Satisfied with the use of E-HRM tools has led to the automation of routine HR work. The third rank was shared by Satisfied as my knowledge and skills up to date through E-HRM system and Satisfied with E-HRM system of my organization.

Impact of e-HRM system on enhanced performance

S.No	Opinion	Avg	Rank
1.	Aims at increasing the efficiency	4.03	1
2.	Cost reduction due to E-HRM system	3.86	5
3.	Speeds up HRM activities/processes	4.03	1
4.	Increases productivity	3.92	4
5.	Improves the quality of HRM services	3.96	3
6.	Increases transparency	3.86	5
7.	Increased Knowledge management	3.81	7
8.	Promotes ability to attract/retain employees	3.61	10
9.	Decreased time spent on Training	3.67	9
10.	Improvement in the contribution of overall performance	3.80	8

The impact of e-HRM system on overall performance of your organization was analyzed using weighted average and it was evident that aims at increasing the efficiency and speeds up HRM activities/processes was ranked one and followed by Improves the quality of HRM services. The fourth rank was to increases productivity. The fifth rank was shared by Cost reduction due to E-HRM system and Increases transparency.

Correlation Test

Correlation Test was used to test relationship between the impact of e-HRM practices and Employee job satisfaction

Spearman's correlation coefficient, r_s, is 0.387, and that this is statistically significant (p = .000). It is clear evident that the impact of e-HRM practices and employee job satisfaction are positively correlated

Multiple Regression

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.612(a)	.375	.338	.478
a. Predictors: (Constant), E-Productivity, E-Communication, E-Recruitment and E-Selection, E-Training, E-Performance Appraisal				

ANOVA[b]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.637	5	2.327	10.199	.000(a)
	Residual	19.396	85	.228		
	Total	31.033	90			
a. Predictors: (Constant), E-Productivity, E-Communication, E-Recruitment and E-Selection, E-Training, E-Performance Appraisal						
b. Dependent Variable: Employee Satisfaction on e-HRM system						

Coefficients[a]						
Model B		Unstandardized Coefficients		Standardized Coefficients		
		Std. Error	Beta	t	Sig.	
1	(Constant)	.237	.603		.393	.695
	E-Recruitment and E-Selection	.271	.125	.231	2.177	.032
	E-Training	.248	.116	.207	2.133	.036
	E-Communication	.415	.135	.339	3.086	.003
	E-Performance Appraisal	-.002	.125	-.002	-.018	.985
	E-Productivity	.010	.118	.008	.087	.931
a. Dependent Variable: Employee Satisfaction on e-HRM system						

The variables are explained below:

1. Dependent Variable : EMPLOYEE STATISFACTION ON E-HRM SYSTEM
2. Independent Variable :
   a. E-Recruitment and E-Selection X_1
   b. E-Training X_2
   c. E-Communication X_3
   d. E-Performance Appraisal X_4
   e. E-Productivity X_5
3. R Square Value : 0.375
4. F Value : 10.199
5. P Value : 0.000**

The sample co-efficient of determination R Square or R^2 (r^2 is commonly used in simple regression analysis while R Square is approximately reserved for multiple regression analysis). It measures the goodness – of – fit of the estimated SRP in terms of the proportion of the variation in the dependent variable explained by the fitted sample regression equation or SRP. Thus the value of R Square is 0.375 that independent variables explain 37.5% of the variability of dependent variable, Employee Satisfaction on E-HRM System is explained or accounted for by the estimated SRP that uses E-Recruitment and E-Selection (X_1), E-Communication (X_2), E-Communication (X_3), E-Performance Appraisal (X_4) and E-Productivity (X_5) as the independent variable. The information is quite useful in assessing the overall accuracy of the model. This model is significant at 1% level. The estimated SRP or Sample Regression Equation can be written as:

$$\mathbf{Y = 0.237 + 0.271\, X_1 + 0.248\, X_2 + 0.451\, X_3 - 0.002\, X_4 + 0.010\, X_5}$$

It was inferred that the independent variables such as X_1, X_2, X_3, X_5 (E-Recruitment and E-Selection, E-Training, E-Communication and E-Productivity) represent the partial effect on increase in Employee Satisfaction on E-HRM System, holding other dimensions of independent variable constant. The independent variables such as X_4 (E-Performance Appraisal) represent the partial effect decrease in Employee Satisfaction on E-HRM System, holding other dimensions of independent variables constant. holding other dimensions of independent variable constant.

A multiple regression was run to predict Employee Satisfaction on E-HRM System from E-Recruitment and E-Selection, E-Training, E-Communication, E-Performance Appraisal and E-Productivity. Four variables such as E-Recruitment and E-Selection, E-Training, E-Communication, and E-Productivity added statistically significantly to the prediction, $p < .05$. The table shows that the independent variables statistically significantly predict the dependent variable (i.e) $p < .0005$ (i.e., the regression model is a good fit of the data). Based on the R & R^2 value we can predict the independent variables. Hence the model is fit.

7. IMPLICATION

The organizations that invest in e-HRM aim at renewing their ways of implementing HR policies and practices, resulting in desired benefits such as improved efficiency and effectiveness can consider these benefits as value-creating factors (Subrahmanian, 2017). Starting from the literature on the impact of IT systems on HRM activities, it has been noticed that the rapid changes in the technological environment, characteristic for the last ten years, made the traditional approach of the e-HRM systems benefit of a mainly operational perspective, insufficient for highlighting the need to implement such systems in an intensely competitive environment. The organizations worldwide have adapted to this tendency and have started projects for the implementation of some e-HRM systems that integrate components dedicated to each area of interest of the HR departments, thanks to which the impact of the different dimensions of the e-HRM systems (transactional, relational and transformational) on the performances of the corporate activities may be evaluated (Totolici et al, 2013).

Sultanate of Oman is among the most rapidly developing countries in the Middle East. It is undergoing radical transformation from being a country reliant on agriculture and fishing to one relying on a skilled and educated workforce for economic and national development. Oman's vision for the coming decades is to raise the skill level and competencies of the Omani labour force. To achieve this goal, it is imperative to develop human resource management practices that are aligned with the values, beliefs and preferences of the Omani workforce but which support the vision of a high skill economy (Aycan et al, 2007). Current Oman Vision 2040 says moving forward with confidence in all sectors which focuses on human talents.

Several studies have been conducted to examine the relationship between the human resource management practices and organizational performance. There are few studies related to HRM research in the Gulf region and especially Oman has begun to appear in the literature from 2006 (Al-Hamadi and Budhwar, 2006; Budhwar and Mellahi, 2006). Al-Hamadi et al. (2007) found that the major factors influencing HRM in Oman were religion (Islam), civil service laws, expatriate workforce and social elites (Omanis who were educated abroad). Aycan et al. (2007) studied factors that influence the cultural orientations of Omani employees and how these in turn influence their preferences for HRM practices and policies. Moideenkutty et al. (2011) suggested that organizations in the Gulf region can enhance their performance by implementing high-involvement HRM practices. However, there is not much of studies related to implementation of electronic human resource management and its effect of organizational performance. E-HRM practices in the Sultanate of Oman is of paramount importance because of its positive impact among employees to carry out their tasks and responsibilities with professionalism, competence, effectiveness and improved performance in the workplace.

8. FUTURE STUDY

This study was attempted to understand the e-HRM practice in the HRM departments across companies in Oman. This study is laying foundation for our new research study that attempts to influence of HR Digital Transformation in the Cognitive Technology Era of the Sultanate of Oman as part of TRC funded research. The future study will come up with a list of processes and HR activities that could be digitalized to resulting in improve efficiency of work which will lead to the improved organizational performance. The future study will give scope for studying the implementation of digitalization which involves the process of adoption and appropriation of HR functions by organizational members. Researchers should anticipate the ways they judge the success of digital HR implementation. The future study will highlight areas of digitalization workplace, and a mechanism for adopting such technologies on the short term and maximizing its impact on the long-term. Furthermore, the study will lay foundation for all researchers to develop tools and plans and also suggest a mechanism for policy makers to improve the capabilities and competencies for digital adoption.

9. CONCLUSION

With the use of e-HRM, organizations will be able to initiate new ways of achieving organizational goals effectively and efficiently by adding value first to its employees who will in turn perform (Oladele and Omotayo,2014). E-HRM is introduced by organizations to improve efficiency and service delivery, to increase the strategic orientation of the HR function, to improve standardization and organizational image and to empower managers. E-HRM outcomes are mainly related to efficiency, service delivery and standardization, relational outcomes and potential improvements in organizational image (Parry and Tyson, 2011). A high-performance e-HRM system in Oman may help preserve the balance between the employees' personal goals and the company's performance goals.

10. ACKNOWLEDGEMENT

This paper is the partial outcome of the project titled " Influence of HR Digital Transformation in the Cognitive Technology Era of the Sultanate of Oman " ID: BFP/RGP/EHR/20/378 funded by The Research Council (TRC), Sultanate of Oman

11. REFERENCES

Al-Hamadi, A.B. and Budhwar, P.S. (2006), "Human resource management in Oman", in Budhwar, P.S. and Mellahi, K. (Eds), Managing Human Resource in the Middle East, Routledge, Oxford, 40-58

Al-Hamadi, A.B., Budhwar, P.S. and Shipton, H. (2007), "Management of human resources in Oman", The International Journal of Human Resource Management, 18 (1), 100-13

Aycan, Z., Al-Hamadi, A.B., Davis, A. and Budhwar, P.S. (2007), "Cultural orientations and preferences for HRM policies and practices: the case of Oman", The International Journal of Human Resource Management, 18 (1), 11-32. doi: 10.1080/09585190601068243

Bell, B. S., Lee, S.-W. and Yeung, S. K. (2006) 'The impact of e-HR on professional competence in HRM: Implications for the development of HR professionals', Human Resource Management, 45(3), 295–308. doi: 10.1002/hrm.20113

Bondarouk, T. and Ruël, H. 2009. Introduction to the special issue: Electronic Human Resource Management: challenges in the digital era. International Journal of Human Resource Management, 20: 505-514

Budhwar, P.S. and Mellahi, K. (2006), "Introduction: managing human resources in the Middle East", in Budhwar, P.S. and Mellahi, K. (Eds), Managing Human Resource in the Middle East, Routledge, Oxford, 1-19

Emma, P. and Tyson, S. (2008) 'Can technology transform HR processes? The case of UK recruitment', The 2nd EAW on E-HRM: barrier or trigger for an HRM Transformation?

Hair, J.F., Tatham, R.L., Anderson R.E, Black, W. (1998). Multivariate Data Analysis, 4th Edition, Prentice Hall Inc., New Jersey, USA.

Hooi, L. W. (2006) 'Implementing e-HRM: The Readiness of Small and Medium Sized Manufacturing Companies in Malaysia', Asia Pacific Business Review, 12(4), 465–485. doi: 10.1080/13602380600570874

Moideenkutty, U., Al-Lamki, A. and Sree Rama Murthy, Y., 2011. HRM practices and organizational performance in Oman. Personnel Review, 40(2), 239-251

Oladele, I. O. and Omotayo, O. A. (2014) 'e-Human Resource Management and Organizational Performance (e- HRM) in the Nigerian Banking Industry: An Empirical Study of Guaranty Trust Bank Plc (GTBank)', Anvesha, 7(1), 10–20

Parry, E. (2011) 'An examination of e-HRM as a means to increase the value of the HR function', International Journal of Human Resource Management, 22(5), 1146–1162. doi: 10.1080/09585192.2011.556791

Parry, E. and Tyson, S. (2011) 'Desired goals and actual outcomes of e-HRM', Human Resource Management Journal, 21(3), 335–354. doi: 10.1111/j.1748-8583.2010.00149.x

Poisat, P. and Mey, M. R. (2017) 'Electronic human resource management: Enhancing or entrancing?', South African Journal of Human Resource Management, 15(1), 1–9. doi: 10.4102/sajhrm. v15i0.858

Popescu, M. C.-D. and Popescu, A. (2016) 'Implementating Information Technology in E-Human Resource Management', Ovidius University Annals, Series Economic Sciences, 16(1), 386–390

Ruel, H., Bondarouk, T. and Looise, J. (2004). 'E-HRM: innovation or irritation. An explorative empirical study in five large companies on web-based HRM'. Management Revue, 15: 3, 364–381

Ruel, H., Bondarouk, T., and Van der Vald, M. (2006), 'The Contribution of e-HRM to HRM Effectiveness,' Employee Relations, 29, 3, 280–291

Strohmeier, S. 2007. Research in e-HRM: Review and implications. Human Resource Management Review,17: 19-37

Subrahmanian, Mu. 2017. Role of Organizational Contextual Factors in Creating Value through E-HRM Usage. Personnel Today, 38,1, 44-50

Thite, M., and Kavanagh, M. (2009), 'Evolution of Human Resource Management and Human Resource Information Systems: the Role of information Technology,' in Human Resource Information Systems: Basics, Applications and Future Directions, eds. M. Kavanagh and M. Thite, Thousand Oaks, CA: Sage

Totolici, A., Totolici, S. and Popescu, C. (2013) 'Successful Models of Implementation of e-HRM Systems in the Private Sector in Romania', Annals of the University Dunarea de Jos of Galati: Fascicle: XVII, Medicine, 19(3), 71–78

CHAPTER

10

The Importance of Entrepreneurial Orientation in the COVID-19 Era

Antonia Koumproglou, Konstantinos Biginas, Vlasios Sarantinos

The Importance of Entrepreneurial Orientation in the COVID-19 Era

Antonia Koumproglou, Konstantinos Biginas, Vlasious Sarantinos

ABSTRACT

This chapter explores the role of entrepreneurship and how it is been affected as a result of the ongoing pandemic, due to Covid-19. The focus will be to explore how the business landscape is transforming, look at the influence of the different stakeholders, ethics and a wider range of similar aspects. Continuing, there will be an effort to look more closely at the potential avenues, established and aspiring entrepreneurs could undertake to navigate their way through this intricately complicated environment, discussing what skills and competencies will be required to lead the transition out of a volatile environment, into calmer waters and hopefully sustainable path in the long-term.

Keywords

Covid-19, Entrepreneurship, Influences

1. CHALLENGING TIMES: WHAT IS THE ROLE OF BUSINESS IN THE PANDEMIC?

We are all together in a shared battle against Covid-19. We are living in extraordinary and unprecedented times of heightened fear, uncertainty and anxiety. The enormous scale of the crisis has disrupted lives, livelihoods, communities and businesses worldwide. Nearly one billion people live and work in informal, under-serviced, and precarious urban conditions worldwide. In a recent survey by the Kaiser Family Foundation, 45% of adults feel that worry and stress related to coronavirus has had a negative impact on their mental health. The UN Educational, Scientific and Cultural Organisation (UNESCO) estimates that 60% of the world's student population has been affected, with 1·19 billion learners out of school across 150 countries.

All countries are epitomised by highly uncertain and unpredictable business environments. From the vagaries of the economy through to varying degrees of social unrest to the impact of the pandemic outbreak, businesses of all forms and sizes must cope with ongoing change, uncertainty and risk. Global growth is projected at –4.9 percent in 2020, 1.9 percentage points below the April 2020 World Economic Outlook (WEO) forecast. This means that 2021 GDP is set to drop some 6½ percentage points lower than in the pre-COVID-19 projections of January 2020 according to the World Economic Update of June 2020. Globally, we are experiencing sharp falls in the remittances that support millions in low-income countries. In sub-Saharan Africa, inward remittances in 2018 amounted to US$46 billion, dwarfing foreign direct investment at $32 billion for that year (The Economist, 2020). Up to 16% of GDP across Africa is from remittances, much of which comes from European countries currently in lockdown. Rapid imposition of movement restrictions has also left migrant labourers stranded while facing sudden unemployment.

The pandemic has exposed the complex global interdependences that underpin economies and exacerbated inherent ethnic, economic, social and gender inequalities. The role of business in this complicated, interconnected society has come under scrutiny and consumers all over the globe are making new demands on businesses, brining front and centre the role of humanity plays in business. Businesses are called to meet complicated obligations such as keeping employees on payroll without the income to support wages, how to maintain workforce or customer relationships remotely. Responsible businesses need to be proactive in their pandemic strategies and responses to mitigate human risks and ensure workforce and customer health and safety. One of the practices that has received the sharpest criticism during the Covid-19 pandemic have been companies furloughing workers, while continuing to pay large salaries to executives. The OECD area unemployment rate fell to 7.7% in July 2020, from 8.0% in June, but remained 2.5 percentage points above the rate in February, before the COVID-19 pandemic hit the labour market. The monthly fall for the OECD masks' strong regional differences. In the euro area the unemployment rate in July increased for the fourth consecutive month, to 7.9% (from 7.7% in June and 7.3% in February), with increases of 0.3 percentage point or more in France, Ireland, Italy and Portugal. In Japan the unemployment rate nudged up marginally, to 2.9% from 2.8% in June, and is now 0.5 percentage point higher than in February of 2020 (OCED News Release, 2020).

Furthermore, many economists and policy makers have slashed GDP forecasts and now portend a deep global recession (Harvard Business Review, 2020). So, what should businesses do in a moment of crisis such as this?

As the immediate health consequences of the pandemic unfold, businesses need to develop strategies and responses not only to mitigate those risks, but also to build sustainability and strengthen resilience and recovery into the future. To compete in this volatile and challenging environment, businesses must shift their focus from driving transactions to maximizing customer lifetime value and providing real solutions to customer needs. Such business practices require something extra by way of entrepreneurship skills to compliment them, a mindset for opportunity driven decision-making and innovativeness. An example of such a mindset is disruptive innovation-taking calculated risks to disrupt the market with innovative ideas and concepts.

The contemporary external operating environment is ingrained with uncertainty and unfolding change situations that are frequently unpredictable and unknowable in terms of timing and consequences and that thus demand some form of strategic awareness capability of organizations of all sizes. In short, an ability to identify and act upon externally imposing potential enabling and constraining forces and factors and integral development opportunities or threat to existing business activity. This process entails for business owners and managers an active willingness to let go of preconceptions and established beliefs to engage with the unknown and navigate unchartered waters. Integral to this, is the focus upon the highly social and relational nature of the learning process - and how progressive owner managers vicariously learn from others.

Given the conceptual nature of this chapter, there is an attempt to draw on different strands of the literature and contemporary information sources in order to pin down the main themes that emerge out of the pandemic and impact on entrepreneurship. This approach has a two-prong emphasis, firstly to allow for currency in relation to the facts and arguments presented, a property that is quite important given that the situation is unfolding as this chapter was authored. Secondly, by scanning and integrating relevant theoretical frameworks to the discussion, to enable the forging of some initial thoughts about what the future might hold in stock for entrepreneurs, organizations and the wider range of stakeholders (Jaakola, 2020).

2. STAKEHOLDER CAPITALISM: THE SIGNIFICANCE OF EXTERNAL RELATIONSHIPS

One way to overcome some of constrains that an entrepreneur may face is acquiring knowledge and resource by tapping into an extended pool, which exist outside the business. Generally, it is accepted that good external relationships bring additional advantages of diffusion of industrial skills which encourage entrepreneurship. Businesses do not exist in a vacuum; Actually, the World Economic Forum (WEF) through its release of Stakeholder Principles in the COVID Era, has championed the development of "Stakeholder Capitalism". In its 49th anniversary, the WEF has updated its Davos Manifesto for the first time since 1973 to more clearly state that businesses must be stewards of the environment, uphold human rights throughout their global supply chains, and pursue sustainable shareholder returns that do not sacrifice the future for the present (Harvard Business Review, 2020).The "Stakeholder Principles" were distributed by the World Economic Forum to 140 members of its "International Business Community" and presented to another 450 business leaders of the Forum's COVID Action Platform. "This is a real test for the stakeholder concept which the Forum and its members are committed to since a long time," Klaus Schwab, Executive Chairman of the WEF, said. "If we do not pass it, the world will disintegrate, and be incapable to deliver on all the other challenges we have as an interconnected society, such as climate change and social inclusion. The objective of this global effort should not only be to fight the virus, but to alleviate its dire economic and social consequences" (World Economic Forum, 2020).

The "Stakeholder Principles" were distributed by the World Economic Forum to 140 members of its "International Business Community" and presented to another 450 business leaders of the Forum's COVID Action Platform. "This is a real test for the stakeholder concept which the Forum and its members are committed to since a long time," Klaus Schwab stated. "If we do not pass it, the world will disintegrate, and be incapable to deliver on all the other challenges we have as an interconnected society, such as climate change and social inclusion. The objective of this global effort should not only be to fight the virus, but to alleviate its dire economic and social consequences" (World Economic Forum, 2020).

Identifying and learning about external change situations is predominantly through interaction with key informants on the boundaries of business activities (suppliers, agents, customers, sector experts, government agencies, competitors); Interacting with key informants is opportunistic in nature-senior management can and should for example seek to exploit daily interfaces with workforce, customers and other stakeholders and use these encounters as "learning sources". Such encounters build into deep dialogical learning interactions whereby the business manager "tries on for size" the personal worldviews of the informant and uses this to challenge their own existing personal worldviews.

Stakeholder Capitalism is not about favouring some stakeholders over shareholders, or pitting one stakeholder against another, as critics define it, but about aligning their interests to increase the pie for the benefit of all, as Professor Alex Edmans of the London Business School (2020) describes it in his recent book "Grow the Pie".

We have already emphasized the importance of reacting proactively in order to minimize the negative effect of the challenging business environment. Entrepreneurs are challenged to deploy a set of competencies to succeed in their entrepreneurial endeavours. We identify entrepreneurial competencies as a specific group of competencies relevant to the exercise of successful entrepreneurship. Below we analyse each of these entrepreneurial competencies.

3. THE IMPORTANCE OF ENTREPRENEURIAL COMPETENCIES

Unlike the traditional business orientation that requires an assessment of market needs before developing a product, entrepreneurial and innovation orientation stipulates that businesses can start with an idea and then try to find a market for it. This means taking calculated risks to disrupt the market with innovative ideas and concepts. Entrepreneurial orientation can be applied in challenging and resource-constrained contexts, under volatile and uncertain conditions like the one we are currently going through. To compete in this volatile and challenging environment, companies must shift their focus from driving transactions to maximizing customer lifetime value and providing real solutions to customer needs. Such business practices require something extra by way of entrepreneurship competencies to compliment them, a mindset for opportunity driven decision-making and innovativeness (Biginas, Wyer, Koumproglou & Bowman, 2017). One such important competency is the opportunity competency. Opportunity Competency a spirit, an orientation as well as a process of passionately pursuing opportunities and launching and growing ventures that create perceived customer value through relationships by employing innovativeness, creativity, selling, market immersion, networking and flexibility" (Hills and Hultman, 2008).

Case in Point: Faced by the collapse in travel, Airbnb moved swiftly to help hosts financially and connect them with potential guests. Hosts can now offer online events focused on cooking, meditation, art therapy, magic, song writing, virtual tours, and many other activities, with users joining for a modest fee. This pivot represents one more step in Airbnb's evolving approach from its traditional business model of facilitating matches between hosts and guests to its move to become a full-range lifestyle platform.

Strategic competency: Long-term strategic planning is no longer a panacea. That means formulating, implementing and evaluating business decisions that enable businesses to compete in a highly pressurising environment, test out market or product ideas and make decisions on a trial basis. At the strategic level, traditional business strategy requires a top-down approach, a clearly defined sequence of activities such as segmentation, targeting and after that positioning. Successful entrepreneurs practice a reverse process from the bottom up. Having identified a possible market opportunity, an entrepreneur tests it through a trial-and-error process. Testing out ideas entails getting daily, ad-hoc feedback from loyal customers and incorporating this in the business' decision-making processes.

Relationship competency: enhances the organizational business strategies, working as a team and maintain good relationship with employees and their main suppliers is key. Equally important is communicating daily targets with employees on an everyday basis and having an open-door policy.

Conceptual Competency: Entrepreneurs use their conceptual talents to solve problems and deal with uncertainties. Owners of those firms monitor the main aspects of the company and tackle problems more effectively. They develop better organizational capabilities such as the firm's innovative capability, cost-saving ability, quality and flexibility and effective use of resources.

4. ETHICAL DIMENSION OF ENTREPRENEURSHIP

Entrepreneurs can be expected to rise to the challenge to show responsivity and resourcefulness. They must realize that they must show an interest in societal well-being, and that they may need to give up short-term profits for the benefit of society. They can also learn to develop creative responses to emerging challenges with scarce resources. In combination, citizenship and resourcefulness can drive socially aware entrepreneurship.

Cases in point:

- Unilever for example has pivoted to prioritize its packaged food, surface cleaners, and personal hygiene product brands over other products, such as skin care, where demand has fallen.
- LEGO has launched two initiatives to support children around the world during the COVID-19 crisis- the LEGO Foundation donated US $50 million to ensure children, particularly those most affected by the COVID-19 crisis, continue to have access to learning through play. The second initiative is a new website which encourages families worldwide to connect to play-based learning across social media.
- Johnson & Johnson have announced an additional $50 million to support frontline healthcare workers fighting coronavirus. The funds will be invested to support doctors, nurses, midwives and community health workers treating patients worldwide during the COVID-19 pandemic.
- Procter & Gamble (P&G) has responded to the crisis by installing new production lines of hand sanitiser in five manufacturing sites around the world. When fully operational, the company will produce 45,000 litres per week, and most of this supply will go to hospitals, health authorities and relief organisations.

(Source: The World Economic Forum, Sustainable Development Impact Summit, September 2020)

5. TRYING TO CRYSTALLISE THE PICTURE AND IDEAS FOR THE FUTURE

Recognizing the challenges, the present situation with the pandemic poses, entrepreneurship needs to be bolstered by significant investment on education. Even before the turbulent landscape, there were significant voices serving as paladins for a greater focus on embedding key skills that could help foster the talent and aptitude of students towards a more entrepreneurial mindset and orientation (Solesvik et al, 2013). Considering the numerous challenges, the post-Covid environment contains, there is a potential call for even greater attention to education as a driving force to support organizations in not only surviving but also thriving in the opportunities that will surface (Langston, 2020). Still, although that is excellent rhetoric, the practical side is considerably more problematic and constrained. While the economic woes are yet to sink in, business and the government are continuously looking into ways that can mitigate the damage and potentially enable the pathway for recovery. Nevertheless, given how volatile things are any concrete plans that will have a strong likelihood for success, especially in the long-term are without a doubt quite hard to crystallise. Scanning the existing ideas and plans that have been bruited about, the emphasis is understandably on trying to contain the damage, limiting the adverse effects for business, employees and the wider population aside.

While recovery might feature prominently in the discussions and scenario-building, in the list of priorities for now appears to be in the backburner. Naturally, amid a pandemic, prioritizing the health and safety of the population needs to come first and foremost. Unfortunately, the repercussions that are already fast becoming apparent because of the virus are already visible and to a large extent concerning (ONS, 2020). At the same time, UK will need to balance not only the challenges stemming from the pandemic but also the imminent exit from the EU, completing a chapter that started with UK's entry into the European family in the 70s. The end of the transition period in 31st of December 2020 in itself marks the beginning of a new era for both the UK and Europe with a lot of issues still undecided as the negotiations for a final plan are still in process when this chapter was written.

So, what are the key observations and recommendations we can potentially formulate? It will become therefore extremely vital for the post-Brexit & Covid world for the UK to find mechanisms that will enable the economy and businesses to weather through the storm and also carve a path towards recovery. Nevertheless, the situation at present still looms as rather bleak with large giants such as Uber & Airbnb having suffered significant damages due to the imposed inertia following the rapid spread of the pandemic (Derderian, 2020). Equally, small businesses are also struggling as particular business areas in particularly have suffered more than others eg. hospitality, food & beverage and so on. Despite the negativity thought, some early signs of recovery in the USA with relation to business formation suggest that there still might be some positivity wrapped in the 'gloom and doom' mantra. According Wyskiel (2020), the secret to success for entrepreneurs in this fluctuating environment is to rely on their resilience, business acumen, innovative thinking and holistic approach in conducting businesses.

Undoubtedly, resilience is a key element of any successful entrepreneur as they must adapt quickly in changing circumstances and indeed the current situation is certainly putting that skill to the test. Equally, their ability to scan the market and perceive possible opportunities is integral to capitalise on any opening that might emerge and be amongst the first movers, especially given the increased competition across local, regional, national and international level. At the same time, their ability to think 'out of the box' and identifying new and better ways of approaching business activity either at strategic or operational level and help them not only reduce costs, something that in a period of reduced activity and economic losses is key, but also to create economies of scales an scope that can produce increased revenues both in the short and longer term.

Finally, the ability of entrepreneurs to network and collaborate effectively with numerous different stakeholders can play a massive role coalescing several individual players together and create a distinct force through that unity, facilitating far swifter progress. It would be important to stress that although entrepreneurs by default are quite independent, the role of the governments is even more pronounced as it has to play an active role, now more than ever, in providing vital support not only to see businesses through but also paving the way for recovery. Some of the programmes we saw in the UK have gone some way to address this need, although it is certainly a hard-balancing act given the state of the finances and the need for excess borrowing to meet increased demands (Ballard, 2020). Despite the shortcomings and challenges, in order to ensure that the road to recover opens, a partnership amongst all the different agents is essential realise any plans and forge future success.

6. REFERENCES

Ballard O (2020) 'government leaves window opens for entrepreneurs looking for exit' https://www.businessleader.co.uk/government-leaves-window-open-for-entrepreneurs-looking-for-exit/100427/ accessed 10/10/2020

Biginas, K., Wyer, P., Koumproglou, A. and Bowman, S. 2017. "Developing an Innovative Teaching and Learning Approach to Enterprise Education". ISBE Boldness, Prosperity and Entrepreneurial Responses Conference Belfast 8-9 N Hills, G. E.,

Edmans, Alex (2020) Grow the Pie, How Great Companies deliver both Purpose and Profit, Financial Times.

Harvard Business Review (2019) Is the Business Roundtable Statement Just Empty Rhetoric? Available at: https://hbr.org/2019/08/is-thebusiness-roundtable-statement-justempty-rhetoric

Harvard Business Review (2020) Making Stakeholder Capitalism a Reality. Available at: https://hbr.org/2020/01/makingstakeholder-capitalism-a-reality

Hultman, C. M., & Miles, M. P. (2008). The evolution and development of entrepreneurial marketing. Journal of Small Business Management, 46 (1), 99- 112.

Jaakkola, E. (2020). Designing conceptual articles: four approaches. AMS Review, 1-9.

OECD Unemployment Rates News Release: July 2020. Available at: https://www.oecd.org/sdd/labour-stats/unemployment-rates-oecd-09-2020.pdf

The Economist (2020) A cash cow dries up: Covid stops many migrants sending money home. (https://www.economist.com/middle-east-and-africa/2020/04/16/covid-stops-many-migrants-sending-money-home), (Date accessed: July 30, 2020)

UNESCO (2020), Education: from disruption to recovery. https://en.unesco.org/covid19/educationresponse, (Date accessed: September 20, 2020)

UN-Habitat COVID-19 response plan (2020). https://unhabitat.org/sites/default/files/2020/04/final_un-habitat_covid-19_response_plan.pdf, (Date accessed: September 12, 2020)

World Economic Forum (2020) Stakeholder Capitalism: A Manifesto for a Cohesive and Sustainable World. Available at: https://www.weforum.org/press/2020 /01/stakeholder-capitalism-amanifesto-for-a-cohesive-andsustainable-world/

World Economic Outlook Update (2020) World Economic Outlook Update, June 2020, A Crisis Like No Other, An Uncertain Recovery. Available at: https://www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020#:~:text=Global%20growth%20is%20projected%20at,Economic%20Outlook%20(WEO)%20forecast.&text=In%202021%20global%20growth%20is,19%20projections%20of%20January%202020.

Langston, C. (2020). Entrepreneurial educators: vital enablers to support the education sector to reimagine and respond to the challenges of COVID-19. Entrepreneurship Education, 1-28.

Solesvik, M. Z., Westhead, P., Matlay, H., & Parsyak, V. N. (2013). Entrepreneurial assets and mindsets: benefit from university entrepreneurship education investment. Education+ Training, 55(8-9), 748-762.

Wyskiel C (2020) 'q&a: innovation and entrepreneurship during the covid-19 pandemic' https://coronavirus.jhu.edu/from-our-experts/innovation-and-entrepreneurship-during-the-covid-19-pandemic accessed 10/10/2020.

CHAPTER

11

A Study on Employees' Psychological Contract of IT/ITES Industry in Chennai, India

Syed Sadullah Hussainy, Tameem Sharief. S

A Study on Employees' Psychological Contract of IT/ITES Industry in Chennai, India

Syed Sadullah Hussainy, Tameem Sharief. S

ABSTRACT

The psychological contract is implicit and invisible contract which consist of unrecorded relationship of employment between employer and employee. It is also a belief which is not clear held by both employer and employee exist along with written job contract. This study is focuses mainly on investigation of employees' psychological contract. The objective of study is to investigate the perception of employees' psychological contract with IT/ITES sector companies in Chennai, India. The data analysis is carried out to get usable and useful information by using various descriptive and inferential statistical tools like Mean analysis and ANOVA etc. Data has been collected from some of the prominent IT/ITES companies listed in NASCOM and operating in Chennai, whose employees have formed a consistently homogeneous community. The total of 950 respondents from 13 IT and 14 ITES units were approached through email with a link to the questionnaire. Out of these, finally five hundred and five responses (505) were received and analyzed. From the analysis it has been understood that the employees' psychological contract in the IT/ITES sector is above the average level since all mean values of the variable are more than three out of five and the mean score of perceived psychological contract of female employees is more than the male employees, employees of IT and ITES companies have different perception regarding psychological contract and ITES companies' employees have higher psychological contract compare to IT sector employees etc. This study gives suggestions, which will surely be helpful for the management of IT/ITES companies in better understanding of employees' Psychological contract in their organizations.

Keywords

Psychological contract, IT/ITES Sector, Perception of employees

1. INTRODUCTION

The employment relationship in 21st century is undergoing fundamental changes and these changes are having influence on the attraction, retention, and motivation of employees. Weralupitiya, A., Jayarathna (2016), Kumar. G.A & Dr Reddy M. S (2016), have mentioned that present employees are different from previous employees because they are comparatively luckier than the previous employees due to increased globalization and economic activities. This has created lots of employment opportunities across the industries. If the employee feels uncomfortable with his/her employer's behavior and attitude or if he/she feels that their employer does not fulfill obligations and keep up promises made, will develop negative perception towards the job and the organization. The negative perception of employees about the employer will form a weak or negative psychological contract which creates dissatisfaction among employees and lower their commitment and increases HR turnover in the organization. Katou A.A, & Budhwar. P.S., (2012) have rightly mentioned that employees consider the organization as their home which is away from the real one. The organization is a place, where employees spend a major part of their days and life. So, they expect that the time, they spend in the organization should be based on positive relationship, respect, and trust. Hence is essential on the part of the employers, that they should fulfil all their obligations and promises that they have made to their employees to gain their trust, confidence, and loyalty. Employers also should strive continuously to achieve the superior and positive employees' psychological contract and work consistently to gain the high level of employees' commitment and performance.

The concept of psychological contract is more about exchange of relationship between two parties such as employee and his employer. The psychological contract formation happens after gaining experience of each other nature, behaviour, and attitude which they have communicated directly and indirectly in the organization (Conway & Briner, 2005). Developing healthy and strong psychological contract among employees is essential for an organization to gain their satisfaction, commitment and building positive morale and attitude towards the organization. When employers fulfil and honour all its promises which they have made to employees result in gaining their trust, confidence with the management of the organization and more importantly gives satisfaction with the job and the organization. Satisfied employees are happy employees and happy employees will contribute better for the organization and they are likely to be more loyal for the organization and like to stay with the organization for a long period of time. On the other hand, opposing to this, if the Psychological contract is affected and violated when employers did not keep their promises and fulfil their obligation. Breach of psychological contract will create the problem of low morale, low productivity, and low commitment and less loyalty of employees towards the organization and more likely to increase attrition and intention to leave the organization. This has been confirmed by the previous researchers such as Robinson & Morrison, 1995; Shore & Tetrick, 1994; Sparrow,1998. Hence, it has become essential that, the organizations should strive to gain a positive and superior psychological contract and a high level of employees' commitment because both are equally important for employees' motivation and retention. This study focuses mainly on evaluating the employees' perception on Psychological Contract with IT/ ITES companies in Chennai, India.

2. LITERATURE REVIEW

Studies done by the previous researchers have confirmed about the positive co-relation between performance, motivation, employees' retention, and healthy psychological contract. From the literature we can understand how the formation of psychological contract between employer and its employees taken place and how it influences employees' motivation, morale, and intention to stay in the organization. Due to increased globalization, technological advancement, and existence of multi-cultural environment across industries employees mind set and attitude are constantly changing towards employment. The changed mind-set of workers influencing organizations to have renegotiation and bring changes in employment contract which is more compatible with existing working climate across organization. Previous researchers have agreed that flexibility employment terms and Pro-HR policies is the current trend across organizations (Hiltrop, 1995; Guest, 1998; Tumley and Feldman, 2000). This is due to the reason that, employment term's flexibility and pro human resource policies are proved to very effective tool to gain employees' commitment and retain employees with the organization. The employer- employee trust is essential element of formation of healthy and strong psychological contract. As Professor Denise Rousseau, rightly mentioned that psychological contract is an effort to create a better understanding of the employment relationship between employers and employees (Robinson Sandra, 1996).

The psychological contract is implicit and invisible contract which consist of unrecorded relationship of employment between employer and employee (Adams.Samuel; Quagrainie, Fannu; Kwame Mensah Klobodu; Edem, 2014). It is a belief which is not clear held by both employer and employee which exist along with written job contract (Coyle-Shapiro, Jacqueline A-M. and Parzefall, M, 2008). The concept of psychological contract can be traced back to Greek philosophers and social contract theorist such as John Locke and Thomas Hobbes. Kotter (1973) consider the psychological contact as an implicit contract with specification of how employees and organizations are meant to behave in their employment relationship. Rousseau D.M (1989) stated that psychological contract develops based on fulfillment of obligations and promises between employer and employees. In another words it is described as the perceptions of mutual obligations between the employee organizations. Employees expect employers to Pay sufficient with performance, provide opportunities for training and development, provide opportunities for promotion, recognize innovation or ideas, give feedback on performance, provide interesting tasks, provide an attractive benefits package, treat everyone with respect, give reasonable job security, and provide a pleasant and safe working environment and so on. Besides that, the employers expect employees to work hard, uphold company reputation, maintain levels of attendance and reliability, show loyalty to the organization, work extra hours when required, develop new skills, and update old ones, be flexible and receptive to change, be polite to clients and colleagues, be open and honest and come up with new ideas and son on.

For a positive or healthy psychological contract, employees feel valued and respected which can lead to loyal employees, who are willing to work hard. A healthy contract is linked to outcomes such as positive employment relations, employee commitment, motivation, and job satisfaction. The stress here is on employees, especially the commitment to their jobs. It offers a framework for identifying and avoiding problems. It highlights the need for managers to talk regularly with their employees and when there is change, to consult widely and systematically. For a negative or weak psychological contract, employees feel under-valued, less motivated, and not respected. This may lead to a lack of commitment to the organization, passive resistance, and possible resignation. It will lead to loss or lack of loyalty and more likely to leave the company as they feel that they have a less secured job.

For example, on the employee side promises made over bonuses, promotion or salary increases may form part of the psychological contract and the on-employer side promises made over working extra time or working during holidays etc., may form part of the psychological contract. Managing expectation is the key responsibility of both the parties and one should not give false promise, which gives other party wrong perception of action which does not happen (Elizabeth Wolfe Morrison and Sandra L. Robinson, 1997). Researchers such as Sandra L. Robinson, Matthew S. Kraatz and Denise M. Rousseau (2017) acknowledge that perceived breaches of the psychological contract can severely damage the relationship between employer and employee, leading to disengagement, low output and in some cases increase attrition and low retention of employees. As stated by (Roehling, M. 1997), the way of managing psychological contract, certainly determines the success of the organization. Here the researcher attempted to present the picture of formation of the psychological contract and consequences of breaching or violating it. Organizations should maintain a positive psychological contract to motivate and retain qualified employees. It is evident from the above literature that, there is a significant interest shown from academics, researchers, and practitioners towards the subject of 'psychological contract'. It is for the fact that it is more likely to sustain employee motivation and commitment which leads to retention of efficient employees in the organization. (Butler &Waldroop1999).

3. SIGNIFICANCE OF THE STUDY

This study is carried out by surveying IT/ITES companies' employees. The outcome of this research reflects the employees' perception on of psychological contracts in IT/ITES sector of Chennai. Even though many researchers have made theoretical and empirical contributions to the study of Psychological Contract in various trading as well as manufacturing industries. But the employees' perception on psychological contract is not given focus especially in the context of IT sector of Chennai. To evaluate the Psychological Contract measures such as employees' mentality, attitude, feeling, perception, sentiment, emotions, loyalty, trust, responsibility, and obligations etc., have been used in this study. The researcher assumes that, the demographic and job characteristics may influence his/her perception of psychological contract. Hence, variables such as age, sector, type of company, qualification, salary, and age of the employees have been taken for measurement. The researcher is confident that, this study will help the readers to understand the reasons why employees' Psychological Contract essential to have better employees' satisfaction motivation and performance.

4. OBJECTIVE

The objective relates to the questions to be answered through the study and they indicate what the researchers is willing to investigate in the study. The objective of study is to investigate the perception of employees' psychological contract with IT/ITES sector companies in Chennai, India.

5. METHODOLOGY

5.1 Approach & Design

This research uses quantitative and qualitative research approach. Structured questionnaire was used to collect primary data directly from the respondents who are the employees working at different positions of IT/ ITES companies. Collected primary data has been summarized with aim of analysis and interpretation by using some tools of statistics to fulfil the study objective. Therefore, the outcomes and findings of this study is the result of statistical analysis. Data has been collected by developing structured questionnaire on online survey platforms such as survey monkey and google forms. The secondary data relating to study were collected from books, journals and organizations' reports published online and offline.

5.2 Variables Used for Measuring Psychological Contract:

To collect data and to investigate the employees' psychological contract, the researcher used the five-points Likert scale ranges from strongly agree to strongly disagree. The following variables relating psychological contract were used in the questionnaire and responses collected from the employees of IT/ITES companies.

- I prefer to work a strictly defined set of working hours.
- I love my job and my company.
- My commitment to this company is defined by my contract.
- I work toward long-term goals of this company.
- My long-term future lies within this company.
- I am heavily involved in my place of work.
- I expect to be paid for any overtime I do.
- I only carry out what is necessary to get the job done.
- This job is a steppingstone in my career development and
- As long as I reach the targets specified in my job, 1 am satisfied.

5.3. Sampling & Population

The population of this study include employees of IT/ITES in Chennai. Convenience sampling method was used with the reason that population is unknow. Data has been collected from some of the prominent IT/ITES companies listed in NASCOM and operating in Chennai, whose employees have formed a consistently homogeneous community. The total of 950 respondents from 13 IT and 14 ITES units were approached through email with a link to the questionnaire Out of these, finally five hundred and five responses (505) were received and analyzed.

5.4 The hypothesis and sub-hypothesis of the study

- H0: There is no difference between job related and demographic variables of employees with regard to psychological contract in IT/ITES companies.
- H01: There is no difference between female and male employees' perception on psychological contract in the IT/ ITES companies.
- H02: There is no difference between ITES companies and IT companies' employees' perception on psychological contract.
- H03: There is no difference between MNC and Indian employees with regard to the perception on psychological contract.
- H04: There is no difference in the perception of psychological contract among the employees with regard to different educational qualifications in IT/ITES companies.
- H05: There is no difference in the perception of psychological contract among employees with regard to their salaries.
- H06: There is no relationship between employees age and perception on Psychological Contract with IT/ ITEs companies.

6. DATA ANALYSIS & INTERPRETATION

Data analysis is of the process of research that brings order, a structure and meaning to the data gathered by using primary data instrument - questionnaire. The data analysis is carried out to get usable and useful information through the analysis of data by using various descriptive and inferential statistical tools like Mean analysis and ANOVA etc.

6.1. Analysis of Sector and Company Respondents:

Data has been collected from the 505 respondents and out of the total samples obtained 260 respondents are from the IT companies which makes 51.50% of the total sample size. The remaining 245 which makes 48.50% are the respondents from ITES companies. Likewise, from the total samples obtained 45.90% which is (232) of the respondents are from the MNCs IT/ITES companies and remaining 54.10% (273) of the respondents from the Indian IT/ITES companies.

6.2 Analysis of Psychological Contract:

From the analysis it has been that employees' perception on psychological contract is higher in case of variable "I am heavily involved in my place of work" (M=3.58) when compared with other variables. Lower psychological contract has been found in the variable "As long as I reach the target specified in my job, I am satisfied" (M=3.15). The overall mean score of employees on perception of psychological contract is 33.83 which is 67.66%. From the analysis it has been understood that the employees' psychological contract in the IT/ITES sector is above the average level since all mean values of the variable are more than three out of five.

6.3 Gender – Psychological Contract:

To compare the difference between gender's opinion on psychological contract in the IT and ITES companies, the independent – sample test was used. The P value of independent sample "t" test is less than Sig. Value (0.01) for psychological contract score, so the Null Hypothesis (H01) is rejected. It also indicates that there is a difference between genders perception on psychological contract in IT/ITES companies. The mean score of perceived psychological contract of female employees (M= 35.74) is more than the male employees (M=32.27).

6.4 Type of company – Psychological Contract:

For comparing the difference between the employees working in IT and ITES companies regarding the perception on Psychological contract, the independent-sample t-test was applied. As the P values of "t" test is less than Sig. Value (0.01) in the Psychological Contract Score (0.023), the H02 is rejected. The mean score of employees belong to ITES companies is M = 34. 49 which is more than the employees of IT companies which is M= 33.22. The "t" test analysis shows that there is difference between the employees of IT and ITES companies regarding their perception on Psychological Contract.

6.5 Company origin – Psychological Contract:

For comparing the difference between the employees' perception on psychological contract who are working in Indian and MNCs IT/ITES companies, Independent-sample t-test was applied. The P values of sample "t" test is less than the Sig. Value in the Psychological Contract Score (0.000), the H04 is rejected. The mean scores of employees' perception on Psychological contract in the MNCs IT/ITES companies is (M= 35.69) which is more than the employees is working in

Indian IT/ITES companies (M=32.25). The "t" test analysis indicates that there is a difference between in the psychological contract of employees working in Indian IT/ITES and MNCs IT/ITES companies.

6.6 Monthly Salary – Psychological Contract:

For comparing the psychological contract of the employees with different salaries in IT/ITES companies, a one-ways analysis of variance ANOVA was used. The P values of one-way ANOVA test is less than the Sig. Value (0.01) in case of the Psychological Contract IT/ITES companies score (0.000) so the H05 is rejected. The mean score of employees who are earning 50001 to 75000 is (M=35.94) which is more than the other group. Hence it is inferred that employees' perception on Psychological Contract who are earning salary of 5001 to 75000 is more compare to other groups. The ANOVA analysis indicates that there is difference in the Psychological Contract of employees who are earning different salaries.

6.7 Age of the employees- Psychological Contract:

A correlation (Pearson product-moment) was used to determine the relationship between employee's perception on Psychological Contract with the IT/ITES companies and their age. The P Value is greater than Sig. Value (0.05) in case of employees' perception on Psychological Contract (0.678) the H06 is accepted. Small positive co-relations have been found (r= 0.019) between age of the employees. The analysis indicates that there is no relationship between the age of the employees and perception of psychological contact in IT/ ITES companies

7. SUGGESTIONS & RECOMMENDATION

This study gives information which will be helpful for the management of IT/ ITES companies in better understanding of employees' Psychological contract in their organizations. Having positive and healthy employees' psychological contract in the organization is essential for the organization to gain their motivation, satisfaction and for their retention. The management of IT/ ITES companies should follow transparent HRM practices and discourage any kind of politics, discrimination, and bias. Deserving employees should be proper rewarded and recognized for their contribution to organization. Similarly, managers should make sure that employees get adequate benefit as per employment contract. The psychological contract is the outcome of the socialization process, so the managers will be having multiples responsibilities. They are not only work for improving the relationship with their employees but also should encourage and promote teamwork in the organization. This will not only enhance better performance but also develop positive feeling of the employees towards the job and the organization. The high-performance teams should be created and nurtured by the HR Managers for this purpose. Management should also ensure that employees are place in the right positions which are exactly matching their domain and specialization and compensate adequately to give them positive psychological contract. It has been found that MNCs IT/ ITES companies employees' perception towards the psychological contract is higher than the Indian IT/ITES companies. The research strong believes that the main reason of this is pr-HR practices and better incentives, benefits, and rewards policies etc., in the MNCs. So, this area requires further investigation and need to be studies for better result in future.

Through personal observation made by the research, it has been identified that employees are experiencing different types of work-related problem such as too many responsibilities, stressful job, unrealistic targets and deadline and physical and mental health problems. Therefore, it is essential on the part of management that IT/ITES companies should make the working environment very conducive for their employees to put them comfortable in the place of work. Management can also provide training periodically and have periodically counselling programs etc., especially for those employees who are undergoing stress and other health related issue in the organization. The recommendations suggested above, if implemented holistically can improve the perception of employees on Psychological Contract in the present organization.

8. CONCLUSION

This study was carried out with the purpose of investigating the employees' perception on psychological contract in IT/ITES companies of Chennai district. The IT industry has greater impact on the Indian economy, and it is one of the major sources of employment in Indian for Indian. But the growing job-hopping among young Indians, is really creating concern among the managers of the IT sectors. Huge employment of opportunity for young skilled IT workers in the market is making the workers to choose the best organization which will satisfy their professional and need. To retain the efficient and skilled workers it has become necessary for the organizations especially such as IT sectors to focus on gaining the healthy and positive employees' psychological contract. Organization should develop pr-HR practice for the employees to enhance their positive feeling towards the organization in which they are employed.

9. REFERENCES

Adams, Samuel & Quagrainie, Fannu & Kwame Mensah Klobodu, Edem. (2014). Psychological contract formation: The influence of demographic factors. International Area Studies Review. 17. 279-294. 10.1177/2233865914545523.

Anastasia A. Katou & Pawan S. Budhwar, (2012); The Link between HR Practices, Psychological Contract Fulfilment, and Organizational Performance: The Case of the Greek Service Sector; Published online in Wiley Online Library (wileyonlinelibrary.com), Wiley Periodicals, Inc. • DOI: 10.1002/tie.21504.

Butler, T & Waldroop, J (1999); Job sculpting, The art of retaining your best people, Harvard Business Review, September-October.

Conway, N., & Briner, R. B., (2005); Understanding psychological contracts at work: A critical evaluation of theory and research. Oxford University Press.

Coyle-Shapiro, Jacqueline A-M. and Parzefall, M. (2008); Psychological contracts. In: Cooper, Cary L. and Barling, Julian, (eds.) The SAGE handbook of organizational behavior. SAGE Publications, London, UK, pp. 17-34

Elizabeth Wolfe Morrison and Sandra L. Robinson (1997); When Employees Feel Betrayed: A Model of How Psychological Contract Violation Develops: The Academy of Management Review, Vol. 22, No. 1 (Jan., 1997), pp. 226-256, Published by: Academy of Management DOI: 10.2307/259230, https://www.jstor.org/stable/259230

Guest, E. D. (1998). Is the Psychological Contract worth Taking Seriously? Journal of organizational Behavior, 19, 649 -664.

Hiltrop, J. (1995). The changing psychological contract: the human resource challenge of the 1990's. European Management Journal. 13(3), 286-294.

Kotter, J. P. (1973). The Psychological Contract: Managing the Joining-up Process. California Management Review, 15(3), 91–99. https://doi.org/10.2307/41164442

Kumar, B. (2016). Talent Retention in Metal Manufacturing Companies in India. GlobalNxt University Working Paper Series, No. 002/2016. Available at SSRN: https://ssrn.com/abstract=2843391 or http://dx.doi.org/10.2139/ssrn.2843391

Robinson Sandra, (1996); Trust and Breach of the Psychological Contract; Administrative Science Quarterly. Dec96, Vol. 41 Issue 4, p574-599.

Robinson, S. L., & Morrison, E. W., (1995); Psychological contracts and organizational citizenship behavior: The effect of unfulfilled obligations on civic virtue behavior. Journal of Organizational Behaxior, 16, 289-298.

Roehling, M. (1997), "The origins and early development of the psychological contract construct ", Journal of Management History (Archive), Vol. 3 No. 2, pp. 204-217. https://doi.org/10.1108/13552529710171993

Rousseau, D. M. (1989). Psychological and implied contracts in organizations: Employee Responsibilities and Rights Journal, 2, 121–138. http://dx.doi.org/10.1007/BF01384942

Sandra L. Robinson, Matthew S. Kraatz and Denise M. Rousseau, (2017); Changing Obligations and the Psychological Contract: A Longitudinal Study: Academy of Management Journal, Vol. 37, No. 1 Articles Published Online: 30 Nov 2017https://doi.org/10.5465/256773

Shore L.M & Tetrick. L.E (1994); Trends in organizational behaviro, Vol 1, edited by C.L Cooper & D.M Rousseau, John Wiley & Sons Ltd.

Sparrow. P, 1998; New Organizational Forms: The Strategic Relevance of Future Psychological Contract Scenarios. https://doi.org/10.1111/j.1936-4490.1998.tb00177

Turnley, W.H. and Feldman, D.C. (2000) Re-Examining the Effects of Psychological Contract Violations: Unmet Expectations and Job Dissatisfaction as Mediators. Journal of Organizational Behavior, 21, 25-42.

Weralupitiya, A., Yasodara Jayarathna, (20166) Impact of psychological contract on employee retention: A case of apparel sector in sri lanka: International Research Journal of Human Resources and Social Sciences Vol. 3, Issue 11.

Education

CHAPTER

12

New Learning Paths: Technology Transformations, Challenges, and Sustainable Educational Practices

Amr Abdelazim Elsayed Ibrahim

New Learning Paths: Technology Transformations, Challenges, and Sustainable Educational Practices

Amr Abdelazim Elsayed Ibrahim

ABSTRACT

The educational sector, which suffers from various of the difficulties inherent in it for decades, now faces a new challenge "Covid-19," changing many traditional instructional practices, concepts, and methods in a short period. Most of the world's governments have closed temporarily, schools; this closure has affected almost 60% of the world's students, affecting millions of additional learners. In this regard, global society has a collective responsibility, which necessity reflected in increased financial investment in education. Therefore, the section of global aid to education has to increase in synchronism with the rise in financial resources for teaching, training, and learning in national budgets. Several organizations, prominently UNESCO, are working to support countries to mitigate the immediate impact of school closures, particularly the effect of the most vulnerable and disadvantaged groups and strive to facilitate the sustainability of education for all through distance learning. The current circumstances have made there a real opportunity to test the success of using electronic programs in distance education. Many countries have come to rely on online learning while preserving traditional classes, to develop the educational process in all its stages. This development, which leads to the availability of learning throughout the day through various methods and methods, to provide educational content with static and moving visual elements, and audio-visual effects, which makes education more exciting and enjoyable and with higher efficiency, effort and less time.

Keywords

Learning transformations; COVID -19; E-Learning; Distance learning; Sustainable Education; Blended Education.

1. INTRODUCTION

The society is noticing since the beginning of this year 2020 an event that changed the features of traditional school and university education tremendously including shook the throne of the oldest and most challenging conventional learning system in several countries around the world (Gallo & Trompetto, 2020). Drane et al. (2020) reported that the UNESCO's recent declaration confirmed that 1.5 billion students that are more than ninety per cent of the world's students would not be able to go to school or university because of its closure due to the spread of the "Covid -19" pandemic. This shared shock resulted in everyone realising that education is a shared benefit worldwide (Bao et al., 2020). Accordingly, our societies presently are suffering from social, and economic isolation led to the stopping in learning systems.

Indeed, this pandemic has a sentimental approach related to the educational process. Instead, it is its central pillar, which is the psychological aspect; it was greatly affected under the pandemic (Covid 19). This psychological affectation for many people. It is a (Corona phobia) the fear of Corona, where phobia is defined as severe fear and irrational of a specific organism or situation and classifies phobia among anxiety disorders. Still, we have to know that the meaning of the word epidemic is a spreading virus and fast spread from person to person (Sarah & Practice, 2020).

Besides, for all students, now a time to create social, emotional skills, and learn more to contribute as citizens to the societies' development. If the role of parents and family is always vital, then it is more important at this time, messages should be used through various means of communication to provide them with advice and advice that helps them to provide better support to their children (Slanetz et al., 2020). Therefore, the reality nowadays is the concept of (paradigm shift), it means a change in theory or practice that occurs when the prevailing theory or practice becomes inconsistent with an emerging phenomenon in life, which leads to the adoption of a new approach (Wajdi et al., 2020).

2. NEW LEARNING PATHS

Modern technology has provided extensive educational opportunities that benefited students and teachers by integrating them into the regular and virtual classroom remotely, and the use of electronic devices such as computers, smartphones, and smart digital panels (Raja et al., 2018). The students' interest in education increased, and their interaction increased. These technologies also assist the growth of education in developing countries, through distance learning, or participation in advanced education courses (Adyrkhaev and sports, 2016). These facts led to one of the economic, learning paths that have become necessary in this period is the knowledge economy. Knowledge economy means the need to shift from consuming knowledge to the production of information (Shahriari et al., 2017). The knowledge economy revolves around obtaining, sharing, using, employing, creating, and producing knowledge to improve the quality of life in its various fields (Al-Samarraie et al., 2018). The knowledge economy based on four main pillars:

A. Innovation depends on research and development through an effective system linking educational institutions with industrial institutions to develop continuously.

B. Infrastructure built on information and communication technologies, which facilitates the preparation, dissemination, exchange, and adaptation of information and knowledge to local needs (Shahriari et al., 2017).

C. Governance that based on strong economic foundations can provide all legal and political frameworks that aim to increase productivity and growth.

D. Education is the most important and essential factor in productivity and economic competitiveness (Cidral et al., 2018).

Furthermore, the rapid transformation model to the new learning paths based on three foundations based on an advanced education system that deals with all challenges and serves the labour market, Moreover, the cultural characteristics of societies, variability and societal awareness. One of the most critical pillars of technology transformation is the vision of governments and the shift to employing digital technology in all sectors (Raja et al., 2018). This model relies on the "human capital" industry, the pinnacle of the pyramid in the epoch of the knowledge economy, as it is an essential information age industry ever. Table 1.1 illustrate the nature of the change in the elements of the educational system.

Table 1. Change Educational System

The Element	The Nature of The Change
Educational Policies	Review; To match the required outputs locally and globally
Departments and Follow-Up	Depend on competencies and standardised standards
Teacher	Instructor, sender, coach, model, decision-maker; Proficient in communication skills and critical thinking and is proficient in the use of techniques and uses them in presenting his scientific material and evaluating his students

The Element	The Nature of The Change
Student	student an interactive, collaborative team worker, researcher, innovator, critic, producer.
Learning Environment	Virtual classrooms focus on intangibles and digital
The Curriculums' Content	Renewable to cope with the explosion of knowledge and instantaneous information flow, based on problem-solving
Assessment Facilities	Assessment using Open book, project, self-evaluation, video interviews, free discussions.
The Teaching Mechanism	It based on different teaching approach in quantity, quality, and content.
Academic Certificates	Internationalisation of education Skills-based certificates.

Mayer (2017) explain that the health ban obligated the students and the teaching staff to the homes as they obligated others. Hence, the natural movement of life stopped, and the educational plan disrupted, so the search for an alternative method was given the goodness of the experiment - school - our societies should exchange questions:

In what way will the educational program resume its work after the end of this pandemic: will its timeline return to its first cycle in terms of the period of class, number of working day hours, and number of school's weekdays? Or are times deducted for "distance learning"?

To answer these questions and explain the suitable and useful plans in the educational and instructional field, will be in the following sections:

3. TECHNOLOGY TRANSFORMATIONS

Technological transformations contribute to knowing the status of students before and after education and monitoring their development, to making students think about important information and focus on this point. These shifts contribute to monitoring the effectiveness of educational content and organising training content according to results, to guide students about their knowledge and competencies (Aparicio et al., 2016).

3.1 Distance learning

Distance education as a program in which electronic channels and networks used to refer us to technology, especially communications technology whose profound impact in all areas of life (Lampert et al., 2018). Also, many people globally use these programs and applications; work is continuing to produce advanced generations of the Internet. Furthermore, the coverage of the transmission of these networks to vast areas of inhabited land requires that the educational community expand its use in the field of work, both administrative and technical. One of the most effective ways for teachers to teach via distance learning is to create a positive electronic environment. Each of the remote learners should feel that they are a vital part of the supportive learning culture that keeps them up on the Internet for life (Aparicio et al., 2016). The exciting interaction method is the remote interactive learning method (Cidral et al., 2018). This method is the overall interaction between the teacher and the remote learner through audio-visual communications and the educational channels that are through broadcast or satellites. Moreover, E-Learning is an essential system of distance learning systems, more practical details in the next section (Traxler, 2018).

3.2 Effective E-learning

E-learning is an imperative that only educational work will rise to it. The rapid development of knowledge and technology affected community organisations and bodies and led to the necessity of searching in the educational field for the best ways and methods that help learners learn. It provides an interactive learning environment that suits the needs of learners in the twenty-first century (Adyrkhaev and sports, 2016). The goal of effective e-learning is to reach an education that transcends space, time, material capabilities, and differences in the abilities and needs of individuals. This type of knowledge leads to describing the relationship between modern technology and learning with power, flexibility, adaptability, and compatibility with everything new until e-learning has reach, which has become a model for integration between education and technologies (Shahriari et al., 2017). E-learning has several characteristics, such as scalability, collaboration, flexibility, and adaptation to the needs of the learner. E-learning systems can also rely upon in continuous learning, educational alignment, economical cost reduction, interaction, fun, quality stability, safe environment, and educational follow-up (Bao et al., 2020).

3.3 Blended Learning

Blended learning defines as one of the education systems in which e-learning merges with traditional classroom learning in one framework (Dziuban et al., 2018). The online learning environment, which is part of blended learning, is facilitated through the Learning Management System. Communication tools and assessment methods which serve blended learning, it is the contents of a learning management system (Raja et al., 2018).

Communication may be synchronous or asynchronous:

Synchronous communication: is any communication that takes place in real-time and does not always require a learning management system, for example, virtual classes, videoconferences and chat rooms.

Asynchronous communication: teaching is indirect; it often facilitated through email and group discussions within the LMS. It should note that the lessons usually divide into units, however not all material requirements are found on the Internet. So only part of some materials can be found on the Internet, and the other component needed to complete the content is in textbooks or any other reference (Moskal, Dziuban, & Hartman, 2013).

Assessment methods: Evaluation is the process of gathering information as accurate as possible and comprehensive as possible, followed by an analysis of this information to decide or judge. The evaluation requires that the learner place in a position to ensure that the learning takes place. Thus, it measures from a measurement network consisting of a set of pre-defined learning elements that demonstrate performance.

3.3.1 Blended Learning Styles

Blended learning employ in the educational process, according to the following patterns:

A. Alternation: In this type of learning, classroom instruction and e-learning are mutually exclusive in presenting one lesson or subject.

   Cantered alternation: Also referred to as class rotation, it is done by rotating students within a single lesson or subject according to a specific schedule or based on the teacher's direction between classroom instruction and e-learning at least once. Furthermore, all of these events happen in one semester, without students moving from one place to another. It may be implemented by dividing students into groups, some of which taught through teacher guidance or group work. In contrast, another group receives its education via the Internet, and then groups rotate among themselves (Moskal, Dziuban, & Hartman, 2013).

i. Laboratory alternation: students rotate within one lesson or subject according to a specific schedule or according to the teacher's guidance between classroom instruction and e-learning, but through students' movement from the classroom to the computer labs in the educational building.

ii. Self-alternation: students rotate within the same lesson or subject according to a specific schedule or according to the teacher's guidance between classroom teaching and e-learning, and the plan is specified for each student separately, and the teacher sets it according to her discretion to what suits each learner, or by using a program Lets split up.

iii. The flipped classroom: students rotate within a single lesson or subject according to a specific schedule, or according to the teacher's guidance between face-to-face classroom instruction on the campus of the educational institution during the school day and e-learning by handing over educational content that often present in the form of video clips on the same topic discussed In the classroom, or completing it via the Internet after school, students view it whenever they want and anywhere they choose, and then discuss it and use its content in the form of learning activities at another time in the classroom.

B. Flex Model: In this pattern, classroom education and e-learning are mutually exclusive in teaching the same subject according to a specific timetable, but the most significant focus is on e-learning. While learning in the classroom, the teacher provides face-to-face support to students only upon request, and this through activities such as small group instruction, group projects or one-on-one lessons (Moskal, Dziuban, & Hartman, 2013).

C. On-Demand: The student receives his education in one or more subjects entirely electronically and with the help of an online teacher affiliated with the educational institution to which the student belongs. At the same time, he continues to obtain educational experiences on the institution's campus in other subjects. The student can learn the material electronically inside or outside the institution.

D. Useful virtual model: It is a whole school experience in every subject (for example, mathematics), so students divide their time between attending the educational institution and distance learning using the Internet where they find educational content. Typically, the intensive virtual learning model begins with full-time online education and then built-in programs are put in place to provide students with a learning experience within the educational institution.

There are steps that a teacher can take to support student learning in blended learning, including the following:

· Understand the technology students will use.

- Carefully plan activities.
- Promote learning and validate understanding.
- Teaching students metacognitive and self-regulatory skills.
- Make learning relevant.
- Should monitoring data (Stein & Graham,2020).
- Provide positive feedback to students and celebrate success.
- The teacher can encourage discussion on the Internet.

Moreover, the advantages of blended learning are as follows:

- Significantly reduced learning expenses compared to e-learning alone.
- Provide face-to-face learning; This increases the interaction between the student and the trainer, between the students themselves, and between students and content.
- Blended learning is strengthening the human aspects and social relations between the learners among themselves and between the teachers as well.
- Blended learning is adequate flexibility to meet all individual needs and learning styles of learners of all levels, ages and times.
- They are benefiting from technological advances in design, implementation and use.
- Enriching human knowledge and raising the quality of the educational process, and then the quality of the educational product and the efficiency of teachers.
- Blended learning is civilised communication between different cultures to benefit from everything new in science.
- Many scientific topics are complicated to teach ultimately electronically; exceptionally high skills and the use of blended learning represents one of the proposed solutions to solve such problems.
- Moving from group learning to student-centred learning, in which students become active and engaged.
- It integrates formative and final evaluation systems for students and teachers.
- Enriches the learner experience and education outcomes and improves formal and informal learning opportunities (Stein, & Graham,2020).

- It provides flexibility in terms of implementation at the program level and supports the current institutional strategic directions in learning and teaching, including opportunities to enhance specialisations and internationalise curricula.

4. NEW LEARNING CHALLENGES

Despite the advantages of new e-learning, questions arise in the minds of many about its effectiveness as a complete alternative to traditional methods, the extent of preparation, challenges facing e-learning? It can be analysed as follows:

4.1 Educational content

Gross et al. (2020) claim that many teachers resort to instructional design to prepare educational material that achieves goals with high efficiency. This design generally based on studying the educational needs of students, identifying purposes and appropriate means to achieve them, and tools for measuring the extent of learning and feedback (Moubayed et al., 2018). Among the models used in the educational design are ADDIE, ASSURE and others, and e-learning base on this aspect. Several aspects should consider before using e-learning, the most important of which are:

4.2 Teaching aids

The choice of educational aids is a fundamental challenge in traditional and electronic educational design. However, in the latter, it is more generous, especially with the urgent need to employ interactive learning that increases students' attention by directly engaging them as contributors rather than as recipients, and this will increase the motivation factor and will achieve better results (Sahin et al., 2016). Here, the teacher must make a considerable effort to determine the appropriate interactive means for each goal. The process of engaging students in different places and maintaining their attention via devices is not easy, but it is certainly not impossible.

The same applies to the assessment process, in particular for the summative assessment. Whereas written examinations are the most common method, especially in mid-term and final exams - despite the remarkable shift towards alternative assessment methods - the electronic review seems complicated, as the monitoring process is impossible to avoid fraud using the same devices (Ceylan and Kesici, 2017).

4.3 Covering different needs and learning styles

Considering the diversity of learning styles is part of the planning elements for a fair and efficient educational process. There are four primary learning styles; Auditory Learners, Visual Learners, Kinaesthetic Learners, and Read and Write Learners (Moubayed et al., 2018). It is the teacher's responsibility here to diversify his methods to cover different needs. Concentrating on speaking on his part throughout the time of the educational session may be appropriate for the audiences, but it is boring for the visual and the activist. Here, the teacher needs to choose the proper programs and applications to prepare a "combination" of educational materials in line with the different styles (Ceylan and Kesici, 2017).

4.4 Teacher readiness

Parks et al. (2016) explain that one of the biggest problems facing the traditional teacher is the readiness to use modern technology in the learning process, and this is not a derogation from it, but rather a reality imposed by the late discovery of many technology devices and applications. Among these traditional teachers were those who sensed the importance of joining them, learning them and using them, and some of them thought that they needed it (Moubayed et al., 2018). The tyranny of technology, the passion of generations for it, and the environmental awareness of the need to reduce the use of papers, among other factors; It led to a gradual and significant shift towards technology (Al-Samarraie et al., 2018). The technological transformation was a shock to this group, who is now under a fait accompli that requires them to use technology, in detail that extends beyond uploading files and sharing them on electronic clouds to what is beyond that. There is another generation lived in a state of denial and ignorance of all these variables, and it did not use technology appropriately before. It is now experiencing the same dilemma, except that it is perhaps better off than the previous generation, given its knowledge of the basics of technology (Parks et al., 2016).

4.5 Technology availability

Technology readiness is a significant element for the success of the idea of e-learning; without it, it would be just a dream. There are different levels to this challenge; The availability of devices, the Internet, the speed of the Internet, and the Internet packages, each of which is a challenge in itself or combination with others (Shahriari et al., 2017). The student (or even the teacher) may have the device, but he may not have Internet service at all. If it is available, it may be slow, or perhaps with an insufficient package to cover video presentations and large-sized materials (Parks et al., 2016). Here, the teacher must know the conditions of all his students to choose the most appropriate methods for the group. If the problem, for example, relates to the lack of useful packages for students, then materials can be prepared in small or medium sizes, and it may also be better to reduce the use of video in direct interviews or use it for a short time (Bao et al., 2020). Indeed, the crisis that faced the educational sector due to this virus pushed E-leaning towards the forefront, so it became an alternative that has no choice except in the absence of infrastructure. Teachers will face significant challenges to cope with this sudden shift, but with proper planning, many obstacles overcome (Yang et al., 2017).

5. SUSTAINABLE EDUCATIONAL PRACTICES

Dai and Hwang (2019) claim that education reform to reach sustainable educational practices needs a holistic view that concerns all aspects and fields, an idea that goes beyond piecemeal approaches and patchwork technologies and the conceptual aspect goes through. Enhance future to be systematic, and quality based. Sustainable educational practices are a management system that is based on a set of values and relies on employing data and information about workers to invest their qualifications and intellectual capabilities in various levels of organisation creatively to achieve continuous improvement of the institution. Sustainability in the educational field refers to a set of standards and procedures whose implementation aims at continuous improvement in the educational product (Al-Samarraie et al., 2018). It also refers to the specifications and characteristics expected in this product and in the processes and activities through which these specifications achieve with the availability of integrated tools and methods that help educational institutions to achieve satisfactory results (Dai and Hwang, 2019).

5.1 Sustainability Standards

The concept of sustainable educational practices is closely related to the idea and standards of comprehensive quality in education, learning and educational administration. The standards of sustainability and educational quality differ according to the different fields they apply, and according to the evaluation systems that they monitor (Dai and Hwang, 2019). Standards meet in many specifications and standards fundamental principles and pillars that are all concerned with the quality of the final product through the various stages of production. Moreover, sustainability in education does not deviate from this framework, as it is concerned with the characteristics of school graduates and the results of their academic achievement through the various stages and processes, the ability overcome problems.

The essential standards for sustainability and quality in education include:

- Curriculum and course quality.
- Infrastructure quality (Al-Samarraie et al., 2018).
- Sustainability should have the efficiency of educational and administrative frameworks.
- Sustainability should have the quality of primary and continuous training.
- Quality in education includes the optimal measure of human and financial resources.
- Quality in education includes the positive impression of the beneficiaries of the school's services.
- Continuous improvement.
- Academic achievement results.

5.2 Sustainability Mechanisms

There is a set of mechanisms and pillars that would improve the status of the educational system and overcome the various obstacles that made the level of education in our Arab countries low. Therefore, any reform according to the following approaches:

Changing educational curricula and programs: In this regard, we must work on adopting a new strategy in building courses that are based on competencies instead of goals, on quality instead of quantity, and pluralism and diversity instead of unilateralism.

Improving the educational offer in cities and villages: According to the principle of equal opportunities, the educational offer must be expanded and enhanced in towns as well as in cities to allow everyone to complete their studies in the best conditions. The roles assigned to it and provide services of many quality (Al-Samarraie et al., 2018).

Taking care of human resources: Considering the pioneering role of the human resource in upgrading the educational system level, attention must be paid to the working frameworks in the sector, whether on the material level and working conditions or at the level of primary and continuous training (Dai and Hwang, 2019).

Decentralization at the level of administration: It means establishing adequate governance mechanisms and consolidating the policy of devolution, which aims to share tasks, adopting proximity policy, educational directives, and procedures to the peculiarities of each region.

Adequate financing and rationalization of expenditures: Any reform project that intends to improve and develop needs sufficient funding to achieve the desired, but this does not mean spending vast sums of money on useless matters, as the quality not measure by the value of the full and funds allocated to the project, but instead by what can be achieved Real-world results at the lowest costs (Al-Samarraie et al., 2018).

Benefiting from foreign expertise: Due to the universality of the quality system, it has become imperative to seek foreign experiences and expertise, especially from the pioneering and proactive countries to adopt this approach, while making sure to carry out adequate sociological and historical studies before introducing any modifications to the educational system to ensure its compatibility with the principles of the quality system (Dai and Hwang, 2019).

6. CONCLUSION

To conclude, we need to develop education in light of the Corona crisis and its consequences, because of the minds that this qualitative future need also requires a building like their capabilities, awareness, outlook, and ways of thinking. We cannot move forward on an outdated methodology, while everything around us changes, without education changing. A future vision cannot implement without establishing that education that is in line with the changes and developments taking place in the world. There are subtle details in education that must consider because they have an impact on the future of new education, and on accelerating or slowing development in it. The importance of e-learning stems from being an investment in digital technology and modern technology in developing educational means. The current circumstances of the spread of the global epidemic (Corona) led to the paralysis of educational institutions in the world. Accordingly, it has become obligatory for our educational institutions to complete the educational process During e-learning and blended learning programs. Educators are doing extraordinary things in the face of the COVID-19 crisis. They are the invisible heroes; they reinvent the methods they employ in education. They make the best of achievements in the most challenging circumstances.

Moreover, educational institutions must make the "Covid-19" crisis a learning opportunity, not a period of interruption in learning, by implementing them on the experience of e-learning, distance learning and blended learning. It is worth noting that the teacher should direct support to students with learning and emotional difficulties. This support can be provided by teachers and educators concerned with special education, through direct communication (face to face), or by sending email messages, following up on the individual learning plan, and maintaining Personal relationships through communication via Skype or any other platforms wherever possible.

In summary, effective educational planning can reduce the problems facing education with all elements of students, teachers, parents and content. In this regard, digital technologies facilitate many teaching tasks of all kinds, and facilitate students' learning and ease of access to learning content. All of the above-mentioned effective learning practices are among the most important solutions that tried, and their results were distinguished and contributed to enabling the achievement of the desired educational purposes.

7. REFERENCES

Adyrkhaev, S.G., 2016. Modern technology of physical education of disabled students in conditions of inclusive education. Pedagogics, psychology, medical-biological problems of physical training and sports, 20(1), pp.4-12.

Al Lily, A.E., Ismail, A.F., Abunasser, F.M. and Alqahtani, R.H.A., 2020. Distance education as a response to pandemics: Coronavirus and Arab culture. Technology in society, p.101317.

Al-Rabiaah, A., Temsah, M.H., Al-Eyadhy, A.A., Hasan, G.M., Al-Zamil, F., Al-Subaie, S., Alsohime, F., Jamal, A., Alhaboob, A., Al-Saadi, B. and Somily, A.M., 2020. Middle East Respiratory Syndrome-Corona Virus (MERS-CoV) associated stress among medical students at a university teaching hospital in Saudi Arabia. Journal of infection and public health.

Al-Samarraie, H., Teng, B.K., Alzahrani, A.I. and Alalwan, N., 2018. E-learning continuance satisfaction in higher education: a unified perspective from instructors and students. Studies in Higher Education, 43(11), pp.2003-2019.

Aparicio, M., Bacao, F. and Oliveira, T., 2016. An e-learning theoretical framework. An e-learning theoretical framework, (1), pp.292-307.

Arnout, B.A., Al-Dabbagh, Z.S., Al Eid, N.A., Al Eid, M.A., Al-Musaibeh, S.S., Al-Miqtiq, M.N., Alamri, A.S. and Al-Zeyad, G.M., 2020. The effects of corona virus (COVID-19) outbreak on the individuals' mental health and on the decision makers: A comparative epidemiological study. Health Sciences, 9(3), pp.26-47.

Bao, Y., Sun, Y., Meng, S., Shi, J. and Lu, L., 2020. 2019-nCoV epidemic: address mental health care to empower society. The Lancet, 395(10224), pp.e37-e38.

Basilaia, G. and Kvavadze, D., 2020. Transition to online education in schools during a SARS-CoV-2 coronavirus (COVID-19) pandemic in Georgia. Pedagogical Research, 5(4), pp.1-9.

Ceylan, VK and Kesici, A.E., 2017. Effect of blended learning to academic achievement. Journal of Human Sciences, 14(1), pp.308-320.

Cidral, W.A., Oliveira, T., Di Felice, M. and Aparicio, M., 2018. E-learning success determinants: Brazilian empirical study. Computers & education, 122, pp.273-290.

Clark, R.C. and Mayer, R.E., 2016. E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning. John Wiley & Sons. https://dx.doi.org/10.1016/j.compedu.2017.12.001.

Dai, Y. and Hwang, S.H., 2019. Technique, creativity, and sustainability of bamboo craft courses: Teaching educational practices for sustainable development. Sustainability, 11(9), p.2487.

Dai, Y. and Hwang, S.H., 2019. Technique, creativity, and sustainability of bamboo craft courses: Teaching educational practices for sustainable development. Sustainability, 11(9), p.2487.

Drane, C., Vernon, L. and O'Shea, S., 2020. The impact of 'learning at home' on the educational outcomes of vulnerable children in Australia during the COVID-19 pandemic. Literature Review prepared by the National Centre for Student Equity in Higher Education, Curtin University, Australia. pp. 1-17.

Dziuban, C., Graham, C.R., Moskal, P.D., Norberg, A. and Sicilia, N., 2018. Blended learning: the new normal and emerging technologies. International Journal of Educational Technology in Higher Education, 15(1), p.3.

Gallo, G. and Trompetto, M., 2020. The effects of COVID-19 on academic activities and surgical education in Italy. Journal of Investigative Surgery, pp.1-2. DOI: 10.1080/08941939.2020.1748147.

Gross, O., Garabedian, N., Richard, C., Citrini, M., Sannié, T. and Gagnayre, R., 2020. Educational content and challenges encountered when training service user representatives as peer researchers in a mixed study on patient experience of hospital safety. Research Involvement and Engagement, 6(1), pp.1-11.

Gryshova, I.Y., Zamlynskyi, V.A. and Shestakovska, T.L., 2017. Implementing cluster forms into national education development strategy. DOI: https://doi.org/10.24195/2414-4665-2017-5-11.

Hrastinski, S., 2019. What do we mean by blended learning? TechTrends, 63(5), pp.564-569.

Keswani, R.N., Sethi, A., Repici, A., Messmann, H. and Chiu, P.W., 2020. How to maximise trainee education during the coronavirus disease-2019 pandemic: perspectives from around the world. Gastroenterology, 159(1), pp.26-29.

Lampert, B., Pongracz, A., Sipos, J., Vehrer, A. and Horvath, I., 2018. MaxWhere VR-learning improves effectiveness over clasiccal tools of e-learning. Acta Polytechnica Hungarica, 15(3), pp.125-147.

Markova, T., Glazkova, I. and Zaborova, E., 2017. Quality issues of online distance learning. Procedia-Social and Behavioral Sciences, 237, pp.685-691.

Mayer, R.E., 2017. Using multimedia for e-learning. Journal of Computer Assisted Learning, 33(5), pp.403-423.

Moskal, P., Dziuban, C. and Hartman, J., 2013. Blended learning: A dangerous idea? The Internet and Higher Education, 18, pp.15-23.

Moubayed, A., Injadat, M., Nassif, A.B., Lutfiyya, H. and Shami, A., 2018. E-learning: Challenges and research opportunities using machine learning & Data analytics. IEEE Access, 6, pp.39117-39138.

Parks, R.A., Oliver, W. and Carson, E., 2016. The status of middle and high school instruction: Examining professional development, social desirability, and teacher readiness for blended pedagogy in the southeastern United States. Journal of Online Learning Research, 2(2), pp.79-101.

Raja, R. and Nagasubramani, P.C., 2018. Impact of modern technology in education. Journal of Applied and Advanced Research, 3(1), pp.33-35.

Sahin, M., Sule, S. and Seçer, Y.E., 2016. Challenges of Using Audio-Visual Aids as Warm-Up Activity in Teaching Aviation English. Educational Research and Reviews, 11(8), pp.860-866.

Sarah, B., 2020. Influence of Selected Psychosocial Factors on Parents and Learners' Mental Wellbeing During the Long School Holiday Due to Corona Virus (Covid-19): A Perception Parents and Learners in Uasin Gishu County, Kenya. Journal of Education and Practice, 4(2), pp.34-52.

Shahriari, N., Grant-Kels, J. and Murphy, M.J., 2017. Dermatopathology education in the era of modern technology. Journal of Cutaneous Pathology, 44(9), pp.763-771.

Slanetz, P.J., Parikh, U., Chapman, T. and Motuzas, C.L., 2020. Coronavirus Disease 2019 (COVID-19) and Radiology Education—Strategies for Survival. Journal of the American College of Radiology, 17(6), p.743.

Stein, J. and Graham, C.R., 2020. Essentials for blended learning: A standards-based guide. Routledge.

Sun, L., Tang, Y. and Zuo, W., 2020. Coronavirus pushes education online. Nature Materials, 19(6), pp.687-687.

Traxler, J., 2018. Distance learning—Predictions and possibilities. Education Sciences, 8(1), p.35. https://doi.org/10.3390/educsci8010035

Yang, X.F., Talmy, T., Zhu, C.H., Li, P.F., Wang, W., Zhang, P., Zhang, H.W., Bulis, S., Wang, K.X., Chen, X. and Wang, Y.L., 2017. Evaluation of teaching and learning: A basis for improvement in medical education. Chinese Medical Journal, 130(10), p.1259.

CHAPTER

13

A Study on Rediscovering, Redesigning and Reinventing the strategies to overcome Challenges posed by COVID–19 On Global Education

Waleed Hmedat, Mubarak Ali

A Study on Rediscovering, Redesigning and Reinventing the strategies to overcome Challenges posed by COVID – 19 On Global Education

Waleed Hmedat, Mubarak Ali

ABSTRACT

The discussion in the book focuses on challenges posed by Covid-19 on Global Education followed by deriving realistic solutions that helps to rediscover, redesign and reinvent approach to global education. The contents initiate from critical understanding of the impact caused by response of governments towards Covid on the education sector. The closure of schools and universities has in turn led to decline in classroom hours, challenges in international student enrolments and rising inequality in learning. The response phase has led to emergence of new trends across educational institutions. These range from rapid shift to online learning without essential training and development for teachers, increased reliance on EdTech start-ups and reduced learning transfer which has impacted the overall state of learning transfer negatively. Considering the outcomes of response phase and the existing challenges, the third part of the book focuses on deriving realistic solutions ranging from adoption of blended learning solutions across remote and hybrid learning. Also, the discussions shed light on Classifying Learners based on the urgency to get back to traditional classes, adopting Systems and Process based on Digital Competence Levels and most importantly in bringing about changes across educational policies and frameworks for a better tomorrow.

Key words

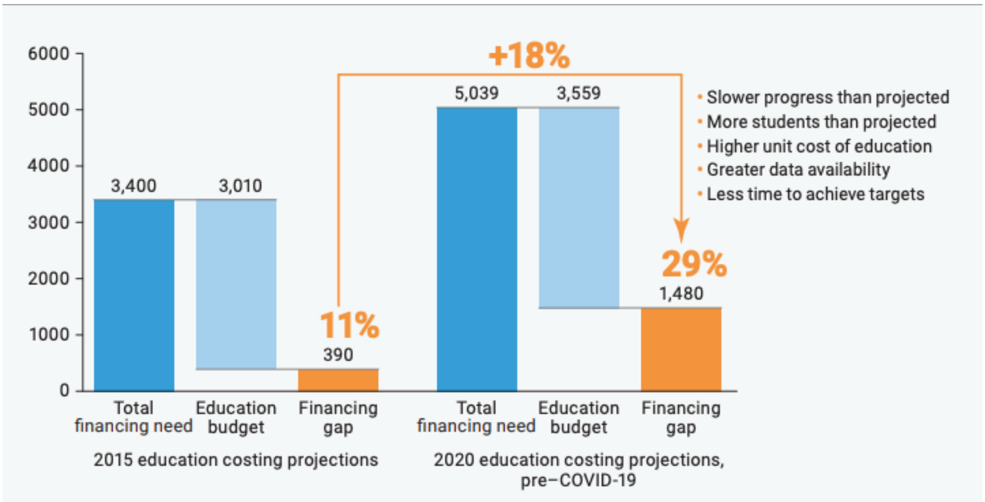
Rediscover, Redesign, Reinvent, Global education, EdTech, Blended learning

1. THE RESPONSE TO COVID–19 AND ITS IMPACT ON THE GLOBAL EDUCATION

1.1 Education before Covid:

Prior the pandemic, the entire world was exposed to the challenges of addressing individual's basic right to education. Amidst a collaborative universal intervention to address it, more than 250 million people were not active in school and more than 800 million stayed illiterate (Singha, 2020). Evaluating the situation of global education on the financial dimension, prior Covid situation was not lucrative as both the lower and the middle-income nations were finding it tough to accomplish the sustainable development in education. Given the intervention of Covid now the financial gap is further expected to mount as shown in the chart below.

Chart-1 showing the financial gap pre-COVID-19



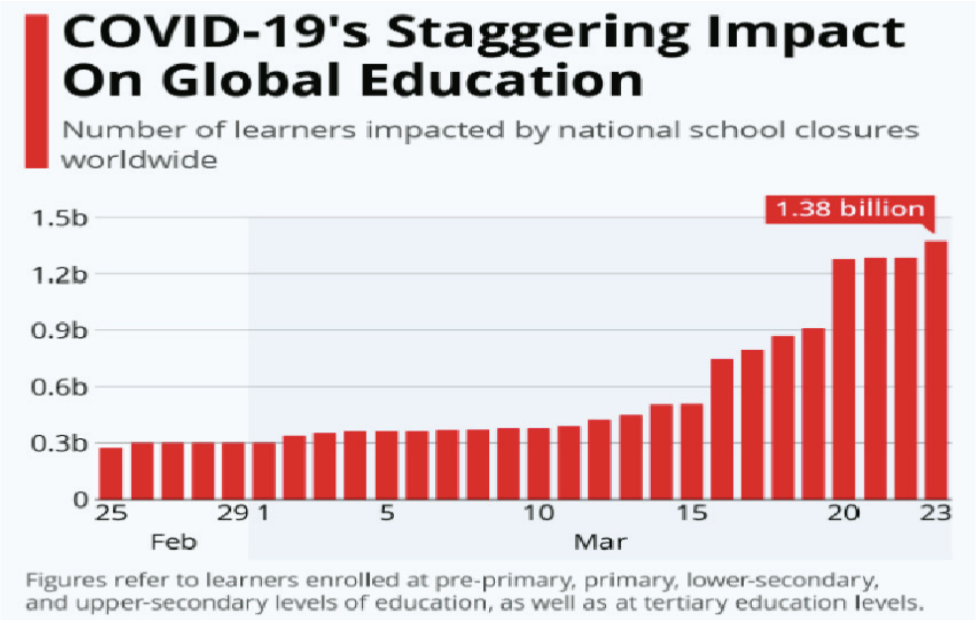
Source: (United Nations, 2020)

Thus an 18% of hike in the financing gap is expected as a result of the impact of the Covid over the education costing projections. Further, the pandemic is also expected to slow down the progress of accomplishing sustainability in education with increased unit cost to be involved in the education.

1.2 Closures and Disruption in Education: The Lockdown Response

Increasing interconnectedness across the world in turn multiplies the risks faced by people across borders. The impact of Covid – 19 is not restricted to borders, instead it has affected people negatively irrelevant to the location, nationality, gender, age or their income. But then, the consequences of Covid - 19 has not been the same, as it has hit several industries across the globe including the education sector (Singha, 2020). It is of no doubt that the Covid - 19 has shed out a greater number of inequalities as well as inadequacies for the education industry – as these range from access to broadband internet services and computers that are essential for uninterrupted learning.

Chart-2 showing COVID-19's impact on global education

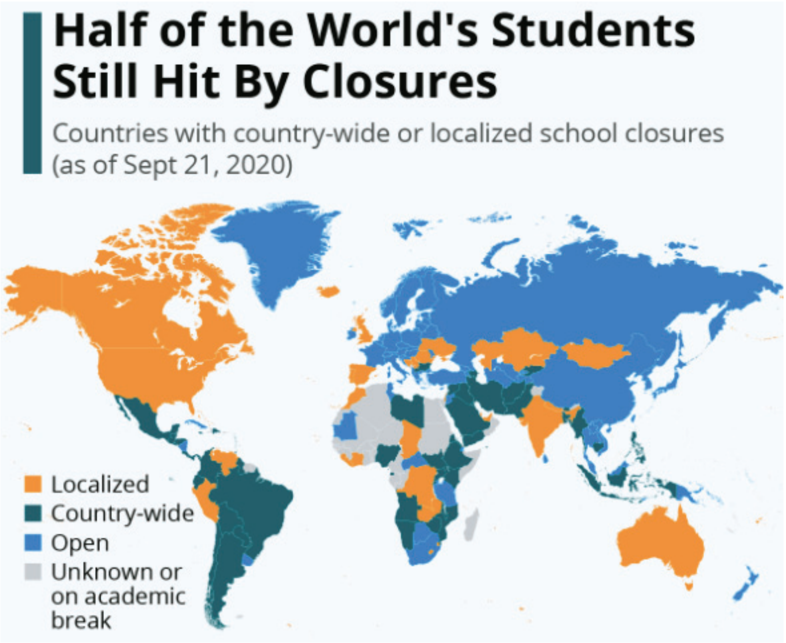


Source: (statista, 2020)

The insights offered by UNESCO as of March 2020 revealed that more than 1.38 billion learners across the globe were not in position to either attend their university / school. The total population also comprises the students who have enrolled across pre – primary, primary, lower and upper secondary grades. A whooping sum of 1,379,344,914 which almost contributes to about 80% of the total global learning population are not allowed to enter their educational institutions.

The peak of the pandemic has been during April where about 1.6 billion students lost access to education which contributed to 90% of global learning population. September 2020 data from UNESCO reveals that a population of 48.6% percentage of learners are still not being able to make it back to school which emphasizes the lack of readiness of educational institutions prior the pandemic has hit them (Singha, 2020).

Chart-3 showing school closures



Source: (McCarthy, 2020)

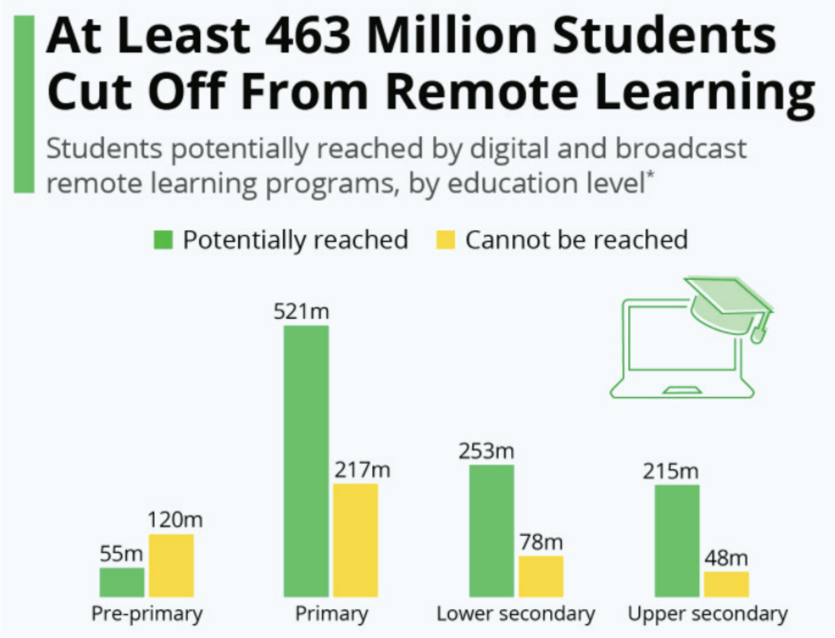
Lockdowns has been the most common response of the countries towards Covid - 19 which in turn has highly interrupted the classroom delivery methods. Even though, the education sector has attempted to address continuity in the learning the students have been pushed to rely highly on source of remote learning namely internet, televisions etc. On the other hands, teachers have also been exposed to inclusion of new pedagogical approaches in their instructional design and teaching interventions in which they have not been trained prior. On the whole, learners who did not have access to the digital learning tools such as broadband internet and computers / tablets have been at high risk of falling behind (Singha, 2020).

1.3 In Equality in Learning:

In the act of mitigating the spread of the Covid - 19 virus most of the countries has imposed lockdowns which has in turn affect the golden hours of classroom instructional delivery to students. The closure of schools initiated across china during 16 February 2020 which was followed by many other countries along with the spread of the virus (Schleicher, 2020).

Amidst the increasing rage of the Pandemic, most of the students are returning from the summer break, there has been increasing discussions on whether reinitiating the classroom delivery methods will be a safe measure. Even though, there has been increased limitations of the remote learning, obviously it does not outweigh the risk of involving students in poor ventilated classrooms during classroom learning methods (Charak, 2020). It is evident that developed nations such as United States rely highly on the remote learning, it is equally important to acknowledge that not all nations across the globe enjoy the privilege of accessing remote learning. The data from UNICEF depicts that, more than 460 million students will not be in a position to take up remote learning merely because they do not have necessary infrastructure or access (Vishwakarma, 2020). This sums up to 31% of the total population in the pre-primary and upper secondary grades as a result of poor policies, absence of digital learning aids to receive learning instructions. Of all the segment of the learners the youngest segment will be the most hit as a result of current switch to remote learning adopted by schools and colleges as a response to Covid.

Chart-4 showing the status of remote learning



Source: (Richter, 2020)

1.4 The international student perspective: Declining enrolments

Of all the segment of learners, the international students where those who got hit first, they had complications on whether to return to their origin or to extend their stay with the host nation where they pursued their courses. The Covid - 19 has influenced the continuity of learning for the international students to great extent. Both the safety as well as the legal status of the international learners are under threat now (Vishwakarma, 2020). Most of the students perceive that remote learning is not the best alternative to experience overseas education. Even though the higher education students where already been offered with resource for online learning (this has not been the case everywhere) there has been an alarming complication across facilitators and teachers in delivering online learning based on new instructional designs (Vishwakarma, 2020).

The access that international students had in form of networking at foreign job market as well as networking got hit. Also, there has been a decline in new enrolment of international students which in turn has affected the funding methodologies being adopted by higher education institutions which heavily relied on the tuition fees from international students. The increased resistance of the new enrolments has been a result of students resisting to invest huge amount of tuition fees to consume online content and miss out the true experience that international learning may offer. Most of the international students were driven by their desire to meet new people, collaborate with researchers across the globe which is under threat now. This in turn has pushed certain segment of learners to refund the tuition fees for which certain institutions have reacted with partial repayments.

The response taken by government, schools and institutions in tacking the spread of Covid has thus impacted the global education in forms of reduced classroom delivery hours, decreased international enrolment of students and most importantly inequality in education as a result of shift to remote learning. Hence it is important to Rediscover, redesign and reinvent methods and approach to education failing which there will be inefficient and equal learning transfer for the students across the globe.

2. EXISTING TRENDS AND CURRENT APPROACH TO GLOBAL EDUCATION DURING COVID 19

Strategies adopted by leading Educational firms across globe

With the continued stress of having to evolve and offer the best of possibilities to reach students, the leading educational institutions deployed their own strategy to reach students with the assistance of technology and infrastructure. The biggest challenge was to identify and make use of the available opportunities in a shorter duration of time.

Some of the most easily identified and accessible mediums include:

Table : 1

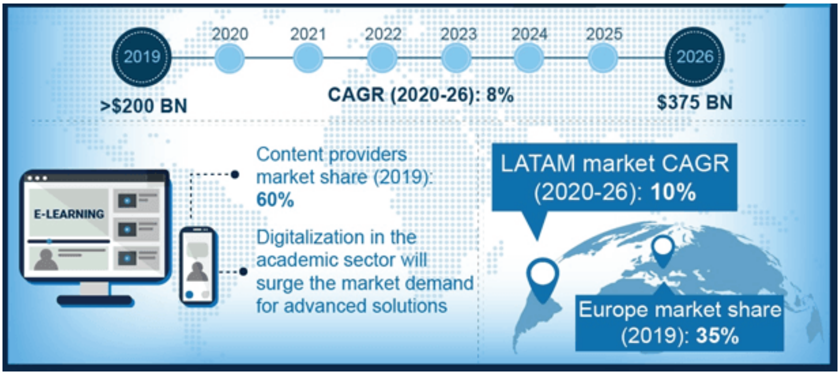
Remote Learning Medium	Learning Support and Outcomes
Radio and Television	Content broadcast over the air to students Capability to reach majority of the student population One-way interaction demanding more exploration from the student perspective
Online Classroom Sessions	Support in the form of digital learning devices A Dynamic Face to Face Interaction and assessment Access to a wider portfolio of subject matter content Real Time Virtual Meeting and Classroom sessions
Instructional Package Delivery	More of a formalized content delivery A self-prescriptive learning content in the form of printouts on textbooks and worksheets delivered by educational firms

Source: (Schleicher, 2020)

Online Learning:

The online learning trends took up ever since the ease of technology usage and accessibility came in place. Here the accessibility also refers to the affordability of the technology and its focus of being available to everyone. The real E-learning trends kicked off through various streams like Multimedia Learning, Technology Enabled Learning (TEL), Computer Based Instruction and Training followed by the Web Learning and Virtual Learning (Naresh, 2015).

Chart-5 showing the status of online learning



Source: (Gankar, 2020)

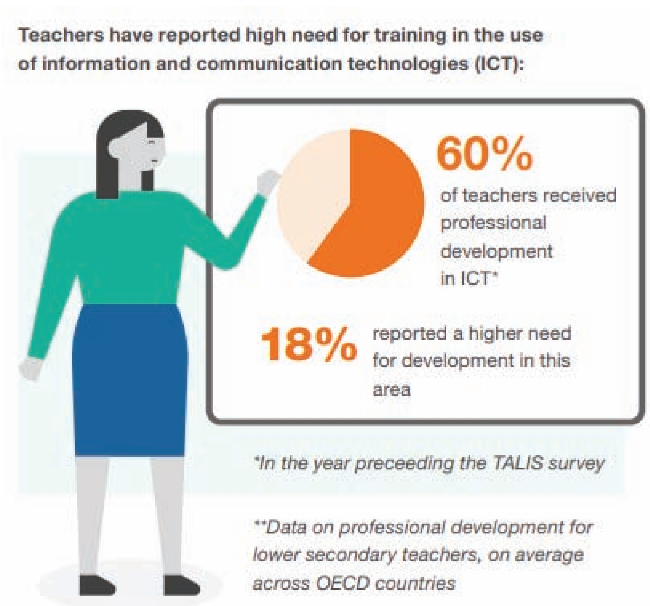
The market is expected to grow to a value worth 375 billion USD by 2026 and this is down to the fact that the pandemic Covid19 has made the growth of the industry from a luxury perspective to a basic necessity perspective. It could be observed that the industry was far slower towards its growth until the end of 2019, but the number of basic online education tools and hardware sales have flocked by three-fold ever then.

2.1 Challenges influencing the current trends in Global Education:

2.1.1 Importance of Skills amongst facilitators:

With the growing importance of skills, it is not just the demand over the subject matter that is critically getting important among the facilitators. It is also the knowledge on digital tools and skills that becoming critically important to communicate effectively through the medium to the students. It is estimated that close to 60% of the teachers have undergone trainings across digital platforms for preparedness over the remote learning needs.

Chart-6 showing the status of training in ICT



Source: (Schleicher, 2020)

But the data of 60% is more relatable to the developed nations considering that majority of the other developing nations could not deploy the faculties to the relatable digital training needs. The chart depicts a 50% gap in lack of training to faculties over their remote training needs across Asia, Middle East and Europe.

In the meantime, MNC's like Google is committed to be involved in developing in collaboration with 'Million Sparks Foundation' a platform which aims at improvising the skillset of the teachers. The goal of the collaboration is to aim at the preparedness of the faculties across the globe to align to the future trends and needs of the future education. It not just aims at effective learning approach training but also give keep the faculties up to date on the latest of trends being offered in the 'Learning Management Systems' platform for effective remote communication of the subjects involved. The combined effort was fruitful to the development of the application 'ChalkLit' which supports the teachers even for skill development even across low bandwidth and offline environments (Google for Education, 2020). With the entry of several market players across the different platforms, it is getting critically important to improve the skills of the faculties involved for a unified education.

2.1.2 Lack of IT Infrastructure:

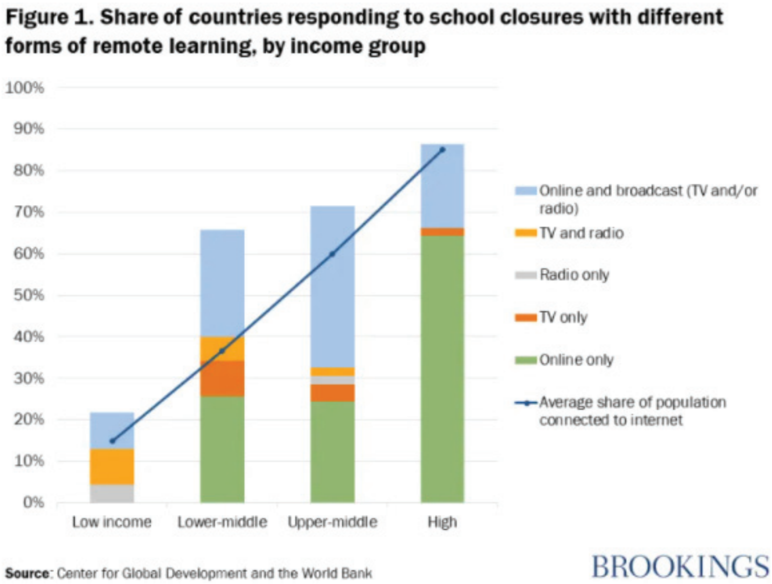
With the pandemic bringing a wrap to the legacy education system overnight has not been overseen by many experts. But the trend has made it clear with the real time problems that have been exposed by several educational institutions over the problems on account of several factors. These factors include high speed connectivity not just across schools but to the students as well, access to low cost high quality online learning devices, Data security as well as high quality content for classroom sessions. With the demands of the current Generation Z population across the globe almost 60% of them like to collaborate knowledge sharing though technology and 93% feeling confident on using technology for education. So, it is high time to expect for improvements in the educational infrastructure to satisfy the demands of the current population.

2.1.3 Accessibility of Services:

The learning opportunities of the learners depend upon the level of accessibility of the services to the population. Considering the level of infrastructure at the facilities of the educational institutions and the basic facilities at the common preliminary educational trusts have been made to be questioned as they have proved not to be useful or accessible to the public which demands quality education. It is been pushed to deciding factors like the level of accessibility of products, services and tools which are currently serving the common public to make education simpler and closer to reality (Charak, 2020).

The accessibility of the services to the population of a nation determine, its level of wealth and the ability to cascade information and knowledge even to the remote locations of a country across tier 3 cities. With close to 1.5 billion learners across the globe as per UNESCO's report which accounts to 91% of the enrolled learners, different countries are responding to the different forms of remote learning (Oced, 2020). Considering the importance that the pandemic Covid19 has thrown at the aspiring learners across the globe, it is evident that the fair share of accessibility for the low-income nations is still restricted to TV and Radio. While the accessibility of the high-income countries has grown phenomenal with almost accessibility of remote learning services to 90% of the population (Oced, 2020).

Chart-7 showing the status of accessibility of services



Source: (Vegas, 2020)

The level of internet access and its services to majority of the population is still limited in majority of the high-income countries. This is down to influencers like inequality in terms of income and with provisional importance given by the respective governments to the upper sections of the population. It is estimated that on an average close to only 36% and 60% of the population have access to internet facilities across the upper and lower middle class as well as high income countries respectively (United Nations, 2020). This could be only addressed through interventions of national interest of the government's involved or through the international dominant players who could make it accessible to the general public.

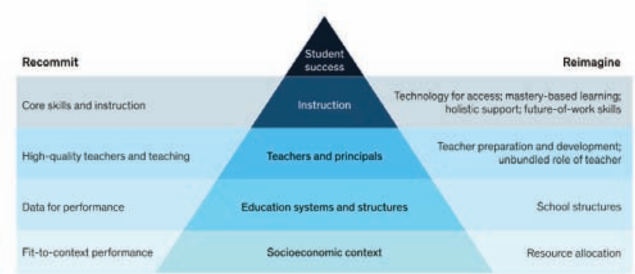
3. FRAMEWORKS TO REDISCOVER, REDESIGN AND REINVENT GLOBAL EDUCATION

In bringing back the efficient learning delivery for schools and universities the role of technology will be inevitable, but it is evident that the role of a teacher could never be replaced. Thus, the rediscovering, redesign and re invention of the frameworks to global education post Covid will call for addressing multiple dimensions involved in the Education eco system. The pandemic has in turn pushed and emphasized academicians, researchers, top management of the educational institutions to adopt new ways of learning there by enhancing innovation beyond the traditional classroom. The fact that Google classrooms has doubled in terms of enrolments, and Khan Academy has also witnessed hefty number of parent registrations showcases the readiness that parents, students have towards migrating to a new tomorrow post Covid (Vishwakarma, 2020). But then the frameworks for tomorrow must take into consideration the challenge of inequalities in learning environment such as access to learning devices, high quality learning transfer and internet. Thus, the time to start reimagining education is right now and it cannot be delayed any further.

3.1 Reimagine the education without changing the basics:

In deriving a model for tomorrow's education, it is of crucial importance to ensure that the basics of education is not forgotten. The basic elements of the education range from core skills / instructions, highly competent teachers and teaching methods, proper performance assessment metrics, customized delivery methods based on students' performance (Budge, 2020). The entire framework for rediscovering the education for tomorrow must be student centric. The following pyramid offers insight on the important components of education irrelevant to the grade and nature of the course. These include instructions, teachers and principals, education system as well as structures and the impact on the socioeconomic dimension (Yoquinto, 2020).

Chart-8 showing the global education framework



Source: (Jake Bryant, Emma Dorn, Stephen Hall, and Frédéric Panier Open interactive popup, 2020)

A. Focus on Core skills enrichment:

Unless the students are offered intense and effective training on the numerical and literacy context it is impossible to meet the basic standards of education. The insights from UNESCO reveals that about 60% of the children population in the world are not able to meet the basic standards of education. So the state of instructional design and teaching materials used for both in person or remote learning must be more effective failing which the effectiveness of the entire pyramid shall go down (Budge, 2020).

B. Highly competent teachers and teaching methods:

Irrelevant to the nature of teaching methods opted by the educational institutions the current challenge faced by the teachers are lack of ICT skills along with that of poor understanding over E learning methodologies. The fact that the schools / universities have failed to train their workforce on capitalizing E learning as means of teaching their students (United Nations, 2020). Thus, it is understood that technology could be an active enabler of education in the upcoming years, but there is no way it could replace a teacher who can exert high level of ICT and Content Authoring skills (Yoquinto, 2020). The road ahead for the top management of the schools and universities shall be in investing hefty of resources in recruiting, training and inducting the workforce on modern content authoring tools essential for formulation of effective e learning content delivery to the students (Charak, 2020).

The most important factor that tends to influence the delivery of the E Learning is that of the deployment of the content developed. The teachers are expected to gain proficiency in an array of learning management system that the educational institution will be implementing in place. These could range from use of in house developed E Learning Management platforms or renowned LMS such as Moodle or Open Edx (Vishwakarma, 2020). Lack of proficiency in Learning management platform is one of the most important limitation that is influencing the capability of teachers to aid successful learning transfer.

C. Proper performance assessment metrics:

Harnessing data shall be the need of the hour in redesigning the education post Covid. Since the nature of teaching methods and delivery methods will take a blended learning it is of crucial importance for the facilitators in form of management of schools and institutions to deploy proper data capturing mechanisms over teaching and learning consumption point of contacts (Yoquinto, 2020). The grading methodologies, nature of assessments will take a revamp as it is essential to understand learner's retention on E learning platforms. But then data must be used in a fair manner as to support, aid and improve instructional designs and not for punishment purposes (Budge, 2020).

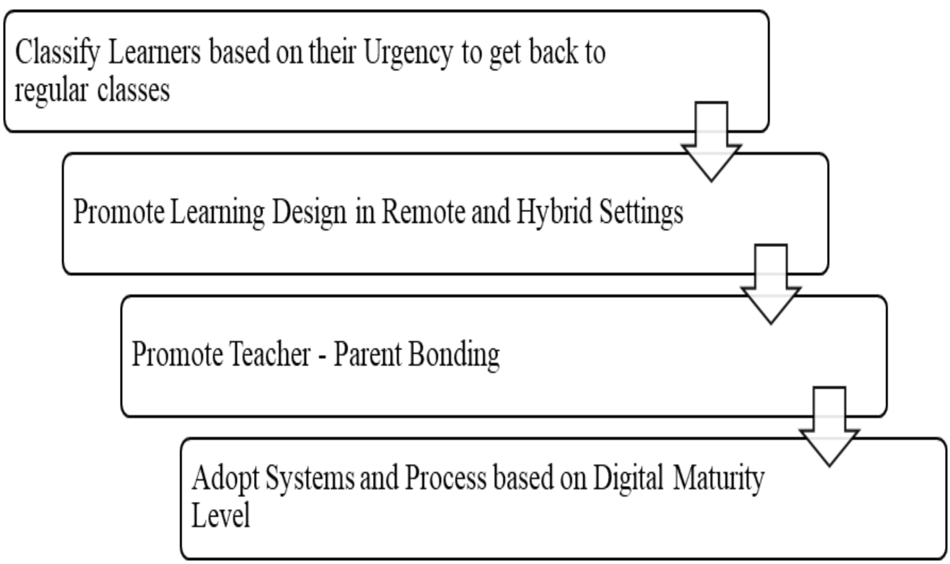
D. Customized learning methods based on performance levels of students:

Understanding student performance will play a vital role in deriving customized learning methods to the learners. The grading for students reflecting poor to fair to good to that of excellent will essentially require a different mix of learning pedagogies post Covid. The inclusion of TV led learning, Radio based Learning apart from E learning is essential so as to address the increased digital divide prevailing in place (mckinsey, 2020).

3.2 A Hybrid Model: The need of the hour

Since there is limited clarity on whether the classroom instructions could resume in full-fledged manner it is advisable that educational institutes focus on developing and implementing a hybrid model that combines both offline and online learning for the students. Across this model, yet again the basic focus is to get the protocols right (Woessmann, 2016). The objective is to ensure that standard operating procedures are followed in order to reduce transmission rates there by saving lives of people irrelevant to the framework that is being adopted (Yoquinto, 2020).

Chart-9 showing the hybrid model



Source: Created by the Author 2020

A. Classify Learners based on the urgency to get back to traditional class:

The nature of learning pedagogy has always remained customized. The one size fits all approach is not true for fostering effective learning and hence the act of rediscovering and realigning the educational framework will call for critical segmentation of the learners based on their urgency to get back to classroom learning transfer (Oced, 2020). The priority is to focus the resource extensively on segments that has been exposed to the greatest challenges. These may comprise the economic limitations, disabilities, unstable environment to learn respectively. Lack of emotional support, technology support, side by side assistance to make use of remote learning are some other factors influencing the capability of the learners. Hence creating physical environment to resume learning back will again call for critical analysis of the learners based on their urgency to learning (Miller, 2020). The objective here is to ensure that these learners are offered real time classroom sessions with no comprises on adherence to standard operating procedures laid to reduce the transmission of Covid - 19. The following table will offer insights on the classification of learners based on their segment.

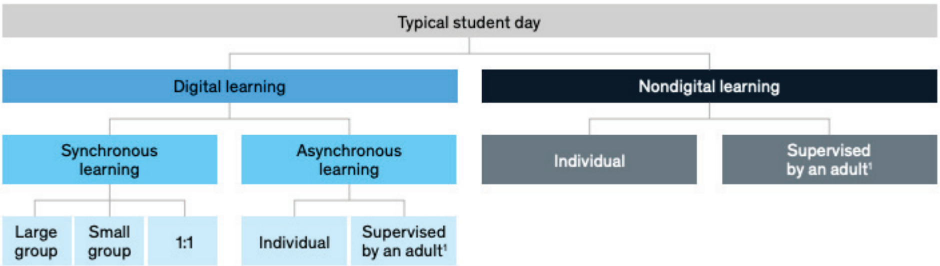
Table : 2

Segment of Learners	Degree of Urgency to Return to classroom	Degree of need to stay Remote
Students who are homeless, without access to broadband internet and learning devices, learners who might be of risk from forms of domestic violence.	Very High	Very Low
Children's of people who are essential workers, health care associates, dual income parents.	High	Low
Students / Learners who are entering into newer phase in their education, students who are in the verge of completing their courses (final year students)	Medium	Low
General students' category	Medium	Medium
Students whose parent consider their children's safety to be utmost important over other factors	Low	High
Students who have underlying health conditions, students who are often exposed to living with elderly people in their family.	Very Low	Very High

B. Promoting the learning design in both remote as well hybrid settings

When the pandemic hit the education sector, there was very limited options and time which pushed educators to stick completely on online teaching. But now given the time for developing new frameworks the scope for designing learning solutions for both hybrid as well as remote settings is high. Understanding the age group of students and thereby minimizing the screen times for kids to that of increasing screen times for adults will be an optimal solution. The following framework tree diagram will offer insight on the nature of teaching solutions for both remote as well as hybrid learning scenarios (Daniels, 2020).

Chart-10 showing the framework tree diagram



Source: (mckinsey, 2020)

C. Promote Teacher - Parent Bonding

The most important trend that has emerged in the education sector post Covid is that of the increased interactions that parents have over their kids' education. Of course, a proportion of parents have been telecommuting and they have also been assisting their kids on education. Thus, extended support from parents to students will remain crucial in coming months / years to enhance the effective learning plans formulated by the educational institutions (Woessmann, 2016).

D. Adopt Systems and Process based on Digital Competence Level

Most of the schools and the educational institutions does lack their capability in terms of ICT infrastructure essential to promote effective learning transfer. Hence using a mix of tools to encourage the Remote learning will be effective means. It is evident that more than 30 countries across the globe make use of Radio to enhance remote learning, wherein twice of that population are accessing the televisions (Oced, 2020). Other tools comprise the use of Mass media, paper hand-outs respectively. Hence the decision to make use of the proportion of resources for remote learning can be synchronized with that of the level of technology maturity exposed by the teachers as well as the learners as discussed in the table below:

Table : 3

Nil technical Competence	Low levels of Technical Competence	Medium Levels of Technical Competence	High Levels of Technical competence
Use of printed materials as learning resources.	Mass coverage of learning materials with the help of Televisions and Radio programs.	The teaching materials could be shared across an array of platforms ranging from videos, Learning Management platforms.	Use of Simulation training, VR based teaching, Learning Management platforms to share interactive lessons and Assessments.
Promote teacher student interaction in safe manner with use of physical notes only.	The interaction of student and teacher tends to happen with use of audio phone calls.	The interaction of student and teacher tends to happen with use of Zoom or online video conferencing.	The interaction between student and teacher could be in virtual class format, chat sessions, emails, blogging, and back end dashboard assessments.

3.3 Sustainable Policy refinements

3.3.1 The Road ahead:

The Road ahead for Global education sector is challenging, but then with ample mitigation measures and introduction of new flexible policies the challenges posed by the Covid - 19 could be addressed. Ensuring safety of the teachers, administrators, students and the parents is the need of the hour. Until a permanent solution to the Covid - 19 is attained through vaccine it is the responsibility of the Educational bodies to be flexible and at same time be authoritative on implementing standard operating procedures governing the public health measures (Charak, 2020).

3.3.2 Address the financing for education:

It is true that the pandemic has in turn pushed the global economy in to a recession that shall take more time to revive. The lower and the middle income group nations are hit the hardest and hence the role of national stimulus package under Covid 19 must also focus on enhancing the state of educational interventions (mckinsey, 2020). The educational ministries across these countries must get in to a mutual understanding with the ministry of finance there by implementing fast track stimulus package for the revival of the global education scenario.

3.3.3 Focus on Equity and inclusion of Learners:

The pre - Covid scenario was highly emphasizing the need for right to education and this shall continue to get implemented in the coming years (Kitch, 2020). The new policies must thus focus on inclusion of the marginalized groups there by ensuring that they receive the utmost quality and long-term education without fail. The classification on the learners based on the state of emergency is essential so as to ensure that their education does not get worsened further. The most important component of the global education under threat is that of the continuation of health and nutrition interventions that comprises nutritional food and sanitization for the students especially in underdeveloped countries. Hence alignment of effective incentives is essential to nurture enrolments and attendance of the students.

3.3.4 Risk Management at levels:

One area that most of the educational institutions and responsible bodies have failed is in formulating and implementing disaster preparedness across the institutions. Apart from the option of moving to online classes during Covid, either the educational bodies or the institutions had no other contingency plans in place (Budge, 2020). Thus, standardization of the risk management policies across addressing health risk to students, teachers and other staffs is mandatory in order to avoid any similar pandemic situation soon. Thus, a detailed risk management assessment and mitigation plan must be in place to promote sustained effective educational continuity.

3.3.5 Promote leadership as well as co-ordination:

In the absence of the effective leadership traits in the education sector the implementation of risk management plans will get duplicated leading to chaos. In promoting the resilience in education, the leadership at the ministry of education needs to be more vibrant. Also there need to exist two-way communication and community inclusion on enhancing the efficiency of learning transfer in coming years (Kitch, 2020).

3.3.6 Refine the Right to Education by inclusion of Connectivity attribute

The role of technology has been of sheer importance in promoting the learning continuity, given the increased number of digital solutions to nurture learning transfer, the question of equity and inclusion in offering increased connectivity to all learners is yet to be addressed (Tlili, 2020). In promoting quality education both the teachers as well as the learners must be offered access to free and open source technologies failing which the right to education could not be accomplished. The role of government, leading technology firms in supporting digitalized resources and contents for the needy will be crucial in coming years (Tlili, 2020).

3.4 Role of Market Players to address Inequality:

With the outset of the remote learning and advanced 5G broadband accessibility to majority of the population globally, it is expected that Facebook, Google as well as Apple would see a growth in the range of 16 billion USD. The role of these players is seen a major pathway for mass communization of accessible features which were deemed to be more expensive (Boorstin, 2019). Google is home to education for close to 30 million primary and secondary school learners through their easy and accessible Google education platforms which include Gmail and Docs across the United States (Singer, 2017). It's only mass or huge players like Google who could initiate to capture and address the problems by a bigger margin. Google recently deployed the strategy 'Philanthropy' which is a 50 million USD initiative to bring in players to identify the issues in the education platforms as a part of the non-profit initiative (Google - Education Gap, 2019). The strategy aimed at capturing the backlogs or grey areas of the poor students in their learning areas to support them and provide them the accessibility to learn their portfolio of subjects. Google is also looking at an initiative 'Can't Wait to learn', which helps the poor and displaced children from being disconnected from their studies especially during situations of famine so as to align them to the curriculum.

At the same point Microsoft and Apple are not left behind. Their continuous strategy to mass market their products like 'Microsoft Platform Training', 'Minecraft EDU', 'Classroom App' as well as VR solutions in the form of 'Oculus Rift' aim at making these a mass market features, and it has given way for smaller players to explore similar lines. This is indirectly adding value to the unexplored possibility of making it simpler and a segment which benefits the learning experience to a different level.

4. CONCLUSION

The Road Ahead for the global education sector will focus on reimagining education there by inclusion of positive reinforcement in teaching methods and learning styles. The future interventions must immediately be able to address three important objectives. These includes the ability review the losses incurred in learning during the Covid Phase, be able to bring back students who are in the stage of completely dropping out of their education, place more policies that nurtures the emotional and social welfare of the entire education eco system comprising teachers students and parents.

5. REFERENCES

Budge, K. M. (2020). Turning High-Poverty Schools Into High-Performing Schools. ASCD.

Charak, K. S. (2020). Covid-19: The Preventive Protocol for Educational Institutions. EduPedia Publications Pvt. Ltd.

Daniels, D. (2020). Distance Learning During the Covid-19 School Closures. Indy Pub.

Jake Bryant, Emma Dorn, Stephen Hall, and Frédéric Panier Open interactive popup. (2020, August 12). https://www.mckinsey.com/industries/public-and-social-sector/our-insights/reimagining-a-more-equitable-and-resilient-k-12-education-system. Retrieved from https://www.mckinsey.com/industries/public-and-social-sector/our-insights/reimagining-a-more-equitable-and-resilient-k-12-education-system: https://www.mckinsey.com/industries/public-and-social-sector/our-insights/reimagining-a-more-equitable-and-resilient-k-12-education-system

Kitch, A. (2020). Resources Pertaining to K-12 Education in Response to COVID-19. Colorado Legislative Council.

McCarthy, N. (2020, September 22). https://www.statista.com/chart/22484/coronavirus-school-closures-worldwide/. Retrieved from https://www.statista.com/chart/22484/coronavirus-school-closures-worldwide/: https://www.statista.com/chart/22484/coronavirus-school-closures-worldwide/

mckinsey. (2020, September 8). https://www.mckinsey.com/industries/public-and-social-sector/our-insights/reimagining-a-more-equitable-and-resilient-k-12-education-system. Retrieved from https://www.mckinsey.com/industries/public-and-social-sector/our-insights/reimagining-a-more-equitable-and-resilient-k-12-education-system: https://www.mckinsey.com/industries/public-and-social-sector/our-insights/reimagining-a-more-equitable-and-resilient-k-12-education-system

Miller, V. M. (2020). 21st Century Education Through The Lens of COVID-19. Independently Published.

Oced. (2020). Education at a Glance 2020: OECD Indicators. OCed.

Richter, F. (2020, September 3). https://www.statista.com/chart/22799/number-of-children-with-and-without-access-to-remote-learning-programs/. Retrieved from https://www.statista.com/chart/22799/number-of-children-with-and-without-access-to-remote-learning-programs/: https://www.statista.com/chart/22799/number-of-children-with-and-without-access-to-remote-learning-programs/

Schleicher, A. (2020, August 2). https://www.oecd.org/education/the-impact-of-covid-19-on-education-insights-education-at-a-glance-2020.pdf. Retrieved from https://www.oecd.org/education/the-impact-of-covid-19-on-education-insights-education-at-a-glance-2020.pdf: https://www.oecd.org/education/the-impact-of-covid-19-on-education-insights-education-at-a-glance-2020.pdf

Singha, S. (2020). Impact of COVID-19 on Economy, Business, Education and Social Life. KDP Print US.

statista. (2020, March 24). https://www.statista.com/chart/21224/learners-impacted-by-national-school-closures/. Retrieved from https://www.statista.com/chart/21224/learners-impacted-by-national-school-closures/: https://www.statista.com/chart/21224/learners-impacted-by-national-school-closures/

Tlili, A. (2020). Radical Solutions for Education in a Crisis Context. Springer Singapore.

United Nations. (2020, August 1). Education during COVID-19 and beyond. Retrieved from www.un.org: https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/08/sg_policy_brief_covid-19_and_education_august_2020.pdf

Vishwakarma, K. (2020). Changing Landscape of Higher Education : Post Covid-19. OrangeBooks Publication.

Woessmann, L. (2016). Handbook of the Economics of Education. ELSEVIER.

Yoquinto, L. (2020). The Science Transforming How We Learn. Hachette.

CHAPTER

14

Teaching how to learn and Learning how to teach in a Pandemic World

G. Ilankumaran, T. Mathi

Teaching how to learn and Learning how to teach in a Pandemic World

G. Ilankumaran, T. Mathi

ABSTRACT

The foundation of widespread education system today was built on Victorian era; although the concepts of progressive schools is under experiments here and there, yet to vouch completely by the global society. In millennia the invention of internet and technologies are changing social norms, corporate values and overall societal structures. With this evolution, the term e-learning, virtual learning etc., had begun to spring up since 1999. Within few years it had taken a better shape and captured the interest of many educators and pioneering institutions. While shifting to e- learning, it's impact & recognitions are the topics of debates of-late; yet COVID 19 forced a global experimentation of remote teaching and learning and had transformed the aspects of education completely. This outbreak put the world to travel on an uncharted territory where the impacts and challenges varies from continents to nations due to financial and resources disparities amongst them. Measuring the challenges or impacts of e-learning on one global scale is illogical as the nature of challenges, governance and overall eco system varies from one another. This paper intends to assess the response of the K-12 education institutions in gulf countries to the pandemics and foresee the future of e-learning opportunities and challenges.

Key words

E-learning, Blended learning, Education for new era, Pandemic pedagogy

1. INTRODUCTION

Education is the only linchpin that could cater the progress of global economy and development. When society lacks access to education, transmitting poverty and marginalization from generation to generation is certain. The society of economically deprived countries are already having enormous barriers in providing access to education due to various societal challenges such as War and conflicts, child marriage, child labor, unpaid teachers, cost of educational supplies, poverty, outbreak of epidemics ...etc and the list goes on which leads the children to drop out from their schooling. While combating all these challenges on hand, expecting such society to continue education with fullest success during the pandemics through e-learning or online is mere a fantasy. This does not mean that all is well in education industry amongst developed nations. Although access to education is well achieved with their capacity, their set of challenges are extreme jeopardy such as gun homicides, non-fatal assaults, mass shooting, lack of tolerance and acceptance, lack of diversity, lack of parents' involvements, achievement gaps, mental health, cyber safety etc., To the top of all these challenges the teachers in developed countries had pampered with comfort and flexible approach for long and such sophistication to an extent failed to prepare them to offer meaningful education in times of uncertainty. Luddite and untrained teachers were forced to adapt remote teaching and learning practices with no time which had only exacerbated the educational impact. Overall, the pandemics had clearly indicated the gaps and lacks in pedagogy as well as the resources that are needed for the uncertain future.

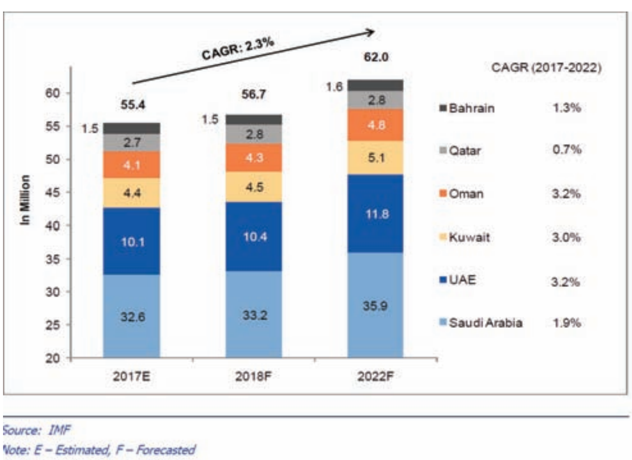
When it comes to the Middle East, The GCC countries were managed to respond efficiently and mobilized their classroom to virtual learning platforms overnight and made this transition agile and flawless in comparison to the world. This applaudable efforts and their readiness might not be possible without their advanced infrastructure like availability of internet to all, established educational institutions and most importantly steadfast economies accrued by oil wealth. Although overall response was commendable there are still few shortcomings and inequity due to their crisis management capacities and huge performance gaps between public and private sectors. Some of government schools were lacking the needed technological platform to support the pedagogy. For example, Ministry of education Kuwait had to suspend the academic year for their public schools while their private schools continued immaculately.

On the contrary, in Qatar both public and private sectors had moved forward with digital learning practices with almost equal capacities. Despite being all practical difficulties, the gulf states overall in comparison with the world, had the potential to achieve to an extent of their disruptive education goals and turned down this pandemic as an opportunity to redefine the education for new era. As we see each continent on earth had progressed with different capacities with their given economy & infrastructure and based on sensitivity driven by the lethality and mortality rate of COVID19. Thus, it's impossible to measure the impact of COVID 19 on Education through a global scale. This paper shall explore the pragmatic challenges and evolved opportunities by the pandemic in gulf countries only.

2. GULF COUNTRIES DEMOGRAPHY AND EDUCATION

COVID has put the educational world to experience a gigantic crisis which caused more than 1.6billion children and youth out of school in 161 countries. Pandemic driven health threat pushed a sudden shift to remote teaching and learning experience with added caretaking responsibilities at home, and the situation had created an immense pressure both to parents and teachers' community. However, crisis had stimulated innovation within education sector. Remote learning solutions and practices were developed by institutions and stakeholders swiftly to ensure continuity of education. GCC region has a steady growth in population in recent decades witnessing huge influx of expatriates along with growth of national population; This shall be due to the great job opportunities with tax free income and life standards, health insurance etc., The total population of GCC had grown from 48.1 million (2012) to 55.4 million (2017). Among which 33% of population is below the age of 23 years. Thus, education is one of the foremost focus by state governments based on demand with expected population to hit 62 million by 2022.

Exhibit 1: GCC Population forecast



Source: (Alpen Capital, GCC Education industry, 2018, p. 41).

With expected growth in (student) population, GCC countries were well prepared in past decades in building sustainable eco systems through their public-private partnership in education. Such readiness and developed infrastructure through various statewide planned educational reforms had indeed built a strong capacity to these countries to face the challenges driven by pandemic. There were continuous efforts and government undertaken initiatives were established to support integration of technologies into education systems and modernizing education through smart learning programs. In-short GCC states were keen in aligning the pedagogy to top global standards to enhance the capacities of GCC nationals and to meet the expectations of their diversified residents. With their public-private partnership majority of the students were given opportunities to learn through Artificial intelligence (AI), Augmented Reality (AI), virtual reality (VR) etc., where such facilities are provided not only in schools but also in museums, public parks, theme parks, National libraries etc., Such great and careful efforts of the governments made the teaching and delivery enhanced with technology where the present age students became tech savvy and a prepared space-age citizen.

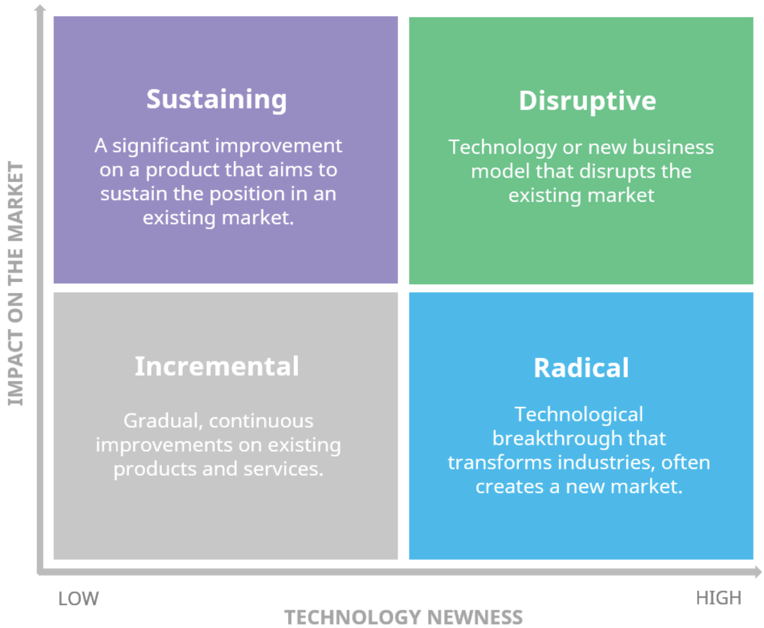
3. REVIEW OF LITERATURE

Disruptive innovation & technology in Education

Success breeds complacency. Complacency breeds failure. Only the paranoid survives (Grove, Andrew S 1996).

As we live in the age of technology and innovation, new solutions are being built over the existing obsolete practices widely. There is a new bigger wave of innovation through technology that affects or influences every chosen industry of the global society and education has no exception too. This reality shall make a huge shift on all prominent players on the market and their power, position and share of wealth in society shall easily being to be replaced by disruption. Pandemic positioned planet earth to understand how disruption works in real world and mandated every other organization either be a disruptor or disrupted. In the field of education, disruptive technologies do not have to emerge to make the existing system an obsolete rather it shall boost the accessibility to gross roots which is an ever-longing goal. For example, if personalized learning is the goal, online learning is the tool where technology made it possible. In general, when new technologies emerge they are usually accessible only to people with wealth and expertise. But in education, disruptive innovation is the force that democratizes those technologies.

Exhibit 2: Disruptive Innovation -What is it and how does it work?



Source: (Kylliainen. J, 2019).

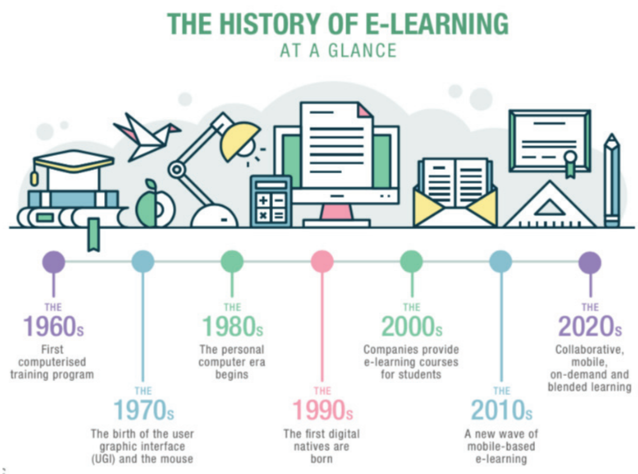
4. DISRUPTIVE EDUCATION & DISTANCE LEARNING

Distance learning /e-learning has become a swift choice to continue education during pandemics. Also, this comes with an advantage of flexibility, accessibility and offers wider range of resources. The disruption through education technology is not new rather evolved and had taken a shape over latest years and had perfectly utilized the present situation as an opportunity to close the gap between online education and bricks and mortar school. Another aspect of distance learning is that it stimulates students' independence and curiosity, collaborative work, critical thinking.

'Sometimes, a disruptive technology comes to dominate an existing market by either filling a role in a new market that the older technology could not fill … or by successively moving up-market through performance improvements until finally displacing the market incumbents' (Simonson, 2020). In earlier times, development of eLearning is connected to development of technology improvement and social infrastructure. New programs were created not only to teach, but also to allow the communicate which had boosted the communication channels between the teachers, students and parents. With the introduction of the computer and internet in the late 20th century, e-learning tools and delivery methods expanded. The first

MAC in the 1980's enabled individuals to have computers in their homes, making it easier for them to learn about subjects and develop certain skill sets. Then, in the following decade, virtual learning environments began to truly thrive, with people gaining access to a wealth of online information and e-learning opportunities. By the early 90s onwards there were schools and education centers had been set up that delivered courses online only, making the most of the internet and bringing education to people who wouldn't previously have been able to attend a school due to health, accessibility and other constraints. Technological advancements also helped educational establishments reduce the costs of distance learning, a saving that would also be passed on to the students – helping bring education to a wider audience.

Exhibit 3: The story of e-learning at a glance



Source: Iberdrola.com (2020).

5. AN IDEAL MODEL DURING PANDEMICS AND FOR 21ST CENTURY LEARNING

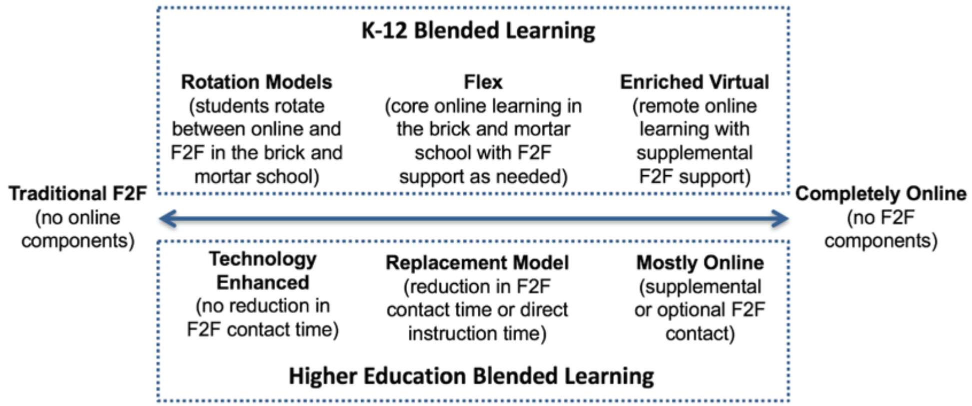
Pandemics broke out to the world by March 2020 and I'm writing this chapter by September 2020; While the schools in gulf had immediately moved to virtual classrooms by March which was commendable, as months pass by students were challenged with various issues such as lack of motivation, interest, adaptability, social interaction, resources, individual attention, feeling of isolation for students from small families, easier and less challenging assignments and the list goes on., Also there were sensitive issues spiked up than usual such as child abuse, domestic violence which results on post-traumatic stress disorder; in an ideal class room these situations are easily observed by the teachers & counselors and addressed immediately. But with online learning to identify such challenges became almost impossible. Thus, school were put in a situation to look for options that could help them to establish a new norm with strong protocols that is safer for the children and yet it could still address the students challenges while being cautious with ongoing spread of virus. Blended learning models turned to be an excellent solution to fit this situation where each institution has the liberty to tailor their model based on the nature and requirements of the student's population. Also it is to be noted that 'students who receives one on one tutoring vastly outperform the students of class room based instruction' Gupta (b.1947).

It's been for decades experts and researches claim students centered learning (personalized) is the golden standard of Education. But still implementing such standard had challenges being insurmountably expensive operational cost and often turned down by the institutions for that fact and continued with factory model of education that were preparing the students for industrial based economy. Despite pandemics, the demand of 21st century is to prepare students for knowledge-based economy and till date the global education system hadn't given enough thoughts and preparation. But today, technology had influenced so many parts of our lives and education is not overlooked too. Integration of innovation and technology and online learning is offering students a customized and personalized experience in education which had pave way for easy implementation of Blended learning. With the support of technology and tools students can learn anytime, anyplace, any path and any pace; which helps the educators to easily structure small groups and personalized learning to understand student's strength and area of focus.

Students achievements, sustainability and scalability are the major goals of blended learning. At the early years of this millennium schools had often misinterpreted the blended learning concepts into just equipping classrooms with devices and software. But, COVID 19 made the educators across the globe to self-educate the real goals, definition and practice of blended learning, as:

- Blended learning is a formal learning program in which student learns at least in-part through online learning, with some elements of student control over time, place, path and pace.
- The student learns at least in-part in a supervised brick-and-mortar location away from home
- Modalities along each student's learning path are connected to provide an integrated learning experience.

Exhibit 4: Spectrum of models of blended learning for K-12 and higher education



Source: (Graham et al., 2017, p. 7)

The Christensen institute researchers (Horn,Staker, 2017, p.55) had further strategized a helpful common taxonomy for blended learning practice as,

1. Rotation model
2. Flex model
3. Self-blended model
4. Enriched virtual model

Schools do not necessarily to rely on just one of these models; It can be either one of these or mixed components from each and design something unique to their specific choices.

6. RESEARCH METHODOLOGY

This study falls under qualitative paradigm and it is conceptual in nature where possible and successful scenarios are weighed through literature review and secondary data. The author being in the Policy Making Level of Education Sector, drawn inferences based on observation of parents and student behavior and also through unstructured interviews.

7. CHALLENGES AND CONSTRAINS OF E-LEARNING:

While sudden impose on public congregation had changed the complete eco system of educational institution, the teachers were stressed and learning to teach while teaching to learn. Educators and institutions were extremely overwhelmed while mapping the past, capturing the present and informing the future simultaneously. The global educational challenges during pandemic is mostly about the access and social interaction with peers, teachers resulting in interruption and gap on academic progress. But, in gulf countries with support of handy internet accessibility the communication with the stakeholders were continued digitally and no question of information inadequacy for learning. Both educators and institutional leaders ensured the resources and support availability to their maximum capacity. The students in gulf region were facing real challenges with lack of physical activities due to lockdown situation and extreme weather conditions, screen time, ergonomic challenges which lead to medical conditions and other health and wellbeing constraints.

8. OPPORTUNITIES

The new normal concepts in education with blended learning protocols that are defined during pandemic which has been tried and tested increasingly will lead the future of education. It's a great opportunity for educators to reposition themselves with highest reputation in society. Locally developed quality resources shall be curated widely and wisely to make it available for global students' community where the world of education coming together without boundaries for 21st century educational goals on planet earth.

9. RECOMMENDATIONS

A successful blended learning model should ideally optimize social interactions yet ensure a balanced learning atmosphere for the students through both synchronous and asynchronous pedagogy. Health and safety of children are paramount importance to the parents, thus in this challenging time parents are obliged to identify an appropriate solution that helps to meet both educational and socialization needs of growing children. Creating a "Pandemic pod" could be an ideal choice for parents. This shall be executed by partnering with 2 to 5 families (ideally neighbors with children of close age group) grouping together to create mini classrooms for their children where caregiving and educational support shall be taken care in rotation. Also engaging them in indoor & in-compound sports activities to maintain their physical health. This shall optimize the efforts of parents who go through challenges with time and availability while this helps tremendously for the children with their social skills like sharing, caring, resolving conflicts etc., Educators shall seize this opportunity to implement the new normal through best blended learning models for their schools which shall not only be helpful during pandemic but a futuristic solution that could help combating many other social challenges like global warming, accessibility to variety and quality programs, diversity etc., Institutions on the other hand can invest in developing programs to train and connect educators; It's time to ensure drafting policies to support the wellbeing of teachers who are overwhelmed and concerned with their work. Reallocating the budget of institutions to funding on giving access to key online platforms for students and teachers, allowing flexible payment plan for families that are in need. Reconsidering the timelines for national level exams and limiting the expectations from the students in terms of university admissions shall be some compassionate considerations.

10. CONCLUSIONS

It is for sure, in the new normal post pandemic practices of education, together educators will harness the innovation and technology to raise global students to their highest potential and prepare them for the sophisticated demand of 21st century knowledge-based economy and GCC would be one amongst the pioneering nations in the globe and shift its position in global education market. Distance learning followed by blended learning practices during COVID 19 had instilled greater educational practices. It had made stronger connections with parents' community where parents are more learned on educational practices and so involved; teachers are valued ever than before, and a beautiful design change happened in learning sphere which is (r)evolutionary. 'The Golden Ticket handed to us by the current situation is our best opportunity to dramatically change and improve the learning lives of our students—and it is an educator led revolution.' (Hattie, 2020).

11. REFERENCES

Alpen Capital (2018) GCC Education industry (3.1 p.41) from https://argaamplus.s3.amazonaws.com/9e55ad53-477f-48f0-b202-2c2f03d6a03d.pdf.

Christensen, Clayton M (1997) The Innovator's Dilemma: When new technologies cause great firms to fail, ISBN 978-1-4228-9601-1, Harvard Business Review Press, Boston, Massachusetts (2000).

Gillard D (2018) Education in England: A History, Retrieved September 24, 2019, from http://www.educationengland.org.uk/history.

Graham, C. R., Borup, J., Pulham, E., & Larsen, R. (2017). K-12 Blended Teaching

Readiness: Phase 1- Instrument Development. Lansing, MI: Michigan Virtual University. Retrieved from https://mvlri.org/research/publications/k-12-blended-teaching-readiness-instrumentdevelopment/

Grove (1996) Only the paranoid survives: how to exploit the crisis point that challenge every company -1st ed, ISBN 0-385-48382-1, New York, The library of congress (1996).

Gupta, O.P (b.1947) Higher Education in India Since Independence, ISBN 81-70222-447-0, New Delhi, University Grant commission,1993.

Hattie, J (2020), Educations golden ticket: Lessons learned from COVID-19, article from https://corwin-connect.com/2020/11/educations-golden-ticket-lessons-learned-from-covid-19

Horn, Michael B., Staker, Heather (2014) Blended Learning: Using disruptive innovation to improve schools

Iberdrola.com (2020). The story of e-learning, https://www.iberdrola.com/talent/online-classes-vs-traditional

Kylliainen. J (2019), Disruptive Innovation – what is it and how does it work? article from https://www.viima.com/blog/disruptive-innovation

Kalam, Abdul A.P.J (2017) Pathways to greatness: Coming together for a change, ISBN-10-9352643836, HarperCollins, 1sted.

Kolb, David. A. (1984) Experiential Learning: Experience as the Source of Learning and Development. Prentice-Hall Inc.,New Jersey

Kroper, M., Fay, D., Lindberg, T., & Meinel, C. (2010), Interrelations between Motivation, Creativity and Emotionsin Design Thinking Processes - An Empirical Study Based on Regulatory Focus Theory. In Proceedings of the 1stInternational Conference on Design Creativity ICDC 2010, Kobe, Japan.

Pulham,E., Graham, C.R (2018), comparing K-12 online and blended teaching competencies: a literature review, Journal of Distance Education vol 39,2018, Issue 3from https://doi.org/10.1080/01587919.2018.1476840

Worapongpat, N., & Choothong, R. (2020). Innovative Practices in Higher Education Administration. HUSO Journal of Humanities and Social Sciences, 4(1), 106-123. Retrieved from https://so06.tci-thaijo.org/index.php/husojournalpnru/article/view/245653

Wells (1920) Outline of History, Deutschland, ISBN9783849675677, CreateSpace, North Charleston, SC, USA.

CHAPTER

15

Digital Technologies in Higher Education Institutions

Kabaly P. Subramanian, Mohammed Al-Haziazi,
Walid Aboraya, Rengarajan Veerasamy

Digital Technologies in Higher Education Institutions

Kabaly P. Subramanian, Mohammed Al-Haziazi, Walid Aboraya, Rengarajan Veerasamy

ABSTRACT

Higher Education Institutions (HEI's) across the world accelerated the use of digital technologies in imparting education and providing support services to its stakeholders including students amidst COVID-19 pandemic. As the stakeholder's expectations are increasing continuously and the capabilities of digital technologies are more accessible and affordable, it is imperative for HEI's to re-orient their strategies and operations digitally like governance and management, teaching and learning, staff and student services, marketing, industry-community engagement, digitally in order to gain sustainable competitive advantage. We analysed selected digital technologies like Internet of Things (IoT), Artificial Intelligence (AI), Robotics and Blockchain and their applications in the context of Higher education institutions. We provide some insights into the potential technologies, plausible capabilities, possible benefits and perceived risks. We also discuss the limitations of this study along with the future directions of this research which intends to help improve HEI's Digital leadership.

Keywords

Digital Technologies, Digital Acceleration, Internet of Things, Artificial Intelligence, Robotics, Blockchain, Competitive edge, HEIs, Educational Experience

1. INTRODUCTION

Sousa et. al. (2017) presents that digital learning is increasingly affecting both classroom/campus-based teaching and at the same time it brings out a big change in the process of delivering course materials to the students at highest level of quality. Romprasert (2020) argues that to digitize the university system, technologies, training programs, and expertise in terms of knowledge and skills in using such technologies are very much vital. Moreover, online education and students' interest towards digital education have not gone in so far to recommend digital education as one of the substitutes of face-to-face learning. So, serious thoughts on implementing various digital technologies in education system must be well planned and used to achieve the goals of educational sector of an economy. In this book chapter, we attempt to analyse selected digital technologies: Internet of Things (IoT), Artificial Intelligence (AI), Robotics and Blockchain and to present its capabilities, benefits and risks to Higher Education Institutions.

2. DIGITAL TRANSFORMATION – A NEED OF THE HOUR – A PUSH AND PULL PERSPECTIVE

Becker et al (2017), in one of the recent studies titled NMC Horizon report 2017 on Higher Education argues that the following are the key technological developments in higher education sector, as identified by leading academics; learning analytics, adaptive learning technologies, IOT, Mobile Learning, Natural User Interface, Next Generation LMS, Affective Computing, Augmented Reality, Virtual Reality and Robotics. Moreover, technologies such as Blockchain helps prevent tampering with educational certificates, cloud computing for storage processing of data, artificial intelligence technologies for performing various teaching, learning, and performing student support services may very well be used by higher education institutions. Higher Education Institutions need to adopt to these technological advancements to gain competitive advantage, failing which they would be at the risk of facing competitive disadvantage. Digital education is not only the future of education, but also the requirement for the current scenario as COVID-19 is predominantly changing the way businesses and services being rendered across the world. Education sector is no exception to this. Thus, digitization of education services is pushed due to the COVID-19 situation prevailing and at the same it is throwing a bigger advantage for the society for building a digital economy of tomorrow, so there is a push for effective implementation from the governments of various countries worldwide.

3. COVID-19 AND DIGITAL ACCELERATION

Yan Z (2020) posits that COVID-19 forces humans to social isolations in order to control the extremely infectious corona virus using different approaches including social isolations through voluntary self-isolation, compulsory quarantine, travel restrictions, stay-at-home, shutdowns of restaurants, parks ,theatres, places of worship, sports venues, museums, and other social organizations, closures educational institutions, working at home, limits or closures of Air travel, and travel by other modes like trains, buses, and ships, closures of country borders, declaration of state of emergency, and lockdowns of entire cities, regions, and countries, isolating ill persons, contact tracing, quarantining exposed persons in order to reduce risks of person-to-person transmission relieve pressure on the healthcare system. This situation in the physical world hugely increase humans' social interactions in the cyber world including and not limited to online education, shopping, entertainment, and healthcare which led to an accelerated diffusion of emerging digital technologies among ordinary people. Concerns on cybersecurity and privacy increased, while countries began tracking those possibly exposed to the coronavirus. It is also noted that misinformation spreading through social media, mails and videos is rampant.

In this context adoption of Digital Technologies by HEIs like IoT, AI, Robotics and Blockchain has also accelerated to facilitate low touch environment. Hence the need to understand such technologies is important for HEIs.

4. OBJECTIVES OF THIS PAPER

The following are the objectives of this study:

(i) To analyze and understand the applications of selected digital technologies in HEIs

(ii) To provide a perspective on benefits and risks associated with the selected digital technologies to HEIs.

5. METHODOLOGY ADOPTED

This paper explores the application of digital technologies in HEIs in terms of its capabilities, benefits and risks. This paper is developed based on the analysis and synthesis of selected scientific literature on the applications of selected Digital technologies: Internet of Things (IoT), Artificial Intelligence (AI), Robotics and Blockchain with the intent to present its capabilities, benefits and risks to Higher Education Institutions.

6. LITERATURE REVIEW

Peña-López (2016) argues that "education can also foster innovation in society at large by developing the right skills to nurture it". Students of current generation require skills such as critical thinking, creativity and imagination. Such skills can very well be imparted to students through use of digital technologies. Digital technologies would help in designing appropriate teaching practices and providing support services to students' community and to the society. Akgün-Özbek (2019) posits that students are now carrying devices for their classes. So, educational institutions must provide safe learning environment that are well integrated and protected, so that any data shared is not lost. Thus, use of digital technologies such as Blockchain, Cybersecurity are essentials for any educational institution. This brings a wide gap for the educational institutions to bring in digital technologies to be used widely by them within the organization and with other collaborators outside the institutions.

Boling et.al (2014) argues that Digital pedagogy that is to be adopted in educational institutions is basically lying on assessing educational models that use technology in the classroom. This poses many challenges for the institutions. Educational Institutions are doing extensive research currently on how technology would bring drastic changes in the pedagogies. (Flewitt, Messer, & Kucirkova, 2015).

Islam et.al (2018) presents that currently learning styles are getting converted into digital technologies based. Digital education is also happening using various social networking websites as well. Educational institutions believe that learning will happen on various social networking sites such Facebook, Twitter, Instagram etc. in the future. This study addresses the students' perception on learning using social networking websites such as Facebook, Twitter etc and argues that it is going to be the future of education. Conventional education system is slowly getting reshaped using various digital technologies. The role of teachers and other academic support providers will be changed in the future due to digitization processes. Teachers will take the role of academic support providers rather than tutors themselves. Digitization brings challenges as well, but such challenges could be very well handled if educational institutions would have invested appropriately on digital technologies. Thus, digital education is the future of education and no educational institution could spare to give up digitization.

Lin et. al (2017) presents that digital education makes educators and educational institutions to utilize the shared education resources on the computer network. This is being done to shorten the gap existing between education provided in urban and rural areas of a nation. Education being provided always gets the difference on the place where it is being provided. Students in Urban areas gain a competitive edge in receiving the best quality education compared to the ones being provided in rural areas. This results in producing economies with wage differentiation, knowledge base been created, innovative capabilities etc. Digitization brings integration and educators are required to use such technologies in the educational processes. This would bring down the differences being perceived so far and would contribute to a larger extent in getting the required knowledge base required for building up innovative capabilities in students' community.

7. INTERNET OF THINGS (IoT) IN HIGHER EDUCATION INSTITUTIONS

Tan et al (2018) finds improving the quality of Higher education using IoT is an important area of Research. In China, High frequency (HF) Radio Frequency Identification (RFID) is used in most of the universities for students' identification, automatic attendance record and students' behaviour record. In addition, Quick Response (QR) code is designed to quickly access course video. These technologies improve the students learning process in Higher Education and provides motivation for learning. Students to swipe the RFID card which records the time when the students enter the classroom, which is an automatic record of absenteeism and late assessment. This system can encourage students to participate in classroom learning on time.

Inside the classroom, the teacher uses QR code to show practice exercises, videos and then students access the materials IPAD, smart phones, etc. to scan the QR code which can directly access the exercises in the Cloud-based. IoT in Higher education facilitates quick access to content and enable interactive responses in teaching and learning environment. IoT in higher education enables enriched interactive learning in classrooms, quick access to multimedia learning and improve collaboration possibilities.

Table 7.1 – Internet of Things in HEI's - Technologies, Capabilities Benefits and Risks Matrix

Potential Technologies	Plausible Capabilities	Possible Benefits	Perceived Risks
RFID	Quick access to course Videos	Improves Student Motivation	Security and Privacy issues

Potential Technologies	Plausible Capabilities	Possible Benefits	Perceived Risks
QR Code	Interactive responses	Student Attendance	
Cloud Computing	Personalization of Teaching and Learning	Enriching Learning Experiences	
Tablets and Smart Phones	Multimedia Learning Environment	Improved Efficiency of Teaching and Learning	
	Enables collaboration		

Source: Compiled by authors based on Natek (2020)

It is evident from the above analysis that Internet of things is one the highest contributing technologies in the field of education. Though it possesses certain security and privacy issues, it offers valuable benefits to Higher Educational Institutions and other stakeholders of HEIs including students. Educational Institutions target to provide good learning and teaching environment both to students and teachers, so that the goal of imparting educational service could be well achieved. Internet of things is one of the greatest tools available currently for achieving this goal. Secondly, despite pandemic situations, the goals of HEIs can be very well realized.

8. ARTIFICIAL INTELLIGENCE (AI) IN HIGHER EDUCATION INSTITUTIONS

Nabiyev (2013) presents that 'artificial intelligence as the ability of computer-controlled device to perform tasks in a human like manner'. Artificial intelligence is one of the technologies that Higher Educational institutions would prefer to employ in imparting education and providing related educational services to students. The technology would be behaving like a human being, so the need of a personal tutor would not be felt by the students' community.

Such technologies are very much needed for the scenarios like COVID-19 since contact of people would be restricted and at the same time, education would be imparted having no compromises on the quality of education being provided. HEIs currently seek for technologies that would provide the best possible education through minimal or zero personal contacts among people. this could be very well achieved through using such Artificial Intelligence technologies.

Table 8.1 – Artificial Intelligence in HEIs- Technologies, Capabilities, Benefits and Risks Matrix

Potential Technologies	Plausible Capabilities	Possible Benefits	Perceived Risks
Artificial Intelligence	Artificial intelligence (AI) makes machines to learn from experiences and act accordingly. Human like behavior could be present	Better communication and improved learning since it replaces face-to-face teaching in full.	Wrong interpretation on certain issues will be present.
Machine learning (ML)	AI makes analytical model building automatic through analysis of data.	Model building becomes much easier through in-depth data analysis	Data analysis must be programmed well. If not, errors bound to arise.
Deep learning (DL)	Machine learning that makes a computer to think and act like a human being.	Human interface is very much felt, and any service could be performed as if it is done by human being	Skills and expertise needed to make this happen. It is a scarce to get people with such skills.
Natural Language Processing (NLP)	NLP makes computers to understand, interpret human language	Human interference is felt very much	High level of Programming skills very much needed to achieve this objective
Computer Vision (CV)	It makes computers/ machines to see, understand, interpret world.	Visualizing the world helps understand all sorts of issues	Programming requires deep knowledge, which could be highly demanded to get.

Source: Compiled by authors

It is evident from the above analysis that artificial intelligence makes life easier. Education and its related services can be provided very well if the technologies related to artificial intelligence been adopted. Educational Institutions can offer the best possible educational services to the whole world. Even though Artificial Intelligence would pose many challenges like investment, technical expertise, knowledge base required etc., but it offers numerous advantages to HEIs and its stakeholders. Moreover, this technology would make stakeholders feel that human interference is very much there even though there would no such interference due to employment of such technologies.

9. ROBOTICS IN HIGHER EDUCATION INSTITUTIONS

The future of higher education will be challenged with many digital technologies like robotics. This is due to the critical change happening in the labor market. Automation will be replacing millions of hand-operated jobs (Zhao & Siau, 2017). HEI's will, not only, be challenged to train their students for industry, but also teaching, pedagogy, and research will be confronted. Robotics is a broad and branched science that is used in various commercial industries and has various uses in various sectors. It is a field of study that is taught in universities. Although robotics is mostly used in higher education within computer science and engineering related fields (Cruz-Martin et al., 2012), it is used in serving other fields like education. According to Eguchi (2014), educational robotics course was introduced to pre-service teachers to be able to improve their teaching performance and use it in their classrooms in the future. It was also integrated as an interdisciplinary course of study in General Education program aiming to improve certain skills like; problem solving, communication, critical thinking, and scientific & technological skills.

In an economy driven by knowledge and innovation, HEI's started to focus on preparing their students to meet the 21st century skills. Such skills require students to be able to use various range of technologies to better identify problems and create imaginative solutions. Also, communicate, collaborate effectively locally and globally, and express themselves creatively. (ISTE, 2020). Within this framework, robotics is regarded as one of the best learning tools that can create such innovative based learning experiences. Its' importance came from being an applied science where learners can put their previous received knowledge into practice (Eguchi, 2014). In other words, it connects learning to practical life, as most of the projects represent real life examples where students try applying learnt knowledge in solving real life problems following logical and scientific strategies.

Educational robot encourages collaborative learning by engaging students in team work to achieve tasks. Students can act as researchers, designers, programmers, or even team leaders to solve the problem. The nature of robotics allows it to deal with higher thinking skills. Through its' applied projects, learners can develop and enhance their critical and creative thinking to accomplish tasks. Also, they will be able to analyze systems and manage their projects. All such practices drive them towards innovation and creativity. All this goes in line with many pedagogical approaches of learning like project-based learning and problem-based learning that focus more on the learner and put him in the center of learning within a constructivism framework. (Istikomah & Budiyanto, 2018)

Although robots offer fun and rich learning experience, some challenges must be met to use it effectively in HEI's. Wagner & Gericke (2013) reported some of these challenges as follows: Educational concepts should be re-designed to be integrated, using the appropriate hardware and software, and finding ways to share knowledge and materials with teachers from different disciplines easily. In their investigation of the trend of using robotics in education, Maximova & Kim (2016) reported some challenges of robotics in education, among these challenges is the narrow usage of robotics although being and interdisciplinary subject. Teachers, students and even researchers have limited robotics and stereotyped it as being used in technical fields ignoring the variety of possibilities available to utilize robotics in education which can help students develop 21st century skills. Another challenge is viewing robotics as an informal education, this leads to the absence of a well-defined curricula, the absence of learning materials, lack of teachers training in robotics, and shortage of using robotics as an intra-curricular learning activity.

Table 9.1 – Robotics in HEIs- Technologies, Capabilities, Benefits and Risks Matrix

Potential Technologies	Plausible Capabilities	Possible Benefits	Perceived Risks
Mouse Robot Colby	Ground Robot Students choose an activity card and plan their route using the code cards with movements arrows to guide the mouse to the target and program the movement sequence.	Promotes the following: -Problem-solving -Critical thinking -Motivation -Curiosity -Creativity	-Educational concepts should be re-designed to be integrated -Require appropriate hardware and software
MBot	Ground Robot Bluetooth/WiFi. Programming and electronics based on Arduino and the Scratch programming language. It can be controlled and programmed from a mobile phone, a tablet or with a computer via a USB cable. No external wiring is needed and include a programmable infrared remote control.	-Imagination -Participation -Stress tolerance and frustration -Respect for peers -Respect for educational materials -Collaborative work -Self-learning	-Sharing knowledge and materials with teachers from different disciplines is difficult. -Availability in institutions -Maintenance

Makey-Makey board	Programmable Board It consists of an Arduino-based electronics board with a USB cable that connects to the computer as one more peripheral, so that it gives its users the opportunity to search and find new ways to interact with their computers, enhancing creativity, imagination, and design. It allows us to convert any object of daily life into a keyboard, remote control, or a mouse.	-Shared construction of knowledge -Access to new channels of information and knowledge -Application of knowledge -Learning to learn -Skills in and with ICT -Basic and initial programming skills	- lack of standardized programming methods -Infrastructure and poor internet connection -Teacher training -Teachers and students should possess multidisciplinary knowledge -Always used for extracurricular activities
Ozobot	Ground Robot It is a line-following robot capable of reading-coloured lines drawn on paper using its sensors.		

Source: Román-Graván et al., (2020) and compilation by authors

In general, robotics can be used to encourage and enhance creativity and innovation in educational settings and create different, fun, and authentic learning experiences to both learners and teachers. However, this technology is still under growth, and its introduction into HE is subject to technological change.

10. BLOCK CHAIN IN HIGHER EDUCATION INSTITUTIONS

Block chain technology was originally introduced in the year 2008. Block chain ensures effective storage of data and but at the same time ensures shared data and available for necessary updates by the relevant and related people after necessary authorization. It is a shared ledger, wherein transactions could be recorded by related people. At the same time, it ensures highest level of safety of records and data as these will be encrypted. Block chain is not used by many educational institutions yet, but it is going to be predominantly used by all HEIs in the future. Using block chain technology, improved students' services can be provided by HEIs and it will also minimize the cost of performing various services to students to the greatest extent possible. Alammary et.al (2019) argues that block chain would rule out the world in the future and it would replace educational institutions being the only certifying organization and provide greatest learning opportunities to students to learn maximum within shorter span of time. To utilize the benefits that are associated with block chain technology requires a voluminous investment commitment from HEIs side.

Table 10.1 – Blockchain in HEIs- Technologies, Capabilities, Benefits and Risks Matrix

Potential Technologies	Plausible Capabilities	Possible Benefits	Perceived Risks
Block Chain Technology	Stores voluminous transactional records in a connected network	Voluminous data can be stored, processed retrieved and reports could be produced. authentic reports can be made with good amount of analysis	Database management systems must be improvised, which must be costing a lot for the institutions.
Peer-to-peer network	Network connectivity through nodes	Connectivity between HEIs and other stakeholders of HEIs ensured. Data can be viewed, updated. reports can be made according to the needs of the users.	Network connectivity issues might arise
Digital ledger	Publicly available data but with maximum protection of data	All related HEIs can have access to the ledger. authorization required to get access.	Security is assured. at the same, encryption is still traceable.
Digital ledger	Instant updating of data and records through authorization, still ensures greatest level of safety and security of data been stored.	Updating of data can be done any related party, but still ensures highest level of security of data	Data modification could be a major threat for all HEIs.
Cryptographic keys	Safety is ensured through encryption. Highest amount of security is maintained.	Highest safety in ensured.	Scope for encryption still persists.

Source: Ali et al (2019) and compilation by authors

This makes it clear that HEIs can avail huge number of benefits through blockchain technology. Blockchain technology is expected to make a big change in the way services will be performed by HEIs in the future.

11. RESULTS AND DISCUSSION

Digital technologies are technologies that ensure sustainable competitive advantage through customer engagement, process cost optimization and Business model innovation. Countries are getting modernized now and new technologies keep emerging to get the above objective achieved. Educational institutions are focusing on value additions possible and the market is providing certain technologies for ensuring value additions, thus, there must be willingness and good perceptions for incorporating such technologies in their operational processes. Such willingness and adaptation are the key variables for the successful digitalization of educational services. The gaps existing between the value additions to be created and the values currently being rendered would possibly be brought narrower through use of digital technologies in educational processes.

The contribution of the study is to bring attention towards selected digital technologies by highlighting its capabilities, benefits and risks. Educational institutions would become highly compatible to produce graduates who can meet the technological changes and challenges more effectively through getting into such high-tech processes being adhered. Educational institutions are becoming the source of experiencing of digitization of operations, thus, graduates becoming capable of adjusting to. Though educational institutions are not profit oriented, their awareness towards resources utilization and cost consciousness will have to be further strengthened. This would be possible through use of certain technologies available. Digitization and digitalization would pave the way for achieving this objective.

Digital technologies provide a way to achieve a goal despite the prevalence of any kind of environmental issue. A clear substitute for face-to -face teaching was much sought by the students' community and staff community to deliver the course contents to the students' community in the best possible manner. Apart from AI and Internet of things, there are other digital technologies which are also very expedient in offering the high-quality education and other related services. If higher educational institutions come forward to make investments on digital technologies, then there is no doubt such institutions would keep getting the benefits, in spite of the perceived risks. Data storage, analysis and making reports are the key activities of HEIs. these tasks will have to be digitized so that education and research activities could be very well focused by educational institutions. Even though digitization needs huge number of resources to be invested, at the end it would bring out enormous of benefits for the institution. Digitization would attract students from all over the world and at the same time, delivering curriculum becomes easier through use of digital technologies. Educational services could be provided keeping highest standards and through which the requirements of stakeholders could be met with no compromises on the quality and in attainment of goals.

12. LIMITATION OF THIS STUDY

This study is based on analysing and synthesizing selected scientific literature. Hence, it may not give a comprehensive picture of these technologies, its capabilities, benefits and risks. A comprehensive systematic survey of scientific literature on the Digital Technologies in Higher educational Institutions will provide a better, more realistic perspective than the one presented here.

13. FUTURE DIRECTION FOR THIS RESEARCH

To overcome the limitations of this study, a more comprehensive systematic study of the phenomenon Digital Technologies and Higher Education Institutions is planned.

A study to build a conceptual framework to guide the Higher Education Institutions Digital Transformation initiatives is envisaged.

14. CONCLUSION

To make education sector as one of the key contributing force in the field of innovation and invention, application of digital technologies is vital. Higher Educational Institutions must be coming forward to digitize their operations in order to establish themselves as one of the highest in terms of number of research activities been carried out and the perfect knowledge provider in an economy. Educational institutions are not profit oriented, their awareness towards resources utilization and cost consciousness will have to be further strengthened. This would be possible through use of certain technologies available. Digitization and digitalization would pave the way for achieving this objective. Education provided in more economical manner, but yielding huge benefits are the core intents of educational institutions. Achieving these two common objectives is becoming easier through digitization and digitalization, thus digital transformation becomes more effective. Digital transformation of educational services provides a good platform for educational institutions to get overwhelming benefits in terms of reaching out world's students community.

15. ACKNOWLEDGEMENT

This paper is the partial outcome of the project titled "Developing a conceptual framework for Transforming Higher Education Institutions, Digitally in Sultanate of Oman" ID: BFP/RGP/EHR/18/125 funded by The Research Council (TRC), Sultanate of Oman

16. REFERENCES

Alammary, A., Alhazmi, S., Almasri, M. and Gillani, S., 2019. Blockchain-based applications in education: A systematic review. Applied Sciences, 9(12), p.2400.

Akgün-Özbek, E. and Özkul, A.E., 2019. E-Transformation in Higher Education and What It Coerces for the Faculty. In Handbook of Research on Faculty Development for Digital Teaching and Learning (pp. 355-378). IGI Global

Becker, S.A., Cummins, M., Davis, A., Freeman, A., Hall, C.G. and Ananthanarayanan, V., 2017. NMC horizon report: 2017 higher education edition (pp. 1-60). The New Media Consortium.

Boling, E. and Smith, K.M., 2014. Critical issues in studio pedagogy: Beyond the mystique and down to business. In Design in educational technology (pp. 37-56). Springer, Cham.

Cruz-Martín, A., Fernández-Madrigal, J.A., Galindo, C., González-Jiménez, J., Stockmans-Daou, C. and Blanco-Claraco, J.L., 2012. A LEGO Mindstorms NXT approach for teaching at data acquisition, control systems engineering and real-time systems undergraduate courses. Computers & Education, 59(3), pp.974-988.

Flewitt, R., Messer, D. and Kucirkova, N., 2015. New directions for early literacy in a digital age: The iPad. Journal of Early Childhood Literacy, 15(3), pp.289-310.

Gerecke, U. and Wagner, B., 2007. The challenges and benefits of using robots in higher education. Intelligent Automation & Soft Computing, 13(1), pp.29-43.

Goksel, N. and Bozkurt, A., 2019. Artificial intelligence in education: Current insights and future perspectives. In Handbook of Research on Learning in the Age of Transhumanism (pp. 224-236). IGI Global.

International Society for Technology in Education (ISTE) (2020). ISTE Standards for students. Retrieved on 16/12/2020 from: https://www.iste.org/standards/for-students

Islam, S. and Jahan, N., 2018. Digitalization and Education System: A Survey. International Journal of Computer Science and Information Security (IJCSIS), 16(1), pp.70-73.

Istikomah, C.W. and Budiyanto, C., 2018. The Contribution of Educational Robotics and Constructivist Approach to Computational Thinking in the 21st Century. In Proceedings of the The 1st International Conference on Computer Science and Engineering Technology Universitas Muria Kudus.

Lin, M.H. and Chen, H.G., 2017. A study of the effects of digital learning on learning motivation and learning outcome. Eurasia Journal of Mathematics, Science and Technology Education, 13(7), pp.3553-3564.

Maximova, M. and Kim, Y., 2016. Research Trend Analysis on the Usage of Robotics in Education. Asia-Pacific Collaborative education Journal, 12(1), pp.45-60.

Nabiyev, V., Karal, H., Arslan, S., Erumit, A.K. and Cebi, A., 2013. An Artificial Intelligence-Based Distance Education System: Artimat. Turkish Online Journal of Distance Education, 14(2), pp.81-98.

Natek, S. and Lesjak, D., 2020. INTERNET OF THINGS IN HIGHER EDUCATION. Issues in Information Systems, 21(2),pp75-84.

Peña-López, I., 2016. Innovating Education and Educating for Innovation. The Power of Digital Technologies and Skills.

Román-Graván, P., Hervás-Gómez, C., Martín-Padilla, A.H. and Fernández-Márquez, E., 2020. Perceptions about the Use of Educational Robotics in the Initial Training of Future Teachers: A Study on STEAM Sustainability among Female Teachers. Sustainability, 12(10), p.4154.

Romprasert, S. and Monjagapate, J., 2020. Digitized Educational System. In E-Services. IntechOpen.

Sousa, M.J., Cruz, R. and Martins, J.M., 2017. Digital learning methodologies and tools–a literature review. Edulearn17 Proceedings, pp.5185-5192.

Tan, P., Wu, H., Li, P. and Xu, H., 2018. Teaching management system with applications of RFID and IoT technology. Education Sciences, 8(1), p.26.

Yan, Z., 2020. Unprecedented pandemic, unprecedented shift, and unprecedented opportunity. Human Behavior and Emerging Technologies, 2(2), pp.110-112.

Zhao, W. and Siau, K., 2017, May. Machine Learning Approaches to Sentiment Analytics. In Twelve Annual Midwest Association for Information Systems Conference (MWAIS 2017), Springfield, Illinois.

CHAPTER

16

Reconsidering the Challenges of Virtual Language Classrooms in the Light of the Covid-19 Pandemic: the Case of AOU in Sudan

Muawia M.Elhasan Gaily

Reconsidering the Challenges of Virtual Language Classrooms in the Light of the Covid-19 Pandemic: the Case of AOU in Sudan

Muawia M.Elhasan Gaily

ABSTRACT

The present study considers the experience of delivering foundation English courses at the Arab Open University (AOU) in Sudan via means of videoconferencing technologies amid the Covid-19 outbreak. It mainly explores the use of ICT to support EFL learning and how traditional on campus language classrooms could possibly be replaced by cyber-classes particularly at the time of crisis. Consequently, the study scrutinizes some potential problems of online tutoring mainly from learners' perspective. Thus, it reflects the AOU learners' perceptions regarding various issues pertinent to implementation of virtual classrooms as a new educational instrument introduced in the place of regular face to face classes to achieve the goal of upgrading and enhancing students' level of language proficiency while being fully autonomous distance learners. Finally, the paper also examines the prospects of building more successful virtual learning environment within the context of AOU in Sudan.

Key words

E-Learning, Virtual Classrooms, Arab Open University, Online Learning

1. INTRODUCTION

With unprecedented outbreak of the Covid-19, it is perhaps not surprising that most education institutions worldwide have shifted to virtual delivery in order to overcome difficulties brought by the virus to traditional on campus classes. Therefore, implementing Web- based education seems to be indispensable more than ever before. As a result, much persistent efforts have been excreted by lots of colleges and universities to enable more successful virtual learning environment VLEs .Thus, the issue of E-Learning has still captured the interest of so many researchers though some educators are still debating the idea of networking -learning efficacy in the context of ELT and arguing whether providing learning materials within online setting could effectively replace traditional methods of delivery.

In spite of the fact that, the wide proliferation of ICT applications particularly in the tertiary level of education doesn't arise in a vacuum, the current crisis of the Covid-19 has actually accelerated the shift towards E-Learning and contributed to significant increasing demand for maintaining virtual learning environments in order to mitigate passive impacts of schools and universities shutdown . In this respect, it has been reported by the UNISCO that more than sixty percent of student population worldwide has passively impacted by the national wide closure and hence most of education institutes adopted E-Learning strategies to compensate for on campus classes. (UNESCO, 2019).

Owing to all these challenges brought by the Covid-19, the AOU council held an extraordinary virtual meeting in the early period of the Covid –19 pandemic in order to discuss different potential consequences of the total lockdown declared by many countries so as to curb the spread of the virus. Consequently, the council meeting recommended the AOU branches spreading over nine Arab countries, including Sudan to move towards online teaching for the purposes of teaching and learning continuity.

In this connection, the AOU in Sudan set up some synchronous online sessions to groups of English majoring students as a complement to their on-campus tutorials. Yet, it is unfortunate that this sudden and unprepared transition to online delivery has posed some challenges to both tutors and learners. The major technical challenges include poor internet connectivity, insufficient number of computers available for students, high cost of internet service and lack of the required E-Learning skills among learners in addition to some other technical problems. Besides, it has also been noted that many students lodged several complaints concerning lack of necessary technical support, knowing that most if not all have first-hand experience of E-Learning technology.

In addition to all these technical issues, some further pedagogical complications such as difficulties of allowing ample opportunities for collaboration among learners from one hand and limited interaction between learners and tutors on the other hand still trigger big challenges for both teachers and learners. In light of the aforementioned considerations, the present study attempts to reflect on the experience of the AOU in implementing online language program during the Covid-19 pandemic. In other words, this paper seeks to provide some insights regarding E-Learning implementation within the context of the AOU in Sudan and explore possible setbacks of online sessions during the Covid-19 pandemic. The paper also tries to ascertain whether the AOU in Khartoum have efficient infrastructure that could probably enable the university to advance towards eLearning in the future.

2. LITERATURE REVIEW AND PAST STUDIES

2.1 Integrating ICT into Language Classrooms

As a matter of fact, the rapid development in the field of information technology over the few past decades has paved the way for bringing different technological tools into the realm of the ELT. There is a growing number of education institutions worldwide still using information communication technology (ICT) to serve different purposes such as supporting the existing EFL pedagogical practices in addition to provide students opportunities to work on different subjects by going online without any requirement of physical attendance at the campus (Dudeny& Hockley 2007 as quoted in Jarino & Ferney (2012). Historically, the primary goal behind introducing ICTs into EFL classes as indicated by Abordin (2015) is to support classroom instructional methods. In this sense, these new revolutionary technologies are mainly utilized by several institutions to support and facilitate teaching –learning process in some considerable ways. For instance, different applications of ICT according to Cakici (2016) are exploited in language classrooms as more challenging instructive tools to enhance learning process within totally virtual learning environment.

Similarly, Khatoony&Nezhadmehr (2002) emphasized the paramount importance of incorporating technology into education field and further claimed that computer- based instruction can improve EFL learning in numerous ways that could pave the way towards enhancing both teaching and learning process. Moreover, the authors maintained the efficacy of incredible huge growth of internet over the recent decades on making the web more attractive environment for carrying on virtual learning. Likewise, Adnan et al., (2019) as quoted in

Khatoony& Nezhhadmeher (2020.p.5) supported the claim that using technology in EFL classes is the best way out to deliver language classes during the time of crisis. Generally speaking, one of the commonest types of the ICTs recently incorporated into EFL classes at the tertiary level is virtual or online classes. The term of virtual classes has been used in the literature by many researchers in a broad sense to refer to a space where students can receive instruction while they are studying at distance and off campus as fully autonomous learners through using some certain computer software which allow them to interact in a quite similar way of traditional face to face classes. For instance, Talbot (2007) referred to virtual learning environment as electronically equivalents of the resources available in real life university or college buildings. Similarly, Franco J (2020) defined virtual education as kind of ICT where both students and teachers will not meet personally but only through a virtual space.

Moreover, both the two terms of virtual learning and online learning are interchangeably used by many authors to indicate the concept or idea of converting conventional language classes into cyberspaces. According to Arif (2020) online or virtual learning is primarily perceived as exploitation of internet in accessing materials without any requirement of personal attendance to the campus by both learners and teachers. On the whole, it's clearly evident from the previously discussed definitions that virtual online language program is entirely about a type of distance education which could be carried out from a distance by means of some electronic devices which provide learners opportunities to study online either synchronically or asynchronically.

2.2 Online Language Programs: Merits & Drawbacks

As previously noted, the issue of virtual education has seen a renewed importance during the Covid-19 outbreak. Yet, there are still some various contradicting views regarding efficacy of this type of tutoring. In this regard, many discussions in the past literature addressed the issue of online education feasibility from different perspectives. For example, Oliver (2015) argues that it's harder for the researchers to characterize online learning due to its relatively short history. Accordingly, the author regarded online programs as type of distance open education which reflects some fundamental features of distance learning. In the same respect, a number of studies have been devoted to investigating advantages of online classes. For instance, Cakici (2016) pointed out that the integration of ICT tools such as internet in the EFL classes will impact leaners' experience more positively and lead them to use English in a very natural real communicative and less stress learning environment. Additionally, the author argues that implementation of educational technology into EFL context could assist learners improving their problem-solving skills in addition to upgrade their level of critical thinking skills. Moreover, online environment could provide ample opportunities for the ways education is accessed and delivered to a large number of communities.) Williams, Cameron & Morgan (2012) as quoted in Swan, (2017: p-22).

Likewise, Haroon & Zaid (2015) highlighted the pivotal role of incorporating technology into EFL classes in minimizing the likelihoods of students' anxiety and insecurity towards English and accordingly raise their level of motivation. As it has also been shown by many authors in this respect, the online-based learning programs can be of great advantage for the EFL learners in some considerable ways. For instance, it contributes to overcome the physical distance barriers by bringing both learners and instructors closer together in a collaborative manner even when time difference is a constraint. One further advantage of this type of tutoring is flexibility of learning. In other words, virtual education usually offers learners opportunities to learn at the convenience of their own time, own place and own pace, and therefore this type of delivery cultivates into learners some sense of liberty and autonomy towards language study. (Parker&Martine, (2010) cited in Sun (2011: p-436).

On the contrary, several other researches shed some light on pitfalls of online language classes. For example, Gleason (2013) pointed out that one of the key limitations of online programs is their limited effectiveness in maximizing interaction and collaboration the same way as in case of traditional face to face sessions due to several technical barriers which might cause some communication breakdowns. Arief (2020) indicated that, the online lessons usually require much time and effort than preparing for face to face classes. Therefore, lots of teachers are most likely to be more reluctant and less enthusiastic and they also might feel heavier burden of conducting such virtual sessions. In this regard, it has been pointed out by Franco.J (2020) that teachers' reluctance towards incorporating technology into their classes can mainly be attributed to two major factors; ignorance and lack of motivation. Compared with traditional on campus programs, the online delivery according to Green (2016) is usually of high cost and requires different facilities and technological tools. Thus, it needs a bigger investment from the side of education authorities. In conclusion, it's strongly believed that integration of ICT into EFL classes has its own drawbacks which should be taken into consideration prior to any attempt towards shifting or advancing to the level of virtual education.

2.3 Potential Challenges of Online Classes

As previously mentioned, the implementation of online delivery and integration of ICT into the EFL classes over the past period of the Covide-19 pandemic represented several challenges and complications which require the major stakeholders to work much harder in order to troubleshoot any further problems which might possibly impede the effective conduct of cyber-classes. Broadly speaking, there are different problematic sources for implementing totally or partially virtual language classes. In other words, the online classes problems could mainly be addressed within three different levels; technological level, administrative level and pedagogical level. According to several researches, for example, Aboriden (2015) technological barriers encompass issues of internet connectivity and bandwidth, high cost of internet service, lack of the required technical support, digital illiteracy of teachers and learners, in addition to insufficient number of computers and smart phones available for the students from families with low income. In the same way, it has also been argued by Sun (2015) that synchronous online delivery is usually problematic and brings lots of troubles to both teachers and learners. The author reaches the conclusion that: "Gathering the class together online at the same time is getting harder and harder, let alone being able to present formal lectures and facilitate learning activities. Time Zone, Internet connectivity and bandwidth, technical breakdowns, individual student's schedule are all issues facing online learners and teachers" Sun (2015: p.5)

On the other hand, many other further attempts have also been made in order to address administrative issues of implementing ELearning within the context of the tertiary level. In this regard, it has been shown by Mirzamohammadi, (2017) that administrative or institutional problems of using technology in the higher education institutes include lack of strategies, as well as lack of institutional policies and administrative costs.

Pedagogically, there's still some common misperception in tutors' mind regarding online teaching practice. The majority of teachers still do believe that they could carry out their online sessions following the same procedures that they used to conduct in their face-to-face tutorials neglecting the fact that the practice of online delivery is totally distinguished from the face-to-face mode in several ways. Thus, it is clearly evident as noted by Gillette-Swan (2017) that not all approaches and methodologies of face-to-face classes are applicable in case of online context and vice versa, accordingly, the EFL teachers should shoulder the responsibility of transforming their lessons into digital learning with some new different insights and perceptions. According to Beaven and et al (2014), although the use of

ICT in the education realms has increased over the past years, still pedagogical development has not kept pace with these technological revolutions. To sum up, while modern technology has revolutionized the ELT realm, the pedagogical practice seems to be less dynamic and thus there's still a growing demand for further research to modernize EL theories and practice in a way that could allow students to learn in more interesting digitalized environment.

3. THE CONTEXT OF AOU IN SUDAN

Bearing in mind that, the AOU adopts an approach to education known as blended or hybrid system of learning which uses technology as an integral part to combine in-class and out-class learning, the transition towards fully online remote teaching in- most of the AOU branches wasn't as problematic as in case of many other conventional universities which have been forced by the Covid-19 pandemic to resort as sudden to online delivery. However, several unexpected complications arise while implementing this type of delivery mainly in case of Sudan branch due to less developed virtual learning infrastructure and limited resources offered for ELearning. All classes at Sudan branch of AOU went online as of March 14th, 2020, that's just immediately after the AOU council decision regarding transition towards online teaching was issued and up to two months later. In the first days of the program implementation, the IT department in collaboration with the teaching program coordinators PCs set out a tentative schedule for the online sessions. Accordingly, the teachers met their students synchronously from home two hours a week for each module.

The LMS as a vital learning platform was exploited as a focal point to communicate all issues concerning implementation of the online delivery including announcements of the schedule, postponing the lectures, updating the students with latest news, receiving students' complaints regarding running of their virtual classes and responding to their request for technical support in addition to inducting them on how they could effectively use online conferencing platforms. Moreover, the LMS was later used as a platform where different types of assessments such as Tutor-Marked assessment (TMA) and Final Take-Home Exams (FTHEs) were administrated. Furthermore, the members of teaching team who had never taught online classes before were offered an opportunity to join just- in time training on different technical aspects of online videoconferencing software. They were actually inducted by the IT technicians for two days on how to run their virtual classes more successfully using the required online tools.

The program (Go –to-Training) was used at the beginning as primary vehicle for delivering the classes, before the IT department decided later to shift towards another application (Big Blue Button) for some justifiable technical reasons. All the online tutorials were recorded before posting them on the LMS by the IT team so that the students could access their missed online sessions. The IT technicians also kept vigilance on all classes as they run in order to provide support whenever needed, while the tutors were assigned the role for regularly taking attendance for their classes and reported it to the program coordinator the same day of the online session for the sake of evaluating overall conduct of the program.

Most lectures are accompanied with power point presentations, however the tutors faced lots of troubles in presenting some parts of the teaching material particularly listening and speaking activities due to some technical issues. All in all, the transition to online classes went smoothly and functional only during the first week and that's just before several critical problems later emerged. For instance, it has been reported by many learners that they were sometimes unable to catch up their tutors online because of bad internet connectivity or the power cut. Other learners also reported some further problems such as bad or no voice while they were online. Further problems noted in this respect include students' lack of digital competence taking into account that most of the staff moved to the online delivery system as sudden and without being fully competent on several aspects of online education systems, though they had already received short term training prior to program implementation.

4. METHODOLOGY

4.1 The Research Questions

The chief questions of this study were formulated as follows:

1. Do the learners at the AOU in Sudan demonstrate any positive attitudes towards English online sessions?
2. What are the most likely technical and pedagogical challenges that usually encountered by the AOU learners in Sudan in accessing and using English virtual classrooms more effectively?
3. What are the prospects for developing more successful EFL web-based education within the context of the AOU in Sudan?

4.2 The Research Hypothesis

The present study aims at testing the following hypothesis:

1- it's hypothesized that the AOU students in Sudan showed positive attitudes towards English virtual classes.

2- it's hypothesized that the AOU students are facing some technological and pedagogical setbacks which could possibly influence their learning in online setting.

3- It is hypothesized that the AOU in Sudan have an adequate E-Learning infrastructure to advance towards virtual education.

4.3 The Research Method

The present study adopts descriptive survey. It mainly uses survey in order to investigate issues related to difficulties encountered by the AOU learners in using online EFL classes.

The Participants

The participants of this study are 40 English majoring students who are currently pursuing their bachelor degree at the AOU in Sudan. This group of participants enrolled in a preparatory orientation English program as mandatory prerequisite for their later subsequent core specialization courses. Moreover, these learners are ranging in age from (18) to (22) years and they relatively share the same level of English proficiency. It should also be noted here that all members of this learners' group experienced online learning for the first time in their academic life only throughout the early period of the Covid-19 outbreak.

Instrument

A validated questionnaire survey was administrated by the researcher in order to collect data regarding the challenges related to implementation of online language program in the AOU over the Covid-19 pandemic.

5. DATA ANALYSIS & RESULTS

As earlier stated in the introduction, this paper focuses on investigating the students' perceptions regarding drawbacks and limitations of online language sessions.

To this end, a dedicated questionnaire was distributed to (40) students belonged to English language faculty while the Statistical Package for Social Sciences (SPSS V.26) was used in analyzing and interpreting the collected data.

Students'Attitudes towards online language classes:

Table 1.1: Students'perceptions towards online language classes

Statements		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I am fully interested in using virtual classes in my area of study.	n	0	2	2	26	10
	%	0%	5%	5%	65.0%	25.0%
I always feel heavier burden of learning through online learning.	n	2	4	18	8	8
	%	5%	10%	45%	20%	20%
I am always punctual to my online classes.	n	0	4	8	16	12
	%	0%	10%	20%	40%	30%
Face to face tutorials are more effective than online delivery.	n	2	4	4	16	14
	%	5%	10%	10%	40%	35%

Table 1.2: Mean and standard deviation for students'attitudes towards the online language classes

Statements	Mean	Std.Dev.	Rank
I am fully interested in using virtual classes in my area of study.	4.10	0.71	1
I always feel heavier burden of learning through online learning.	3.40	1.08	4
I am always punctual to my online classes.	3.90	0.96	2
Face to face tutorials are more effective than online delivery.	3.90	1.15	3

Std. Dev. = Standard Deviation

As it is shown by Tables 1.1 and Table 1.2, most of the students (90%, n=36) reported that they were fully interested in using virtual classes in their area of study with mean responses of agreements of (4.10) and standard deviation of (0.71). Up to 70% of the students (n=28) indicated that they were always punctual to their online classes, with mean responses of agreements of (3.9) and standard deviation of (0.96). In addition, three quarters of the students (75%, n=30) agreed that Face to face tutorials are more effective than online delivery, with mean responses of (3.9) and standard deviation of (1.15). While 40% of the students (n=16) were agreed that they always feel heavier burden of learning through online learning, the majority of the 45% (n=18) were neutral towards that feeling, with mean responses of (3.40) and standard deviation of (1.08).

In general, the categorization of attitudes towards online language classes, revealed that the majority of participants had positive attitudes (65%, n=26), while 14 (35%) showed some negative attitudes (p –value <0.01). Based on the above results, there would be a strong evidence to support the hypothesis that the AOU students in Sudan branch demonstrated some positive attitudes towards using virtual classes.

E-Learning Infrastructure

In their responses to the question in the survey labeled "Facilities for online learning at the AOU in Sudan are still very limited to run fully virtual classes." half of the participants (50%, n= 20) responded positively while 40% of them (n=16) responded inversely, with mean responses of agreements of (3.15) and standard deviation of (1.41). A t-test for one sample indicated that the mean responses reported statistically not significant (p-value> 0.05). Based on this finding, we have no evidence to maintain the hypothesis that the AOU in Sudan have sufficient infrastructure to adequately run fully online programs.

Technical Barriers

While Table 2.1 (below) shows frequencies and percentage distribution of students' responses in experiencing technical problems in accessing online sessions, Table 2.2 (below) shows the descriptive statistics for participants' responses in this concern. Up to three quarters of the students (75%, n=30) agreed that they had an excellent digital literacy, with mean responses of (4.05) and standard deviation of (0.88). Next to that, three quarters of the students (75%, n=30) agreed that recordings of online tutorials are usually available on the LMS, with mean responses of (4.00) and standard deviation of (0.96). With regard to difficulties faced the students during the online sessions, the majority of the surveyed students agreed that they encountered some difficulties in accessing online sessions due to bad internet connection (60%, n= 24), with mean responses of (3.90) and standard deviation of (1.11). In addition to that, majority of the students also reported that they were unable to attend online classes due to high cost of internet services (70%, n=28), with mean responses of (3.70) and standard deviation of (1.29).

Table 2.1: Participants'perceptions towards technical problems

Statements		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The directions provided by the IT technician for accessing online sessions are satisfied and clear to me	N	2	4	20	**10**	**4**
	%	5%	10%	50%	25%	10%
I have an excellent digital literacy.	N	0	2	8	16	14
	%	0%	5%	20%	40%	35%
I encountered some difficulties in accessing online sessions due to bad internet connection	N	2	0	14	8	16
	%	5%	0%	35%	20%	40%
I was unable to attend online classes due to high cost of internet services	N	4	4	4	16	12
	%	10%	10%	10%	40%	30%
It is easy for me to raise questions while online using tools such as raise hand button and chat box.	N	4	4	16	6	10
	%	10%	10%	40%	15%	25%
I don't have sufficient internet quota to be involved in online session.	N	8	4	12	12	4
	%	20%	10%	30	30%	10%
I haven't taken online class, because I don't have a smartphone or a laptop.	N	4	6	8	12	10
	%	10%	15%	20%	30%	25%
Recordings of online classes are usually available on the LMS.	n	0	4	6	16	14
	%	0%	10%	15%	40%	35%

Table 2.2: Mean and standard deviation of responses towards technical

Challenges of online sessions.

Statements	Mean	Std. Dev.	Rank
The directions provided by the IT technician for accessing the online sessions are satisfied and clear to me.	3.25	0.95	7
I have an excellent digital literacy.	4.05	0.88	1
I encountered some difficulties in accessing online sessions due to bad internet connection	3.90	1.11	3
I was unable to attend the online classes due to the high cost of internet services	3.70	1.29	4
It is easy for me to raise questions while online using tools such as raise hand button and chat box.	3.35	1.25	6
I don't have sufficient internet quota to be involved in online session.	3.00	1.28	8
I haven't taken any online class before, because I don't have a smartphone or a laptop	3.45	1.30	5
Recordings of online tutorials are usually available on the LMS.	4.00	0.96	2

Std. Dev. = Standard Deviation.

The Degree of technical challenges:

In what follows, the researcher categorized students'perceptions towards technical challenges in order to summarize them.

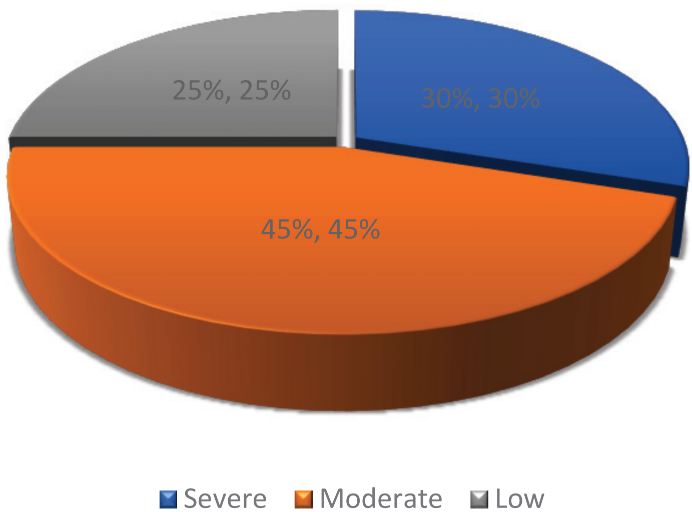
Table 3: Degree of the online program challenges.

Degree of the problems	n	%
Severe	12	30%
Moderate	18	45%
Low	10	25%
Total	40	100%

As Table 3 illustrates, the majority of surveyed students viewed the degree of problems in accessing online language sessions as moderate (45%, n=18), whereas 30% (n=12) of them indicated that they encountered some severe problems. However, a quarter of students indicated that no problems found while they were accessing online sessions.

A chi-squared test shows distribution of the degree of problems in accessing virtual sessions distributed equally (p-value > 0.05).

Figure 1: Degree of the problems in accessing virtual language classes



As it is clearly shown here, several technical and technological problems occurred but only within some varied levels.

Pedagogical issues

Table 4.1: Students'perceptions towards pedagogical issues

Statements		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The tutor always uses adequate teaching aids such as PowerPoint presentation.	n	0	4	10	16	10
	%	0%	10%	25%	40%	25%

Statements		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The tutor usually urges and encourage students to vividly participate in different stages of online session.	n	0	4	10	20	6
	%	0%	10%	25%	50%	15%
The tutors carry out discussion along with students during online session.	n	0	6	12	10	12
	%	0%	15%	30%	25%	30%
The tutors always give some personal feedback in a real time for each student work	n	0	4	22	12	2
	%	0%	10%	55%	30%	5%
Some parts of teaching materials such as listening, and speaking is hard to be learnt through virtual classes.	n	2	4	14	16	4
	%	5%	10%	35%	40%	10%
Allotted time for every online session isn't enough.	n	4	10	6	8	12
	%	10%	25%	15%	20%	30%
There's always good Communication and interaction between the teacher and students during the online session.	n	0	14	16	8	2
	%	0%	35%	40%	20%	5%

Table 4.2: Mean and standard deviation of responses towards pedagogical complications

Statements	Mean	Std. Dev.	Rank
The tutor uses adequate teaching aids such as PowerPoint presentation.	3.80	0.94	1
The tutor usually urges students to vividly participate in different stages of online session.	3.70	0.85	2
The tutors carry out discussion along with the students during online session.	3.70	1.07	3
The tutors give some feedback in a real time for each student work.	3.30	0.72	6
Some parts of the teaching material such as listening, and speaking is hard to be learnt through virtual classes.	3.40	0.98	4
Allotted time for every online session isn't enough.	3.35	1.41	5
There's always good communication and interaction between the teacher and students during the online session.	2.95	0.88	7

Std. Dev. = Standard Deviation

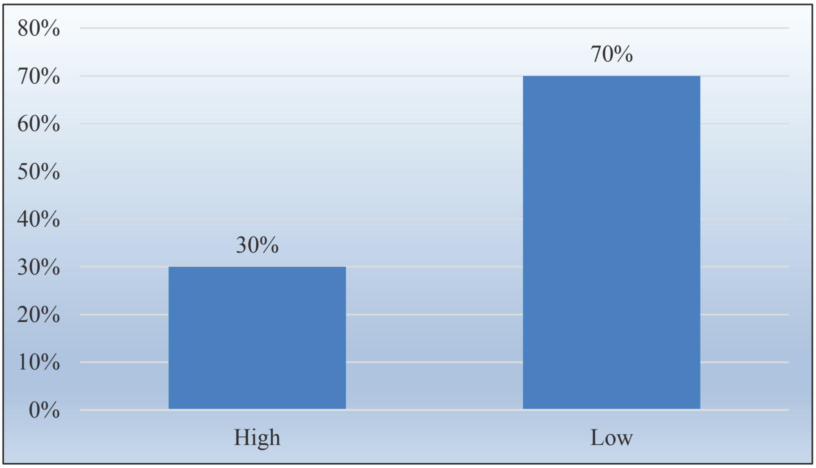
While Table 4.1 (above) shows frequencies and percentage distribution of students' responses regarding some pedagogical problems, Table 4.2 (above) shows descriptive statistics for their responses in this domain. Up to 65% of the students (n=26) agreed that the tutor always uses adequate teaching aids such as PowerPoint presentation., with mean responses of (3.8) and standard deviation of (1.0). Whereas, the majority (65%, n=26) agreed that the tutor usually encourages students to vividly participate in different stages of online sessions with mean responses of (3.70) and standard deviation of (0.85). Moreover, slightly greater than a half of the participants (52%, n=22) pointed out that the tutors highly carry out discussion along with the students during online session, with mean responses of (3.70) and standard deviation of (1.07). When investigating pedagogical problems, half of the participants (50%, n=20) pointed out that some parts of teaching materials could hardly be learnt through virtual classes, with mean responses of (3.40) and standard deviation of (0.98). In addition, up to 50% of the surveyed students (n=20) indicated that the allotted time for every online session moderately is not enough, with mean responses of (3.35) and standard deviation of (1.41).

Table 5: The Degree of pedagogical problems

Degree of the Pedagogical problems	n	%
High	12	30%
Low	28	70%
Total	40	100%

As Table 5 shows, the majority of students (70%, n=28) viewed that the degree of the pedagogical problem classes is low (p-value < 0.05). However, 30% of the students (n=12) indicated some pedagogical problems usually encountered while using virtual classes.

Figure 2: Degree of the pedagogical problems of using virtual classes



Stating on the above findings, we could conclude that, although the AOU students are experiencing some pedagogical difficulties in their attempt to use online classes, the degree of these problems is fairly low and it isn't as acute as technological impediments.

6. CONCLUSION

The present study is wholly devoted to reflecting on the experience of the AOU in Sudan in implementing online language classes during the Covid-19 pandemic. The results revealed that although learners are facing some challenges in accessing these online classes, they still demonstrating some positive attitudes towards this type of distance education. Mostly, the study draws attention to the problems of using ICT in EFL classes. So, it is likely to be of some benefit for the ELT practitioners mainly at the tertiary level Moreover, this study is expected to contribute in raising awareness of education authorities towards embarrassing some digital ways in education taking into consideration that most if not all of education institutions worldwide are expected to persistently advance towards ELearning particularly throughout the covid-19 era or any other similar time of crisis.

7. ACKNOWLEDGEMENT

The author is grateful to Dr. Ehab Abdel Rahim Eldawi, the assistant professor of statistics at the AOU for his invaluable assistance in analyzing the data through the SSPS software

8. REFERENCES

Arif, Nugroho &Arief, Atmogo (2020). EFL Classes must go online. Teaching activities & challenges during Covid-19 pandemic in Indonesia. Registrar Journal. vol.13, No1 (2020), pp49-76

Aboderin, Olukayode Solomon (2015). Challenges and Prospects of E-learning at National Open University of Nigeria. Journal of Education and Learning.Vol. 9(3) pp.207-216

Beaven, Tita; Emke, Martina; Ernest, Pauline; Germain-Rutherford, Aline; Hampel, Regine; Hopkins, Joseph; Stanojevic, Mateusz Milan and Stickler, Ursula (2010). Needs and challenges for online language teachers - the ECML project DOTS. Teaching English with Technology: A Journal for Teachers of English, 10(2), pp. 5–20

ÇAKICI, Dilek (2016). The use of ICT in teaching English as a foreign language. Participatory Education Research (PER) –Special issue 2016-IV, PP 73-77 November 2016

Franco.J (2020). The challenges of virtual education. httpss://ascilite.org/archived-journals/e- jist/docs/Vol17_No1/MeetingPOst/Challenges_virtual.htm

Gillette-Swan, Jenna K. (2017) the Challenges of Online Learning: Supporting and Engaging the Isolated Learner.Journal of Learning Design 10(1):20 DOI:10-5204/jld.vpi3.293

Gleason, Jessy (2013) Dilemmas of Blended Language Learning: Learner and Teacher Experiences" CALICO Journal 30(3):323-341 DOI: 10.11139/cj.30.3.323-

Green, P. (2016). How to succeed with online Technology (1sted, pp.261-286) learning. In. Rushby&D.W. Surry (E.Ds.). The Willy Handbook of Learning

Haroon, Noor et al (2105) E-Learning as a Platform to Learn English among ESL Learners: Benefits and Barriers. Research in Language Teaching & Learning (pp.79-106) –Chapter 5; Publisher: penrbit UTM press.

Khatoony, S., & Nezhadmehr, M. (2020). EFL teachers' challenges in integration of technology for online classrooms during Coronavirus (COVID-19) pandemic in Iran. AJELP: Asian Journal of English Language and Pedagogy, 8, 1-16. https://doi.org/10.37134/ajelp.vol8.sp.1.2020

Jairo Enrique Castañeda&Ferney Cruz Arcila (2016) Through Teachers' Eyes: The Use of Virtual Classrooms in EL. available online at: https://www.researchgate.net/publication/309848627_Through_Teachers'_Eyes_The_Use_of_Virtual_Classrooms_in_ELT

Oliver, Martin (2015). Evaluating online teaching and learning. Available online at: https://www.researchgate.net/publication/234783418

Mirzamohammadi M. H., "The Feasibility of E-Learning Implementation in an Iranian University" The Electronic Journal of e-Learning Volume 15 Issue 5 2017, (pp423-432) available online at www.ejel.org

Sun, Susan Yue Hua (2013). Online Language Teaching: the pedagogical challenge. Knowledge management &E-Learning: An international journal, vol3, No.3

Talboot, Christine (2010) Studying at a distance. A guide for students. Open University press-Mc- Graw Hill –England

الجامعة العربية المفتوحة
Arab Open University

AOU-OMAN

AOU-OMAN

Arab Open University - Oman
www.facebook.com

www.aou.edu.om

ISBN 978-99969-838-0-1

Arab Open University Branches in 9 Arab Countries

Kuwait Lebanon Jordan Egyypt KSA Bahrain Oman Sudan Palestine