INTERNATIONAL PERSPECTIVES ON THE ROLE OF TECHNOLOGY IN HUMANIZING HIGHER EDUCATION

INNOVATIONS IN HIGHER EDUCATION TEACHING AND LEARNING

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INNOVATIONS IN HIGHER EDUCATION TEACHING AND LEARNING VOLUME 33

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EDITED BY

ENAKSHI SENGUPTA
Centre for Advanced Research in Higher Education, New York, USA
International HETL Association, New York, USA

PATRICK BLESSINGER
St. John's University, New York, USA
International HETL Association, New York, USA

MANDLA S. MAKHANYA
University of South Africa

Created in partnership with the International Higher Education Teaching and Learning Association

https://www.hetl.org/

United Kingdom – North America – Japan
India – Malaysia – China

Emerald Publishing Limited
Howard House, Wagon Lane, Bingley BD16 1WA, UK

First edition 2021

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

ISBN: 978-1-83982-713-6 (Print)
ISBN: 978-1-83982-712-9 (Online)
ISBN: 978-1-83982-714-3 (Epub)

ISSN: 2055-3641 (Series)

ISOQAR certified Management System, awarded to Emerald for adherence to Environmental standard ISO 14001:2004.

Certificate Number 1985
ISO 14001

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LIST OF CONTRIBUTORS

Derek E. Baird	Independent Researcher, CA, USA
Patrick Blessinger	International Higher Education Teaching and Learning Association, NY, USA
Jeff D. Borden	Institute for Inter-Connected Education, CO, USA
Megan Eberhardt-Alstot	California State University, Channel Islands, CA, USA
Cathrine V. Felix	Norwegian University of Science and Technology, Norway
Mercedes M. Fisher	Concordia University Wisconsin & Concordia University Ann Arbor, USA
Lorna Gonzalez	California State University, Channel Islands, CA, USA
Afroditi Karapistola	Hellenic Open University, Greece
Mandla S. Makhanya	University of South Africa, South Africa
Serpil Meri-Yilan	Agri Ibrahim Cecen University, Turkey
Margaret Merrill	University of California, Davis, CA, USA
Eugenia Panitsides	Hellenic Open University, Greece
Alex Rockey	University of California, Davis, CA, USA
David Edward Rose	University of Newcastle, UK
Enakshi Sengupta	International Higher Education Teaching and Learning Association, NY, USA

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SERIES EDITORS' INTRODUCTION

INNOVATIONS IN HIGHER EDUCATION TEACHING AND LEARNING

The purpose of this series is to publish current research and scholarship on innovative teaching and learning practices in higher education. The series is developed around the premise that teaching and learning are more effective when instructors and students are actively and meaningfully engaged in the teaching–learning process.

The main objectives of this series are to:

(1) present how innovative teaching and learning practices are being used in higher education institutions around the world across a wide variety of disciplines and countries;
(2) present the latest models, theories, concepts, paradigms, and frameworks that educators should consider when adopting, implementing, assessing, and evaluating innovative teaching and learning practices; and
(3) consider the implications of theory and practice on policy, strategy, and leadership.

This series will appeal to anyone in higher education who is involved in the teaching and learning process from any discipline, institutional type, or nationality. The volumes in this series will focus on a variety of authentic case studies and other empirical research that illustrates how educators from around the world are using innovative approaches to create more effective and meaningful learning environments.

Innovation teaching and learning is any approach, strategy, method, practice, or means that has been shown to improve, enhance, or transform the teaching–learning environment. Innovation involves doing things differently or in a novel way to improve outcomes. In short, innovation is positive change. With respect to teaching and learning, innovation is the implementation of new or improved educational practices that result in improved educational and learning outcomes. This innovation can be any positive change related to teaching, curriculum, assessment, technology, or other tools, programs, policies, or processes that lead to improved educational and learning outcomes. Innovation can occur in institutional development, program development, professional development, or learning development.

The volumes in this series will not only highlight the benefits and theoretical frameworks of such innovations through authentic case studies and other empirical research but also look at the challenges and contexts associated with

implementing and assessing innovative teaching and learning practices. The volumes represent all disciplines from a wide range of national, cultural, and organizational contexts. The volumes in this series will explore a wide variety of teaching and learning topics such as active learning, integrative learning, transformative learning, inquiry-based learning, problem-based learning, meaningful learning, blended learning, creative learning, experiential learning, lifelong and lifewide learning, global learning, learning assessment and analytics, student research, faculty and student learning communities, as well as other topics.

This series brings together distinguished scholars and educational practitioners from around the world to disseminate the latest knowledge on innovative teaching and learning scholarship and practices. The authors offer a range of disciplinary perspectives from different cultural contexts. This series provides a unique and valuable resource for instructors, administrators, and anyone interested in improving and transforming teaching and learning.

Patrick Blessinger
Founder, Executive Director, and Chief Research Scientist, International HETL Association

Enakshi Sengupta
Associate Editor, International HETL Association

PART I

CREATING HUMANNESS WITH TECHNOLOGY

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CHAPTER 1

INTRODUCTION TO INTERNATIONAL PERSPECTIVES ON THE ROLE OF TECHNOLOGY IN HUMANIZING HIGHER EDUCATION

Enakshi Sengupta, Patrick Blessinger and Mandla S. Makhanya

ABSTRACT

The world's educational space is facing critical issues from globalization, accessibility and effort to integrate both technology and learner-centered knowledge. Educational practitioners, scholars and influencers are enthusiastic about infusing technology in their pedagogy and teaching–learning practices. There is a growing concern among policy-makers about the learning benefits of inducing technology into education, the psychological impact using technology and the safety of the information in learning environments. However, radical changes have taken place in the socio-political world, and education has become more democratized and humanized. Students are made aware the value of knowledge in a hyperconnected world and the need to continually learn throughout all stages of life. Successful inculcation of knowledge cannot happen only by improving the curriculum but also by achieving through an all-round development that allows the students the freedom to choose and participate in independent activities that result in social welfare and community well-being. The debate as to how to maximize the use of technology in education continues.

International Perspectives on the Role of Technology in Humanizing Higher Education
Innovations in Higher Education Teaching and Learning, Volume 33, 3–12

ISSN: 2055-3641/doi:10.1108/S2055-364120200000033001

This book aims to address the humaneness that surrounds the world of technology in education. It highlights the use of emerging technologies in pedagogy and case studies are cited to address the ongoing debate that technology brings a positive effect on education and mankind. The demand for technology continues as mankind faces unprecedented challenges where classroom education may not be possible. Technology continues to fulfill the challenges of creating a more democratic educational environment.

Keywords: Technology; learner-centered; safety; information; educational program; curriculum; accessibility; improvement; humanized; psychological impact

INTRODUCTION

Much has been written and debated about the current higher education system and its failure to deliver accessibility to quality education system. Current challenges comprise of increasing tuition costs and pressures for educational reform (Atkinson, 2010; Lederman, 2008; Lynch, 2013). Many academics have argued that students are disengaged in the learning process and the current teaching–learning process practiced in most universities does not encourage critical thinking or creativity (Atkinson, 2010). It is not only the students but academics have argued that faculty are equally disengaged in the process of teaching and assign over-inflated value to the exam and grading process. At some institutions, the main factor that motivates the faculty is finishing the assigned content, grading the students and completing the semester without placing much value to the creative learning process and engaging students with real problems of society. A survey conducted by McKinsey in 2013 showed that many graduates are unprepared for the "real world" and not equipped to compete in the job market (McKinsey in collaboration with Chegg, Inc., 2013). Gutting (2011) noted that proponents of higher education reform need better engagement as far as student–teacher relationship is concerned.

Our planet's resources continue to be stretched and it has become more complex with robotics, biotechnology, genetics and other innovations, which has a positive effect on mankind but at the same time makes our living more uncertain amid ever-growing global issues (Blessinger, Sengupta, & Makanya, 2020). Educational systems are undergoing rapid changes and alignment on a day to day basis where various institutions are competing with one another. The current and future curricula should be able to accommodate the needs of the students, enhance their life skills and develop their ability to think creatively and critically (Lase, 2019). There has been growing anxiety among educational institutions to contain the paradoxes and address them effectively so that our future generation is well equipped to create solutions to handle these issues. Strategies are crafted by institutions for curriculum re-orientation incorporating information and communication technology (ICT), data computerization and technology literacy to

create globally minded citizens having the required skills and competencies for future.

Technology is capable of alleviating us from the challenges that we are facing. Some of the new innovations that can raise the standard of higher education are e-textbooks, open resources, online classes, simulations, gamification, flipped classroom and active learning classes. Massive open online courses and learning management systems have changed the face of education, making it open and accessible to all. Yet, technology cannot be treated as one-size-fits all. While imparting online education one needs to remember the individuality of the student, the cultural background, exposure in the past, physical abilities and esthetic values. Hence, learner-centered approach is not confined to classrooms alone but should be extended to online learning, and technology should be able to support the humane side of the learners.

In order to make higher education more humanistic, institutions need to review their objectives, content and technologies that create a more humanistic-oriented education along with creative interaction with the actors and identifying a practical paradigm to make such an effort effective and working (Ignatovitch, 2016). Humanizing the student–teacher relationship is based on the system theory of personality developing training. It begins with the teacher paying attention to the students individually, treating them the highest social value and giving undivided attention to develop the intellectual, moral and physical qualities of the learner. Acquisition and development of knowledge are directed toward a humanistic approach where the traditional goal of education and training is reoriented into acquiring skills and competencies. A university degree is no longer valued as the one capable of algorithmic actions but one that developing artistic skills and have the freedom to choose their life-defining goals and professional activities (Ignatovitch, 2016).

LITERATURE REVIEW

Successful countries are facing the industrial revolution 4.0 with automatization and use of technologies in every field of progress. New generations are adapting to such rapid changes and it is the faculty member who can help them to acclimatize to such changes. Mentors and other faculty members are required to learn about the new ever-changing technologies, gain mastery over them and prepare themselves for global challenges. Every university needs to prepare itself for new information and literacy in this particular field of education. Old forms of literacy that depended on reading, writing and mathematics are giving way to data literacy, technology, and human capabilities and creativity. Literacy in technology will help students to learn about mechanics and automation, whereas humanizing the role of technology will create awareness about how to interact with the world and with people (Aoun, 2018).

Education requires optimization by making use of creative, innovative technology and is expected to change and adapt themselves with outputs that cater to the changing era. Fisk (2017) explains the existence of a new vision of learning

that promotes learners to learn not only skills and knowledge that are needed but an awareness that helps the students to identify the source to learn these skills and enhance their knowledge. With the advancement of technology, Quantz (2015, p. 99) emphasized that "social reconstructionist have developed into many different strands of educational thought, today this philosophy is best represented by a school of philosophy referred to as critical pedagogy."

Osiceanu (2015) also warned us about the dramatic uptick of the presence of technology in a learning environment resulting in cyber and virtual learning, giving very little thought as to how this might impact the students and their constant exposure to technology. What remains to be discussed and researched in the concept of humanization and critical pedagogy is grossly absent in a virtual setting. Education for long has been navigating the unchartered path of usage of technology and in times of crisis this has resulted as a boon to educators and students, but in spite of the welfare of the masses, there has been a dearth in normative discussion surrounding the priority of technology in institutions of higher education. Technology has been considered inherently beneficial for students and pedagogical practice and the absence of a discourse that critically examines the role of technology, and its impact has led to an influx in the usage of new platforms, apps and software's fanned by corporate influence updating them without considering the intellectual autonomy of faculty members, exercising monopoly of over captive markets.

Fisk (2017) as cited by Aziz Hussin (2018) has advocated several trends that relate to Education 4.0. E-learning tools are helpful in places that are hard to reach, remote and considered volatile. They give the students the opportunity of self-paced learning. The learning can be personalized and individual students with their separate chat rooms can seek help from the faculty, which in most cases they would have been shy or reluctant to do so. They have a choice of how to learn which content to access from the open sources and which they feel is difficult to comprehend. Students are subjected to mentor-based learning with individualized attention hence project-based learning is a great possibility to be explored. Students instead of being passive listeners can now apply logical trends in interpreting the given set of data and they can be assessed differently which otherwise may have been irrelevant. Mentors will have to pay more attention in designing and updating the curriculum and students on the other hand will be more responsible and independent in learning.

Education 4.0 is increasingly gaining its popularity and it is usually used by educationists to describe the integration of cyber technology into learning. Education 3.0 (Lase, 2019) as we know emphasized on neuroscience, cognitive psychology and educational technologies. Education 4.0 stresses on harmonizing human and machines to find solution to various problems and issues that can ultimately result in human welfare (Hussain, 2013). Dunwill (2016) also predicted significant changes as to how classrooms in the future will operate or even look like. There might be significant changes in the classroom layout, educational landscape will change with the integration of virtual and reality. Flexible learning style, flexibility in assignments and flexibility in assessments would take a center stage and online learning options will have a great impact on higher education.

Individuals in the age group of 18–23 years are getting exposed to the concept of higher education and integrating education with employability, which are embracing technologies in their everyday lives. This Generation Z (Gen Z) is welcoming the challenges and is actively participating in group discussions, interactive learning environment and self-paced learning mode. They have unlimited access to educational sources and can access them from almost anywhere. Their preference for digital tools and new technology is responsible for them to quickly adapt to the learning process dependent on technology and they want to access such facilities with low access barrier.

The world has seen an unprecedented wave of mass migration and homeless people from war-ravaged countries (Sengupta, Reshef, & Blessinger, 2019). There is a whole generation of students who are unable to have access to education and such challenging situations have created the need for technology. Technology is trying to create new pathways in education for the refugees. Technology may not be a panacea but research conducted in this field has shown that ICT for refugees, ICT for development, and ICT for education (Annan, Traxler, & Ofori-Dwumfou, 2015; Dahya, 2016; Kleine, 2013; Raftree, 2013; Wagner, 2014) support the possibility of using ICT to enhance and enable education for refugees. The role of technology in education seems to be a solution in this landscape where online education and mobile technologies are gaining popularity among refugee communities (Ally & Mohammed, 2013; Dahya, 2016). Sociotechnical theory emphasizes the mutually shaping powers of technology and society while incorporating the shifting values and practices that change and connect local and global communities (Latour, 2005; Sawyer & Mohammad, 2014) and that impact transnational structures related to accessing higher education for refugees.

CONCLUSION

Educational scholars and practitioners are still in the process of finding out what works best and the most effective possible method to deliver optimal learning facilities. We are in a stage when we are lured by educational technological companies about benefits of packaging and selling devices and universal tools that will help us in furthering the student's awareness about their environment and finding solutions to problems that were ignored till date. While we consider the positive aspect of technology, academics are giving thought to the humanizing aspect of technology and the increased control and surveillance. It is a matter of debate whether technologies can effectively manage classroom, whether they can substitute a real classroom environment and whether they are capable of generating creative and critical inquiry. The current educational environment is myopic in nature supporting an audit culture with accountability and fixation of data. The role of technology in education and mainly that of humanizing it will only unravel in years to come and will be based on context and situations. Technology is positive, ethical, supports and makes human lives better but the ultimate goal lies in training people; in that case faculty members and students

effectively use technology in the best possible manner and minimize its negative impact.

CHAPTER OVERVIEWS

"Socially Present? The Perception of Humanness Online through Video," by Alex Rockey, Lorna Gonzalez, Megan Eberhardt-Alstot and Margaret Merrill, talks about connectedness, which is essential to student success in online learning. By projecting themselves as real people through video, instructors support connectedness. In this chapter, researchers apply the theory of social presence (Garrison, Anderson, & Archer, 2000) to case studies from two public higher education institutions: a four-year university and a large research university. Analysis identifies video as a humanizing element of online courses. Findings suggest video could be used in a variety of ways (e.g., video lectures, synchronous office hours, weekly overview videos), and no single use of video was perceived to be more or less effective in developing social presence and humanizing the learning experience. However, participants especially perceived connectedness when video was used in a variety of ways. Students from the second case study validated a perception of connectedness to the instructor that faculty in our first case study hoped to achieve. However, one instructor's perception of disconnect illustrates that video is just one of the several pedagogical practices necessary to create a satisfying learning experience for both students and instructors. While video is not the only way to establish social presence, findings suggest video is an effective practice toward creating a humanized and connected online learning community.

"The Role of the Teacher and AI in Education," by Cathrine V. Felix, explores the development of new educational technology – in particular, artificial intelligence (AI) – the ever-dynamic role of the teacher is changing again. The traditional image of the teacher is as "the" source of knowledge and instruction in the classroom. Now, there are algorithms that can identify individual student needs and shortcomings in a way that only teachers could do until the recent past. AI-driven applications can give instructions and assignments that are at least reasonably well adapted for helping each student develop to his/her best potential. One could worry that the teacher will soon be replaced by technological artifacts, her job redundant. Although there is no sign that will happen, nonetheless AI is taking over many of the teacher's more mundane tasks, successfully, with no reason to doubt it will take over more of these in future. This chapter sets out the potential benefits and pitfalls of educational AI. Its central thesis is that the educational system must take full advantage of teachers' uniquely human expertise, bodily presence, and capacity for existential reflection. The idea is simple: teachers have an essential humanity that present-day AI cannot even begin to approach, under even the most liberal description of its capacities. To secure good education into the future, one must always remember that being human – having a mind with the capacity for self-reflective criticism and abstract thought – is a value in and of itself. AI stands ready to be a collaborative assistant, not a competitor, in the ongoing evolution of education.