9th World Congress on Information and Communication Technologies (WICT 2019)

GIET University, Gunupur, Odisha, India.

Special Session Workshop Proposal

on

Technologies and Trends in Educational Innovation (EduTrends 2019)

Conference Subtheme: "The Role of Technology in Education and Health"

Abstract: Educational Innovation is a topic that has been highlighted over the past few decades as a developmental element or tool used in classrooms, teaching and performance assessment, as well as, the higher institutions growth in the diaspora. Interestingly, in the context of Information and Communication Technologies (ICT), the theme (Educational Innovation) has drawn attention in different areas such as the AI in Education, Data Analytics for Education, Lifelong Learning, Competency-based Educational Models, Performance and Digital Assessment Systems, E-Learning and Collaborative environment, etc. For instance, studies have shown that the teachers and/or educational institutions can use various technologies and teaching tools to help develop and increase the student's competencies/skills level. Moreover, researches have shown that any effort to consolidate and foster the educational Innovation scheme must integrate the available technologies and theories. Faced with such paradigm shift, the academic leaders, researchers, innovators have to take up the challenge of building novel technologies and learning strategies towards achieving the said educational goals. To this end, this workshop theme believes that one of the conditions towards successfully achieving the educational innovation is to provide a strong theoretical or technological framework which integrates the planning, implementation and experimentations, results interpretation and improvement of the

educational processes in question. For example, the envisioned theoretical and/or technological frameworks can be applied to interpret the students' level of knowledge or status in terms of the domain of the acquired skills/competence, and in turn, to understand how they themselves relate to the available technologies and trends within the educational settings. On the one hand, basing the concept of the Educational Innovation on strong theoretical and technological frameworks will ensure its successful application. On the other hand, in order to support the outcomes and impact of the resultant frameworks, models, algorithms, and methods in the wider scientific or educational community, a single theory or technology is not enough, rather a series of theoretical/technological frameworks are needed.

Workshop Aim and Objectives:

The aim of this workshop is to bring together researchers from academia, government bodies, and commercial industries who are actively addressing problems in the area of Educational Innovation. This workshop offers the participants and audience the opportunity to discuss their completed projects, work in progress and lessons learned over the years so far, in order to plan for the future of "Educational Innovation" especially with regards the rapidly growing trends and technological advancements.

Presently and in future years to come, the methodological insights derived from the existing tools or methods which support the educational innovation particularly as it concerns "The Role of Technology in Education" can help deliver effective roadmaps on the next-generation of teaching and learning, as well as, decision making for different organizations. Indeed, the notion of the Technologies for Educational Innovation present various challenges to the research and IT community ranging from: The role of Technology in Education to Enhancing the students Assessment and Feedback through Technology, Using the Web and Computer-based Technologies to improve Collaboration across the Education domains, to the provision of Innovative Tools and Technologies to support Lifelong Learning, Design Principles for Collaborative Learning, Networked Learning Communities, Development and Evaluation of Learning Environments, Learning Systems Platforms and Architectures,

E-Learning, to Knowledge Management and Sharing, using Openly Accessible Online Teaching Materials (OER), ICT in Education, and using Information Technology to enhance Digital Inclusion, and to support those with Learning Difficulties, etc.

For all intents and purposes, these challenges are mainly directed towards Educational Innovation both in terms of the theoretical and technological levels. In view of that, this workshop aims to solicit and provide the methods on how we can manage more efficiently the current trends and tools that can be used to support the basic aim of the educational innovation. Perhaps, from the current researches and in this workshop, a significant number of questions are targeted to be answered. For example, amongst the different presented papers and discussion will be a focus on how to determine:

1. What methods or tools are tractable for Educational Innovation?
2. How can we make the value (quality) and impact of the technologies for education feasible in reality?
3. When are the results, methods, and answers beyond reach in practice?
4. What approximation theories, tools, models, frameworks, algorithms, or techniques can help us strike a balance between the quality of the educational innovation and the cost/challenges of implementing the process?
5. How can we effectively use the information technologies to improve the educational processes without uncompromising the ethical and/or personal factors such as information privacy, personalization of e-contents, self-learning? etc.

The educational innovation is perceived as the practice which seeks to introduce improvements within the educational domain by providing tools and in-depth analysis of the technologies that have a more impact on the higher education system. Thus, the proposal for this workshop "Technologies and Trends in Educational Innovation". Theoretically, this workshop aims to put together the relevant literature and

discussions in order to explore the technological potentials/prospects of using educational innovation to support the activities of the different higher institutions.

Therefore, since the Educational Innovation and its trailed technologies constitute the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources - we encourage researchers, students or professionals from academia and industry to submit papers that highlight the value and impact of Educational Innovation on topics that include, but are not limited to the following:

- New Trends and Practices in Educational Innovation that are transforming education around the world.
- Technologies to help improve the teaching-learning process.
- Implications of the digital generation in education throughout life
- New Methods and their impact in continuing education
- Competency-based Educational Models for Performance Assessment
- Educational Innovation Indicators
- Innovation Methodologies
- Emerging Technologies
- Educational Process Intelligence
- Educational Process Management
- Collaborative Social Networks
- Learning Analytics
- The role of Technology in Education
- Enhancing the students' Assessment and Feedback through Technology
- Using the Web and Computer-based Technologies to improve Collaboration across the Education domains
- Innovative Tools and Technologies to support Lifelong Learning
- Design Principles for Collaborative Learning
- Networked Learning Communities
- Development and Evaluation of Learning Environments
- Learning Systems Platforms and Architectures

- E-Learning
- Knowledge Management and Sharing
- Using Openly Accessible Online Teaching Materials
- Using Information Technology to enhance Digital Inclusion and to support those with Learning Difficulties
- Adaptive Learning

Important Dates:

Paper submission due: September 01, 2019
Notification of paper acceptance: October 15, 2019
Registration and Final manuscript due: October 30, 2019
Conference: December 16-18, 2019

Workshop Organizers:

Principal Organizers:

1. **Dr Kingsley Okoye** (Data Architect, Writing Lab, TecLabs, Tecnológico de Monterrey)
2. **Professor Samira Hossieni** (Director of Writing Lab,TecLabs, Tecnológico de Monterrey)

Co-Organizers:

3. **Professor Genaro Rebolledo-Mendez** (Mentor, Writing Lab, TecLabs, Tecnológico de Monterrey)
4. **Ms Isela Stefany Pena Gonzalez** (National Coordinator, Writing Lab, TecLabs Tecnológico de Monterrey)
5. **Dr. Arturo Arrona-Palacios (**Postdoctoral Researcher, Writing Lab, TecLabs, Tecnológico de Monterrey)
6. **Professor Jose Escamilla de los Santos** (Director of Educational Innovation at TecLabs, Tecnológico de Monterrey)
7. Others (TBA)

International Program Committee.

1. Dr Aaron Kans (University of East London, UK)
2. Dr Saeed MhD Sharif (University of East London, UK)
3. Dr Abel Usoro (University of the West of Scotland, UK)
4. Dr Stephen Odaibo (RETINA-AI Health, USA)
5. Others (TBA)

Short Biography of the Organizers:

Kingsley Okoye received his Ph.D. in Software Engineering from the School of Architecture Computing and Engineering, College of Arts Technologies and Innovation, University of East London, UK in 2017. He also completed a Master's degree in Technology Management in 2011 and a Bachelors degree in Computer Science in 2007. He is a MIET member at the Institution of Engineering and Technology, UK. and a Graduate Member in the Institute of Electrical and Electronics Engineers, IEEE. He is a devoted researcher to Industry and Academia in operational, hardware and software fields of computing in areas such as Data Science, Machine Learning, Artificial Intelligence, Big Data and Advanced Analytics, Software Development and Programming, and Business Process Management. Therefore, Kingsley has had the opportunity to do case studies and work in interdisciplinary and cross-cultural teams of various business and academic units that serve multiple industries. This includes serving as a software programming lab tutor for undergraduate students. He also serves as editorial board member and reviewer in reputable journals and conferences and has contributed to research and project outcomes by assessing and evaluating their impacts upon the scientific and industrial communities. It is Kingsley's personal mission to foster sustainable technical research and provide solutions through critical thinking, creative problem solving and cross-functional collaboration. He has also participated in presentations, research methods, and data analysis topics in several conferences and workshops. His Research interests include; Process Mining, Business Process Modeling and Automation, Learning Analytics and Systems, Semantic Web Technologies, Knowledge Management, Big Data Analysis and Process Querying, Internet Applications and Ontology. Kingsley is a Data Architect in the Writing Lab of Tecnologico de Monterrey. Kingsley is also a Member of the Machine Intelligence Research Lab (MIRLabs), USA. Profile link: http://www.mirlabs.net/global/index.php?c=main&a=person&id=1742

Samira Hosseini obtained her BSc degree in Applied Physics from the University of North Tehran, Iran, and her MSc degree in Polymer Chemistry and a Ph.D. degree in Biomedical Engineering from the University of Malaya, Kuala Lumpur, Malaysia. She served as a postdoctoral associate at Tecnologico de Monterrey, Mexico while holding a postdoctoral fellowship at Massachusetts Institute of Technology, Cambridge, USA. Currently, she is Director of Writing Lab in the Center for Educational Innovation at

Tecnologico de Monterrey, Mexico. She also holds the position of research professor at the School of Engineering and Sciences, Tecnologico de Monterrey. She is the author/co-author of more than 25 scientific publications, 19 book chapters and is the inventor/co-inventor of 4 intellectual properties. She is a member of the Mexican National Academy of Researchers (level one) and is on the Editorial Board of different international journals. Profile link: https://writinglab-tec.com/team

Genaro Rebolledo Mendez obtained his BSc degree in Informatics, his MSc degree in Computer Systems, and his Ph.D. degree in Computer Science and Artificial Intelligence at the University of Sussex, UK in September 2007. He is the author and co-author of 8 journal papers, 24 conference proceedings, and author and co-author of 3 book chapters. Currently, he is working as a Mentor at Writing Lab at Campus Monterrey, Tecnológico de Monterrey, Mexico. Genaro is also a researcher at the Universidad Veracruzana, visiting researcher at the IDEAS Lab of the University of Sussex and the Serious Games Institute, at Coventry University. He has previously carried out research at the London Knowledge Lab, Institute of Education, at the University of London. Genaro's interest is in the design and evaluation of educational technology that adapts to the differences of affective and cognitive sensitivity among students. Study how the motivational and cognitive difference impacts the behavior of students with educational technology and how it impacts students' learning technology. For this he uses artificial intelligence techniques, computer science, education and psychology. The subject of his PhD thesis is in the area of motivation in the learning environment. To analyze the degree of effectiveness of the scaffolds of motivational adaptations by using modeling techniques to develop motivation models that detect different degrees of motivation. These models are used as justification to adapt the reaction of the technology. His other research interests includes defining the scope of a technology-based learning environment to facilitate verbal and nonverbal communication of children with Asperger's disorder and the definition of guidelines for Web2 support tools for higher education teachers. Genaro is the co-editor of special issue on affective education that appears in 2008 in International Journal of Learning Technology (IJLT) and reviewer of Journal of Computer Assisted Learning (JCAL). Profile link: https://writinglab-tec.com/team

Isela Stefany Pena Gonzalez has a bachelor degree in International Business from Universidad Autonoma de Nuevo León, San Nicolas, Mexico, in which she went on an academic exchange to Cologne Business School in Cologne, Germany. Isela obtained a master's degree in International Business with concentration on Human Resources. Isela has worked on multinational firms in Monterrey and has applied Lean methodologies to improve the business processes. She has worked as Master Data and Human Resources Generalist and has experience using ERPs, data systems, and employee systems. Having Spanish as her native language, Isela is also proficient in English, Italian and German languages. She has interest in talent management, by training and developing people. Isela is currently the National Coordinator of the Writing Lab, TecLabs of Tecnologico de Monterrey, and she is the principal organizer of the series of Integrated Workshop on Research Methods and Publication that is organized on monthly basis for the Professors at Tecnologico de Monterrey. Profile link: https://writinglab-tec.com/team

Arturo Arrona-Palacios is currently a postdoctoral researcher at the Writing Lab Department which is part of TecLabs from the Tecnologico de Monterrey. One of his main goals as a postdoctoral researcher is to act as a Mentor in research in topics of educational innovation. Also, he is interested in sleep research, and one of his aim is to know the differences between sleep habits and circadian preferences with the double-shift school system (morning shift and afternoon shift) in Mexico and also match these differences with certain psychological aspects. In addition, Arturo explore several topics in criminology, such as community violence, aggression, and bullying. He is very passionate about research and open to the new ideas and exploring new topics of research in the future. Profile link: https://www.linkedin.com/in/arturo-arrona-palacios-30111934/

Jose Escamilla de los Santos is the Director of Educational Innovation at TecLabs, Tecnológico de Monterrey, Center for Innovation in Technology and Education of the Technological Institute of Higher Studies of Monterrey (ITESM). He studied Computer Systems Engineering at TEC, and Master and Doctorate at the Polytechnic Institute of Grenoble, France. His research area is the use of technologies in education. He has published in international congresses and workshops and directed doctoral theses. Member of the coordinating committee of Virtual Educa Zaragoza 2008. He is also an expert in innovation management and in the design, management, implementation, evaluation and research of different academic programs. Profile link: http://www.virtualeduca.info/universidades-y-redes-educacion-superior/universidades/88-escamilla-de-los-santos-jose