

Foreword

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Education under FIRE

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FIRE or the Fourth Industrial Revolution era is currently designing the landscape of the many aspects of society including education and the job market. Generation z learners (within age range 13-19) (EAB, 2018) may eventually find their niche (the future) in the workfield only if equipped with the 21st century skills. These skills (e.g., critical and creative thinking, design thinking, time management, personal and social capabilities with ethical and intercultural understanding [Australian Curriculum, Assessment and Reporting Authority, 2016; Taylor, 2016]) with the now known liquid skills (e.g., verbal communication, creative and critical thinking, active listening, and a disposition towards lifelong learning [Infosys, 2016]) require a new learning paradigm that may be able to bring the learners to 21st century-skilled state. Popularly as Education 4.0, this new education paradigm sets the education terrain to a system that focuses on the following attributes: remote and self-paced learning, personalized teaching and learning, field experiences, internships and mentoring, collaborative work for task completion, exposure to data interpretation, digital tests, inputs to designing and updating the curriculum, and re-skilling and upskilling of teachers (Fisk, 2017; Education 4.0-Mobile Learning, 2017).

The FIRE phenomenon also influenced how we present the articles in the 13th volume (issue no.1) of our journal-The Normal Lights. Themes within the issue encompass a good collection of articles on technology in education, STEAM education, and wellness and balance. We conclude with vision of the fifth to cap the fourth.

Consequently, the education terrain may heavily depend on technology use and integration in this era. Two of our articles used technology-driven learning strategy and/or environment to enact the curriculum. Cacho used the Facebook wall discussion integrated in flexible learning activity (FLA) in an undergraduate teacher education program literature course through a “10/90” model ratio of teacher and student online content contribution shared respectively. This model generated positive themes and active interactions of students. Sarmiento and Prudente used “MyOpenMath” (an open source software) to teach math and prevent students from engaging into “homework copying” and generated remarkable improvement to homework answering practices. Essentially, technology-driven strategies aim for improved student learning in the country.

As a complement to technology-integration, the concept of “disciplines are stronger together than apart” starts permeating the teaching and learning through the idea of STEM (science, technology, engineering, mathematics) with an “A” for the Arts. Seven of our articles described the disciplinary components of STEM. Four of these seven explicate the Arts to initiate the concept of togetherness. Sanchez and Rosaroso used narrative inquiry in describing the journey of teachers in implementing science investigatory projects. They found this teachers’ journey as instrumental in developing the research skills and science attitude and character of the students needed to initiate innovations. Their study may imply that learning STEM disciplines largely depend on the teachers’ skills and motivations. In fact, Albuero examined the pedagogical beliefs and classroom practices of mathematics teachers and found that high school math teachers demonstrated classroom practices that lean more to conventional approaches and are inconsistent with their pedagogical beliefs. Her results imply the need for training and professional development program to shift their pedagogical perspective to lean more towards constructivism. Fortes and Andrade concretized the concept of “constructivism”

through their study that explored the students' mathematical creativity in terms of fluency, flexibility and originality. Their study emphasized a student-centered process of using non-routine problems to develop an overall mathematical sense of the students.

Apparently, our next four articles focus on easing in the "A" to complete the STEAM paradigm. The Art of Reading is the emphasis of Dayagbil who used action research in implementing the Communicate, Read, and Engage (CRE). She found that the action (CRE) improved the reading comprehension level of struggling readers bringing them from frustration level to instructional level. Two other articles feature the Art of Language and Inclusivity. Manulim and Gonong worked on ascertaining the actual preferences of Filipino university students of voice in invitation letters and found a dominance of active voice. Their findings suggest that students give emphasis on foregrounding the doers. Espeno-Rosales and Careterro used case study combined with discourse analysis to peruse gay lingo and found that the stylistic variation of gay lingo is in the word coinage through phonology, and morphological transformations. In social context, gays and others use the lingo to conceal sensual topics, to gossip and to upscale one's status as well. Completing our articles on "A", Loatians Sengsouiya, Chatouphonexay, Phonoke, and Xiaxanith probed the Art of Learning of their university level English majors. They found that Loatians have more than one learning style preference, although most tend to prefer visual learning with other learning styles. Loatian gender also pronounce differing preferences, where males lean toward the kinesthetic-tactile while females go for group learning. Whichever pair emerge, productive learning still means balance in lifestyle consequently exuding wellness.

Our last two articles highlight the concept of wellness and balance for learners as well as for teachers in the fourth

revolution era. Zamora examined the college learners' nutrition knowledge and salt consumption and found that majority are unaware of the recommended salt intake per day and even upon awareness, these majority still prefer salted food for its affordability, accessibility and taste. Zamora's survey confirmed that health and food literacy are needed to promote good health and wellness among the learners. Work-life balance of STEAM (Science, Technology, Engineering, Agriculture and Mathematics) teachers of the Southern Tagalog region explored by Quintana, Mercado and Balagtas confirmed that teachers' personal life is sometimes affected by work despite availability of work-life benefits in educational institutions which include equal access to promotion, training and sickness leaves. Their findings may eventually spell out measures to review or craft new policies for work-life balance of teachers and other non-teaching personnel.

While we adapt to the fourth industrial revolution, we also deal with and care about humanity and inclusivity concretizing the visions of the Fifth Industrial Revolution era. This has been a highlighted challenge, as some of the champions of FIRE surmise that the new technologies have the capability to be an Orwellian "enemy of the" (World Economic Forum, 2019). With the surge of technology and the machines of FIRE continue to roar, innovators envision that humanity and the society may be able to survive through five beacons of hope: profit with purpose, targets for progress, closing the gender gap, scaling and spreading, the 5IR. The last contrasts the trends of FIRE and brings back the society towards the service of humanity to a achieve balance.

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