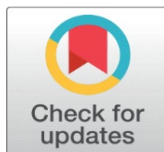
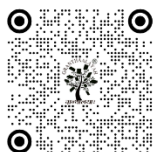


REIMAGINING NURSING EDUCATION THROUGH VISUAL AND EXPERIENTIAL PEDAGOGIES: INTEGRATING OUTCOMES-BASED AND EDUCATION 5.0 FRAMEWORKS

Steve M. Esteban  

¹ Faculty, Assistant Professor II, Isabela State University, Philippines



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Corresponding Author

Steve M. Esteban,
Steve1987doc@Gmail.Com

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1. INTRODUCTION

The dawn of the new reform in learning rooted from the constraints of the 5th Industrial Revolution (5th IR) where “exponential technologies” (Peters, 2017). This is where the cyber-physical systems (CPS) were realized. Such headways have introduced the use of implantable cellphones, reading glasses, clothes connected to the internet, robotic pharmacist, proliferation of bitcoin economy, and the absolute admission of the population to a fast-paced global network (World Economic Forum, 2015). This industry will expose the usability and availability of AI, robotics, nanotechnology, quantum computing, 3D printing, Internet of Things (IoT), autonomous vehicles, energy storage, wearable devices, embedded

ABSTRACT

The Fifth Industrial Revolution (5IR) calls for the transformation of higher education through innovative and learner-centered approaches that align with the evolving demands of modern society. This study examines the compliance and integration of outcomes-based education (OBE) and Education 5.0 frameworks within nursing education, with emphasis on visual and experiential pedagogies. Using an explanatory sequential mixed-methods design, the study employed total enumeration of respondents from Isabela State University. Data were collected through structured and unstructured interviews, as well as pilot-tested questionnaires. Findings indicate that the institution demonstrates full compliance with OBE standards. However, limitations in the effective utilization of high-end simulation facilities and equipment were identified, affecting the extent of innovation in experiential learning. Content analysis revealed key challenges, including inadequate simulation resources and faculty training, resistance to curricular reforms, the impact of the COVID-19 pandemic, and students’ study habits. Suggested enhancements emphasize the need for improved acquisition and expert use of simulation technologies, continuous monitoring of learner-centered curricula, strengthened research training, and comprehensive student support systems. The study concludes that integrating visual and experiential pedagogies within OBE and Education 5.0 frameworks contributes to the development of competent, future-ready nursing graduates equipped with 21st-century skills.

Keywords: Nursing, Visual and Experiential Pedagogies, Education 5.0 Frameworks

sensors and microchip implants. As its contribution to the prevailing society, it shall require accelerating workforce “reskilling” through education (World Economic Forum, 2017).

Thus, Education 5.0 (E5.0) is a desired approach to learning that aligns itself to the rapid demands of the new knowledge economy of the 5th IR. For universities to continue to produce successful graduates, they must prepare their students for a world where these CPS are prevalent across all industries (Muzira & Bondai, 2020). Historically, E5.0 has evolved from the colonial era from which the call of time has taught the youth from traditional farming skills, carpentry, dress-making, men-dominated cultures, indigenous and ethno-science transcended by the local Zimbabwean elders to their young. The aim of the reform is to utilize competitive, cutting-edge, scientific and technological erudition in the pursuit of producing goods and amenities and attain a prediction of middle economy by the year 2030 (Ministry of Higher and Tertiary Education, Science and Technology Development, 2018).

In today’s current education report, the Philippine Education System has not fully enfolded the integration of the advanced globalization of education. Among these modern challenges are shortages of school equipment and learning materials; absence of concrete scientific evaluation of the program’s efficiency and effectiveness during the new curriculum’s pilot implementation; teachers’ competence; hasty implementation and poor information dissemination; absence of academic conferences and seminar-workshops to fully understand the E5.0 standards; and lack of resources and mastery of subject (Umil, 2017).

In order to verticalize the mode of learning, the industrial reform has aligned its premises to apprise the medium of teaching. This has paved its way to the development, incorporation, and implementation of the Outcomes-based Education (OBE) in the living curriculum in the era of knowledge economy. This curriculum design is designed to permit the faculty to stimulate thought-provoking activities, learning modalities, and assessment strategies that is fixed on end-goals and desired learning outcomes. This is the moving aim of the OBE Curriculum (Tan et al, 2017).

In nursing practice, technology which includes telenursing, triple care that involves remote care with clients via camera, digital and Bluetooth stethoscope and chip monitor (Durlak, et. al., 2011). In 2016, the World Economic Forum suggested that problem-solving, creativity, communication, self-directed learning (SDL), collaboration and critical thinking skills would be the core skills of the 21st century nurses. Students are keenly taught in clinical skills development, since it is the key element used to evaluate the quality of nursing education (Cleary, et. al., 2018).

Succinctly, the Bachelor of Science in Nursing (BSN) is a four-year degree program that teaches students the necessary skills and knowledge for health care around four main components: health promotion, disease prevention, risk reduction, and health restoration. Isabela State University (ISU) is one of the top state universities in the country having been named as one of the 19 leading universities by the Commission on Higher Education (CHED). In the medium term until 2018, the University commits to break into international stature through the development of globally competitive graduates in the undergraduate and post graduate education. It is currently moved by its concurrent theme, “Sustaining Excellence, Pursuing SDGs, and Embracing Digital Evolution Towards a SMART University” and its mantra, “University for people, nature, research, entrepreneurship and innovations”. (ISU, 2015). The major stakeholder of the rapid shift and adoption of the 5th IR Nursing education are the 21st century learners. They are coined as it is because they have expectations that are unmet within the traditional mainstream of higher education (Castle & McGuire, 2010).

Currently, the CMO NO.15 S.2017 has an order to direct the HEI’s horizontal typology. An intuitive design in the curriculum is required by an applying Nursing program to achieve the expected learning outcomes and align it to the conventional vision and mission of the Institution.

2. THEORETICAL FRAMEWORK

The frame factor theory, proposed by Urban Dahllöf that run in the 1960’s is an apparent theoretical underpinning of this study. This theory is utilized in this study since it relates in the management of the program strategies and systems as well as the evaluation of the implementation of the system based on concerns pertaining to an institution’s equivalence and differentiation. In short, the theory underpins the organization, appropriation and advancing application of the SPGs enacted respectively by each sections of the Memorandum Order. Hence, this is the theory where the ‘curriculum map’ of a program is designed. This theory elaborates how factors and conditions in the implementation of a new curriculum affect the performance of students (Allen & Murrell, 1978). Hence, a triumphant organization has a wide comprehension of the factors that subsist and then impends change, so it is possible to take dominance of modification in the critical instances in which it operates. The change is accompanied by a quick response to solutions. The 5IR has furthered the

way the society face the world, even including reality itself. This is the point where the Industry 5.0 and Education Society 5.0 meets (Ślusarczyk, 2018).

2.1. RATIONALE

The potential outcomes that can be drawn out from the investigation can produce a 'ripple-effect' that might reflect the overall level of compliance and integration of educational standards of most nursing schools in the country. Thus, the author of this study targets to design the first-ever workable evaluation tools to guarantee the compliance and integration of every nursing program in the country to Outcomes-based and Education 5.0 standards there is no currently existing advanced and unswerving contrivances to quantitatively estimate the products of the abovementioned third-world standards. It is opted to be used by curriculum implementers and evaluators in and out of the country as benchmark tool for program evaluation. This is declared to be the ultimate purpose of this study.

3. METHODOLOGY

3.1. METHODS AND SAMPLE

In the study, the researcher employed the explanatory-sequential mixed-method design. The methodological design of the evaluation followed what Teddlie & Tashakkori in 2009 has supposed; that the idea is to realize explanatory inferences when investigating findings generated by several known methods.

Total Enumeration Sampling (TES) is a purposive sampling method where the investigator chooses to examine the entire population having a common set of characteristics. This sampling makes use of the units to make up the population (Crossman, 2018). Isabela State University- Ilagan, College of Nursing has 30 full-time Clinical Instructors and 76 regular level 4 Nursing students while ISU Echague has 23 Clinical Instructors and 153 level 4 nursing students. Due to the terms, all participants were qualified to take part in the study. This sampling gave the participants the equal chance to be selected from a statistical population (Plourde & Congalton, 2003). In the selection of the faculty, the said group of participants were selected through the following criteria; (1) manifested their interests in sharing their perception, personal understanding, and experiences in the implementation of the new curriculum; and (2) currently assigned for at least (1) year. On the other hand, the 21st Century Learners were selected while having the following criteria; (1) qualified products of the K-to-12 curriculum who were officially enrolled in the Nursing Curriculum of ISU-Ilagan, (2) who gave informed consent as participants, (3) who were regular students of the college without records of any failure and deficiencies in their major and minor subjects, (4) who can read and understand the questionnaires and tools written; and (5) and who were qualified to graduate within the school year.

The study utilized the two instruments in quantitatively and qualitatively gathering the data. Namely, the questionnaire used to quantitatively measure the unit's compliance to OBE standards, designed for both the faculty and the students and the unit's integration of the standards of Education 5.0 for the faculty. These instruments were crafted empirically from similar study using the same tools, literatures and ascertained parameters coming from curriculum experts. The development of the assessment tools conform to the method suggested by De Vellis (2003). The author conducted eight steps, which consists of: (1) determine what the investigator aims to measure; (2) Item pool generation; (3) determining a measurement format (i.e., response options); (4) review of item pool by experts; (5) consideration of validated items; (6) administer to a pilot group/ development sample; (7) Item evaluation; and (8) conduction of the study to the identified participants. After determining and qualifying the experts, the researcher conducted the S-CVI and ICVI rating. Thereafter, the pilot study with a large sample followed and were tested for internal consistency where the Cronbach's alpha was be computed.

4. DATA GATHERING PROCEDURE

Phase 1: Quantitative Aspect

Institutional research protocols and regulations were strictly observed by the researcher throughout the data collection procedure. Before data gathering, clearance and permission letters from the Graduate School, Institutional Ethics Review Board, respective head of the campus and the ISU Main Campus were secured and approved and the nursing department was selected as the setting of the study. When the Ethics Committee, the University President and

the Department Head approved the study, the investigator distributed the questionnaires to the participants through JotForm.

Phase 2: Qualitative Aspect

The participants in this step were the Faculty and level four nursing students of the ISU-College of Nursing. After the tools were eventually utilized for evaluation, certain results needed an elaborative interpretation. The researcher optimally believes that these cues can only be validated through a rigorous qualitative interview. The investigator, with the aid of qualified research assistants, had set an onsite interview for available participants, both students and faculty, and online interview for geographically inaccessible participants. This is to abide with the COVID-19 prevention measures and to save time and maintain quality. The interview had a readily available recording device or applications to record the data on hand.

5. DATA ANALYSIS

On the quantitative aspect of the study, specific data pertinent to the sections and subsections of the CMO 15 series of 2017 were relatively gauged in which the investigators proclaimed as necessary elements to reckon the attributes of the competencies. The Average Weighted Mean was used to calculate the probability or the weighted mean that is associated with a particular outcome or event with the associated quantitative outcome and then adding all the products together (Meier, 1953). These data described the 4-point Likert scale set in each tool. On the Extent of OBE-compliance Evaluation Tool, the data were rangely interpreted based on the utilization of accreditors derived from CMO 15 series of 2017 standards. They were scaled as follows: For the faculty: 1.00-1.75 = not compliant; 1.76-2.50 = slightly compliant; 2.51-3.25 = compliant; and, 3.26-4 FC (Paguigan & Jacinto, 2018). For students; 1.00-1.75 = unsatisfactory; 1.76-2.50 = satisfactory; 2.51-3.25 = VG; and, 3.26-4 E (Singh & Kumar, 2019). For the Education 5.0, the interpretation is as follows: 1.00-1.75 = not integrated; 1.76-2.5 slightly integrated; 2.51-3.25 = Integrated; 3.26 – 4.00 = fully integrated (Muzira & Bondai, 2020).

Content Analysis was used to identify the describable variables of the study namely, the issues and difficulties and proposed suggestions and enhancements to realign the program to standards set by of Education 5.0 in line with the Industrialization 5.0. This tool is a qualitative data analysis method involving a rigorous reading through a set of data like notes from in depth interviews. This helped the investigator identify patterns in meaning across an array of data to derive at a certain category (Clarke & Braun, 2012). This requires a systematic categorizing and coding of text to identify patterns and trends of terms through their structures, relationships, frequencies and discourses of communication (Powers & Knapp, 2010). Deductive analysis, in this case, was used by the author since relevant statements were derived from the participants' list of quoted statements.

6. RESULTS AND DISCUSSION

Table 1

Table 1 Summary of Overall Results for the Outcomes-based Education Extent Compliance					
	OBE-CMO AREAS	Ilagan Mean	Extent of Compliance	Echague Mean	Extent of Compliance
1	VMGO Dissemination and Acceptance	3.96	Fully Complied	3.98	Fully Complied
2	Faculty Standards & Functions	3.91	Fully Complied	3.93	Fully Complied
3	Curriculum And Instruction Implementation	3.97	Fully Complied	3.98	Fully Complied
4	The Campus's Support to Students	3.93	Fully Compiied	3.99	Fully Compiied
5	Conduct Of Research and Its Societal Convergence	3.94	Fully Complied	3.94	Fully Complied
6	Extension, Linkages and Utilization	3.99	Fully Complied	3.99	Fully Complied

7	The Campus Library	3.94	Fully Complied	3.97	Fully Complied
8	The Infrastructure & Academic Resources	3.96	Fully Complied	3.97	Fully Complied
9	The Simulation & Workshop Facilities	3.94	Fully Complied	3.96	Fully Complied
10	Administrative Functions and Support	3.97	Fully Complied	3.99	Fully Complied

Table 1 depicts that the following items had an Extent of Compliance of “Partially Complied” with a mean of 2.33 and below for the following: “The Doctoral degree of the Dean and the faculty” (Mean: 2.2 for Ilagan and 2.3 for Echague) and “The availability of a qualified Laboratory Technician” in Ilagan Campus. On the other side, the general result of all areas and specific items in each area for CMO-OBE Compliance had a mean of 2.34 and above which significantly verifies that the Nursing Programs of ISU Ilagan and Echague as “Fully Compliant” to the OBE standards in most of the areas.

Area 1: Vision, Mission, Goals and Objectives (VMGO) Dissemination and Acceptance

The campus VMGO is renewed and realigned to the up-to-date economic third-world demands every four years in ISU. The undertaking in the dynamic renewal is conducted during the University Strategic Planning under the review of the University President and the Board of Regents (BOR) in conformity to the requisites of the CHED. This concerted pursuit shapes and aligns the constantly growing human capital central to the demands of the modern industry through calculated and proven academic measures (Cascolan & Venture, 2019).

Area 2: Faculty Standards & Functions

The continuous upscaling in the qualification of nursing faculty in the country today has posted a challenge in the recruitment of nursing faculty in HEIs (Appiah, 2020). This has led to the abrupt-shift of nurses from nursing education to clinical nursing practice. As recommended by the CHED in 2015, nursing faculty (including part-time and full-time) shall obtain a master’s degree or a doctoral degree in the course. This helps them prepare the complexities in nursing science, graduate preparations in facilitating, clinical practice, research, development of curriculum and its implementation.

Area 3: Curriculum & Instruction Implementation

This prominently implies that the offering campuses support the rapid-shift from the traditional to the prevailing OBE Curriculum. Thus, the attempt to improve quality nursing instruction and clinical experiences based from the exhibited academic and clinical evidences through effective instructional design and exposure to desirable hospitals (tertiary settings) have been the promising end of ISU in terms of its adoption of the concurrent curriculum. As Forbes et al (2009) reiterated in their study on curriculum reform, the incorporation of quality competencies in nursing education and safety, restructuring of frameworks, methods to reduce content laden curricula and teaching while utilizing new pedagogies, should be taken into account.

Area 4: Support to Students

The overall acquiescence of the unit to student services addresses the well-rounded needs of students to survive in their academic passage. Rendon (1994) as cited by Cooper in 2010, supports the claim since many students in the new era today prove the association between a wide-range of student support and academic triumph. The orienting unit is tasked to enlighten the freshmen population to in-campus services to promote sense of belongingness, awareness of comprehensive support services such as advising, basic skills assessment, study scheme development, career exploration and financial assistance. The key to address the rising service demands begins with needs assessment, modeling flexible and creative programs and ultimately, assess the effectiveness of the activities (Williams, 2002).

Area 5: Conduct of Research and its Societal Convergence

As a whole, ISU as a leading research university in the region provides optimum motivation to its developing scientific community by providing assistance to paper presentations, participation to capacity building seminars/training, incentives to best paper awards for local, regional, national and international research presentations and incentives for publications to reputable journals (ISU, 2018). This exercise of social engagement allows reputable encouragement through the constant espousal of the educational society.

Area 6: Extension, Linkage & Utilization

The mechanisms of community involvement with the recognized and imperative service programs employed by ISU Nursing Department towards infirmity vulnerable groups in the vicinity has reinforced what Llenares and Deocariz (2018) proclaimed. Extension and public involvement allowed the community to feel the presence of the institution. In their study, it was proven that there is an escalating appreciation of the influence of Higher Education Institutions (HEIs) in the teaching-learning process as students operate disciplinary knowledge to address real-world problems. It plays as a link between the College and the community and an avenue where HEI expand their expertise in line with its programs. Community extension also promotes transfer of technology and products to uplift the economic status of the target beneficiaries.

Area 7: The Campus Library

The compliance of the campus to the universal library standards provides certainty to the academic society in terms of its scholastic service, resource availability and interagency linkages. In a provocative essay written by Bennett (2015), the renovation of library construction and architecture have responded to the wide impact of information technology in the new era. This emerged from the integration of electronic classrooms in professing information literacy to physically assimilating the space where print materials and electronics are kept. Some units have fashioned 'information commons' which are technologically equipped and manned by information specialists. Such headways have nevertheless continued to relive the traditional trajectory of permitting the mastery and manipulation of information in the modern library management and service.

Area 8: The Infrastructures & Academic Resources

The overall area result implies that ISU fosters a learning environment that is infrastructure and ergonomically wise. Welch & Saltmarsh (2013) proclaimed that the baseline development program for smart infrastructures include access, information competence, integration of existing resources, scalability, sustainability and functionality. The core goal of the university's human-oriented infrastructure is to make students lifelong learners and the faculty self-sufficient.

Area 9: The Simulation & Facilities

As an overall analysis to the area assigned to evaluate the acquirement of target facilities to enhance student nurses' learned skills, the expertise in manipulating simulated clinical scenarios allowed student nurses of ISU to integrate learned skills into practice through the availability of clinical workshop facilities. This compliance led to the evidently effective contribution of the faculty to produce clinical graduates equipped with efficient competencies. This deeply implies that simulation creates situations realistic to a particular work setting that provides students with the prospect of "practicing" psychomotor skills as well as integrating knowledge to the setting (Swenty & Eggleston, 2011).

Area 10: Administrative Functions & Support

The result greatly implies the role that the administration in managing academic and resource related needs of the campus is exemplary. Taking multiple factors in academic management and balancing between professional ethics and integrity allows for an expression of commendable and distinguished leadership function in an organization (Lester, 2009). Since the campus decision-makers are regarded as the key component in the management and control of resources and pronouncements in campuses, this exceptional performance of the ISU administrators label them as personnel indulge in operative interpersonal relations.

Table 2

Table 2 Summary of Overall Results for the Education 5.0 Extent of Integration					
EDUCATION 5.0 PILLARS	Ilagan Mean	Extent of Compliance	Echague Mean	Extent of Compliance	
1 Teaching	2.93	Fully Integrated	2.92	Fully Integrated	
2 Innovation	2.40	Fully Integrated	2.35	Partially Integrated	
3 Research	2.84	Fully Integrated	2.84	Fully Integrated	
4 Community Services	2.91	Fully Integrated	2.91	Fully Integrated	
5 Industrialization	2.63	Fully Integrated	2.43	Fully Integrated	

Table 2 illustrates the integration of education 5.0-standards to the Nursing Programs of ISU achieved a mean of 2.40 and extent of “Fully Integrated” for ISU-Ilagan and “Partially Integrated” for ISU-Echague. Hereof, the mean for this set of items is 2.40 for ISU-Ilagan with an Extent of Integration of “Fully Integrated” and 2.35 for ISU-Echague with an integration extent of “Partially Integrated”. Hence, the overall mean is 2.35 with an Extent of Integration of “Partially Integrated”.

In terms of Innovation, the most pressing critical issue identified on E5.0-integration in ISU Nursing Curriculum is its acquisition of simulation facilities in portraying the actual hospital settings. Today, both the program offering under one university system evidently has inadequate, outdated, and predominantly non-functional simulation apparatuses not fully maintained for student-skills development, according to the quantitative remarks and qualitative statements of the faculty and students of ISU. These substantiations coming from the different sets of participants convey that the Nursing Program offered by the two campuses remarkably integrates most of the Pillars of Education and I5.0 except for innovation, under which were classroom and simulation (ie. tools, facilities and equipment). Some renowned studies uphold the particulars that the dawn of the digital era is allotted to develop new digital products and services (Wiesbock & Hess, 2020). Digitalization, in most fields, has imposed challenge to modern researchers for theory and practice. Edokpolor in 2019, appraised that teaching implementation and learning is disrupted in the absence and inadequacies of major teaching aids and equipment. These domestic issues in technological availability relatively reflects the overall technical status of not just the Campus but merely the availability of advanced and avant-garde simulation equipment of most Higher Education Institutions in the Country. Moreover, the performance and motivation of simulation teachers are principally affected in the non-provision (by the campus administrators) of exponential technologies (MacKinnon, et al, 2017). The foremost advantage in simulation-aided instruction highly contributes to the theoretical training of nursing students to date. This high-end training equipment help students develop knowledge, skills and caring attitudes while creating a sense of security to patients while avoiding harm and errors. It is also crucial in the development of self-confidence, self-esteem, rational decision-making and comfort in skills execution (Lavoie & Clarke, 2017).

Table 3

Table 3 The Issues and Challenges Encountered During the Implementation of the OBE-Curriculum in the Nursing Program		
Summary of the codes and categories for the issues and challenges in OBE-compliance of the faculty and 21st century nurse learners of ISU-College of Nursing.		
Categories	Codes	Themes
Sustainability	Equipment Training Support Finance	“Inadequate physical resources”
Nursing Education	Instruction Implementation Curriculum E-learning Knowledge	“Encounters in instructional delivery”
COVID-19	Pandemic	“Instructional constraint during the Pandemic”
Student Performance	Study habits Personal Relationships	“Self-paced learning”

Table 3, through an inductive approach, showcases the codes derived from participants’ statements. From these collections of codes, the categories sustainability, nursing education, COVID-19 and student performances became the categories in the issues and challenges experienced by the faculty and students in OBE-compliance of ISU.

For the category Sustainability, the rationale of this category in the context in the field of education is based from the results administered by Damit, et al in 2021, who claimed that the disputes in campus sustainability in the realm of OBE implementation are the lack of administrative support, overloaded teachers’ tasks, unstable system implementation and inadequate implementation of the concurrent curriculum. This pertains to a method of using certain resource to avoid depletion or permanent damage (Bell & Morse, 2008).”

On the other hand, the values and standards must transcend with the particular time and particular culture in a deliberate fashion rather than merely left to occur as emphasized in the category Nursing Education. The increasing complexities in healthcare has forced these global standards resulting from the increasing number of caring

professionals towards the need to assure more equitable access to healthcare (WHO-Global Standards for the Initial Education of Professional Nurses and Midwives, 2019).”

During the COVID-19 Pandemic, Nursing Education faced the major catastrophe that landed in squaring the actual exposure of nursing apprentices with the reinvented simulation activities. As the crises elevated, many statutory bodies ordered to close colleges, schools and universities to prioritize the safety of students, teachers and nations. Due to the onset of the pandemic, universally, face-to-face classes, clinical placement of undergraduate nurses, and clinical skills laboratories were either curbed or proscribed in countries precariously affected by the outbreak. This aimed to safeguard and maintain the health and wellness of the stakeholders as a whole (Agu, et al, 2021).”

In a study piloted by Midraj in 2018 on OBE, academic discipline-related encounters, Students’ Performance created additional barriers in OBE implementation for teachers working in Vocational Schools. Among these are the student’s unfavorable habits and learning management that disrupts learning engagements despite of remedial work, motivation and encouragement.”

Table 4

Table 4 Suggestions Made to Realign the Program to the Standards of the Education 5.0.		
Categories	Codes	Themes:
Innovations	Equipment Technology E-learning Update	“Availability of high-end academic resources.”
Support	Trainings Administration Financial Student development Scholarship	“Nursing Program strengthening & reinforcement.”
Compliance	Instruction Curriculum Research	“Conformity to curriculum standards of the ISU Nursing Program.”

Table 4 illustrates categorical suggestions to realign the program to Education 5.0. Innovations, support and compliance were the identified categories with implications concisely described. In the category about innovation, the codes equipment, technology, e-learning and updates were identified by the author. In the category support in terms of training, administration, finance, student development and scholarship were coded. The final category, compliance, instruction, curriculum, and research were coded.

It was highlighted on the category Innovations that the ‘exponential technologies’ proposed by the 5IR has hosted the role of AI as cliché in the civilization (Peters, 2017). The cyber-physical systems overwhelmed the exponential culture to robotics, bitcoin economy, IoT, nanotechnology, microchip implants, quantum computing, embedded sensors, so-on and so-forth (World Economic Forum, 2015). In Tonybee’s report of the 5IR, the education domain became consistent with ‘reskilling’ its components, mainly the stakeholders and end-users, to keep-up with the demands of the prevailing education curriculum and the novel global economy (Schwabb, 2016).”

For student’s Support, students’ perception of teacher and parental educational bolster indirectly affect academic success through their plausible and significant motivations on students’ learning behaviors and academic self-concepts (Sanders, 1998).”

Moreover, in Casiano & Andrada’s study (2019) on the anchored to the category Compliance, having a stable background on seminar-workshop is not plentiful because teachers and implementers’ insight is only focused on the format used and merely not on its application in the classroom. In terms of syllabus submission, supervisors often track regular submissions and often times, fail to give feedbacks about the content. Teachers are strongly suggested to attend to trainings and seminars to learn about applications. The school is opted to arrange monitoring teams to verify the integration of the high-end curriculum in instruction.”

Table 5**Table 5 Enhancements in The Curriculum Proposed to Realign the Program to The Standards of The Education 5.0 Of The 5th Industrial Revolution**

Summary of the codes and categories for the curriculum enhancements designed to realign the program to Education 5.0 of the faculty and 21 st century nurse learners of ISU-College of Nursing.		
Categories	Codes	Themes
Nursing Curriculum	Instruction Curriculum	"Raising the quality of Nursing Instruction."
Facilities	Equipment Finance Technology	"Adoption of the technical standards of the 5 th Industrial Revolution."
Provisions	Student development Training Support	"Enhancements for the stakeholder's overall support."

Table 5 depicts in terms of enhancement, the pursuit to realign the standards of Education 5.0, the following categories were identified: nursing curriculum, facilities and provisions. In nursing curriculum, instruction and curriculum were the developed codes. The author themed it as, "Raising the quality of Nursing Instruction". In the category facilities, the codes were equipment, finance and technology. The theme was, "Adoption of the technical standards of the 5th Industrial Revolution". Finally, the category provisions maintained the codes student development, training and support having a theme of, "Enhancements for the stakeholder's overall support.",

Curriculum reforms are a customary process in modernizing the context of education within a course program (Omar, et al, 2020). In the category Nursing Curriculum, administrators need to carry out periodic monitoring of the implementation of the learner-centered nursing discipline (Hadi & Zain, 2016).

The second category pertains to facilities which covers the codes equipment, finance and technology. To enhance student skills and potentials, the campus administrators must enhance cooperative endeavors with various government and non-government agencies to harbor the required tools and equipment (Audu, et al, 2013). On financial aspects, the domestic units engaged on the financial concerns of the program must identify the updated sources of funds from the national to the departmental level to support existing projects, programs and academic activities (Annigeri, 2018). And in technology, the acquisition of high-fidelity and low-fidelity equipment, partial task simulators, virtual reality, standardized patients, e-learning facilities, and hybrid simulations makes learning more fashionable to the students (Koukourikos, et al, (2021).

Finally, the category Provisions appointed to the joint efforts among the faculty and the campus government. These category supports the codes on student development and training. A well-rounded support from the academic family, succinctly, the teachers, since the fostering environment created by the related groups is known to enhance a caring, gender and culturally sensitive and student-centered environment (Guzman, et al, 2017.)

7. CONCLUSION

The paradigm-shift from the traditional to the contemporary curriculum posited multitude of challenges to the stakeholders of Isabela State University.

Minor shortfalls in curriculum and instruction were attributed to teacher attitude, instructional preparedness and skills trainings, 'acceptance' of the growing academic trends and expertise in research. The campus administrators are also encouraged to provide genuine support to teachers and students as part of their development. Despite of the COVID-19 crisis, the unit also exceeded the global ordeals by implementing strategic adjustment, use of online resources and increasing simulation exposures. On another account, the unavailability, misuse, accessibility, lack of up-to-date trainings, affordability and maintenance of high-end simulation equipment placed the program as innovation-resilient, thereby, making the integration of Education 5.0 to the curriculum inadequate that reflects the overall status of most Nursing Programs offered in the country.

Overall, this study affirms that the Nursing Programs offered by the ISU – Echague & Ilagan campus – is with the learner-centered standards of CHED's OBE Curriculum. This evidently means that the program produced 21st century

nurse learners who have matching skills proficiency with the trending global economic standards through a dynamic learner-centered approach in teaching.

8. RECOMMENDATIONS

The Campus Administrators should uphold and primarily consider the welfare of the faculty and students as the implementors and end-users of the academic services through a continuous and genuine support in funding the required facilities and equipment for nursing skills development, rigorous trainings and workshop of faculty in handling accessible, affordable and available cutting-edge technologies and healthcare innovations, incessant monitoring and evaluation (accreditation) of learner-focused teaching strategies to promote quality instruction, grant scholarships and foster learning environment that is caring, non-gender-biased and culturally-sensitive. Moreover, the campus administrators should procure the required Workshop/skills/Simulation Facilities to engage more learning. This includes coordinating with the government (DBM, finance sector, etc.) and non-government units, communities, industries, labor unions and the wealthy clusters of the society in terms of contributing workshop tools, facilities and machines so that the graduates will optimally acquire the target Knowledge, Skills and Attitudes (KSA) to play part to the socioeconomic progress of the country.

Similarly, the Faculty should fully-embrace and adjust to the shifting curriculum of the new era. Since teacher attitude is a foregoing challenge, defining exit/terminal outcomes in all levels and incorporating OBE components in the learning outcomes and programs, contents, instructional methods of delivery and assessment procedures aids in fully accepting the curriculum. Relatively, Students must also learn to adjust and accept the new curriculum holistically. In addition, they must also align their knowledge, skills and aptitudes in caring by modifying their study habits and learning styles with the ILOs of OBE. The campus must provide seminars and trainings in the use of FTLM materials and MOOCs (Zoom and other virtual platforms) to increase students' interest and habits towards e-learning.

For Curriculum & Instruction, the stakeholders must learn how to 'embrace' the new curriculum by accepting directives, guidelines and strategies in the conduct of instruction. This includes an in-depth reading and study of the OBE and its incorporation to the lesson plan, IMs, course syllabus and clinical teaching plans. Applying this strategy may eliminate doubt, confusion and wave of oppositions in the teaching-learning environment. They must also abide with the shift of discourse from a teacher-centered to a learner-centered, learning-style diversified, problem-based and self-directed learning. On the other hand, Faculty Researchers must have teaching experiences in research gained through research subject teaching, consultations and panel evaluation. To become an effective nurse teacher-researcher, the faculty should embrace research wholeheartedly. This is attainable through continuing professional education (ie., specialty in nursing research), trainings and workshops. Functionally, the administration should encourage the faculty to conduct research projects, participate in in-house research presentations, increase internal and external funding and partnerships/linkages, and local and international engagements.

CONFLICT OF INTERESTS

None.

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