



Cognitive Ability of Nursing Students Anchored in Outcomes-Based Education

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ABSTRACT

The 4th Industrial Revolution (4IR) demands Higher Educations to adopt an up-to-date curriculum, innovative programs and align student skills according to the manpower needs of the modern society. Countries employed the Outcomes-Based Education (OBE) curriculum to ensure that their professionals uphold the expected third-world competencies. This study is sought to assess the cognitive skills and perception of the first-year nursing students in Isabela State University anchored to the OBE Curriculum of the 4IR. Mixed - method research approach was used to identify their perceptions of the OBE and assess their cognitive abilities. Simple Random Sampling Technique was used to select 51 participants.

The adoption of the program showed an “Average” result in the learner’s mastery level. The subject Theoretical Foundation of Nursing (TFN) was substantiated to be the easiest subject taken by the learners out of the 8 Professional Subjects where test questions were mainly categorized as “Lower-Order-Thinking Skills”. On the other hand, Microbiology & Parasitology, where “Higher-Order-Thinking Skills” questions were assigned was found to be the most difficult. Their profile variable had no significant attribute to their cognitive abilities. Perceptively, most (36) learners had no idea about the nature and implementation of the OBE curriculum where the concurrent nursing program is integrated. Since factors were attributed to students, facilitators, and the OBE curriculum espousal, the abovementioned curriculum adoption and implementation need to be reinforced to meet the intended competencies of the modern global industrialization. Further studies need to be conducted that is aimed at scholarly enhancing the curriculum.

Keywords : (Cognitive Ability, Fourth Industrial Revolution, Nursing, Outcomes-based Education, Strand)

INTRODUCTION

The legitimate era of the flourishing global standards of modern industrialization has proclaimed a cascading challenge in the foregoing education and course offerings in the universal arena (Rajae et. Al., 2013). The invasive stripe of the Fourth Industrial Revolution (4IR) where artificial intelligence (AI), Internet of Things (IoT), exponential technologies and the cyber-physical systems has penetrated the confines of healthcare, advertising, finance, transportation system, laws, education, work stations and every profession in the same way (Peters, 2017). This will include sophisticated features like flying cars, glitch-free internet, lorries, holograms, 3D Printers, nanotechnology, virtual reality and mechanical equipment that is not mentioned in the progress of the academic curriculum (Ganon, 2018). The uniform apprehension of this academic blueprint has displaced the traditional method of instruction, where teachers were transformed into facilitators directed to facilitate well-thought-out program concepts to stakeholders (Dimitrios, et. Al., 2013).

According to Hobsbawm and Wrigley in 1999, the Industrial Revolution is not merely the act of rushing the economic growth, rather an advancement brought about by an economic trend and social transformation. It can be traced back from the noble work of Arnold Tonybee in 1884 who conveyed the term “Industrial Revolution” in his lecture. It is clearly advocated in the reform that the 4IR will reshape the future of education, gender, and work (Schwabb, 2016). These have enforced the impression why students and program decision-makers need to understand the language of trending technologies and their ascertained capacities to drive them towards looking for a tradition-resilient job markets, work and recruitment platforms (World Economic Forum, 2017).

Also, according to Ganon, mastered skills must also be translated and communicated comprehensively to students, providing them demonstrative skills and aptitude connected to the 4IR. Baysanova & Asmolov in 2017, also discussed the significant relationship between the ever-changing technology that can enhance the process of recruitment through algorithms that simply match skills with the employer’s needs.

Education have been acclimatized in adapting the constantly changing, progressively dramatic and dynamically crossing demands of the world. OBE have been originally linked to the Behaviorist's Theory that rooted to critically scrutinize the assessment and competency parameters of a wholesome nursing education. Moreover, OBE which have been advocated for more than 50 years has been designed to define knowledge requisites, general skills and blueprinting assessments in the scholarly arena (Morcke, et. Al, 2013).

With the tremendously engaging milestone to globally educate the learning-resilient world, it has simultaneously evolved, innovated and preferably modified to seamlessly fit the gaps in the learning process. Due to the increasing need to produce globally competent learners, a new reform in the educational system was conducted to improve the unilateral system of learning and scholarly transform it into a learner-centred approach (Tan, et. Al, 2017). The focus of this approach is more on the output (outcome) rather than the input (thought). Thus, student achievements can be measured, proven and can be improved (Mohieldein, 2017). This has motivated the author of the study to deliberately gauge the introduction of the OBE curriculum in the nursing program for the 21st century nurse learners. The time-to-time dynamics in science and technology forces the production of well-qualified graduates equipped with the aligned knowledge and skills to fill the proper work qualifications. Hence, it is imperative that the ultimate vision of universities and colleges around the world is to restructure the academic models to focus on outcomes (Utsumi, 2019).

This is ultimately the moving aim of the OBE Curriculum. It represents a curriculum design and teaching models that bears a student-centered approach system that discovers what learners should know, demonstrate, comprehend and adopt diversely with the standard educational curriculum (Tan, et. Al, 2017). Although OBE has been advocated for over 60 years, historically, it was earlier introduced by Dr. William Spady, a head of Change Leaders, a sociologist and the father of the latter. It was still cited in nations such as City University of Hong Kong, Australia, US, Sri Lanka and Malaysia where it had greatly impacted and is beneficial on actual end-users. His work was honored in the Philippines in 2015 when it was introduced in some local schools for grade 10-12).

In the Philippines today, the tertiary education curriculum is standardized by the Commission on Higher Education (CHED). An array of program offerings in the locale is legally piloted by the Policies, Standards and Guidelines (PSGs) scribbled in the statements of the policy-making body to timely assess and evaluate, and rigorously regulate the realization of dignified Higher Education Institutions (HEIs) and technical skills development authorities (Bandalaria, 2014). In his declaration in 2017, President Benigno S. Aquino III has sanctioned the Republic Act (RA) 10650 otherwise known as the "Open Distance Learning Act" levelled to magnify the access to educational opportunities and services through the institutionalization of Open Distance Learning (ODL) to HEIs with archetype aids and fund appropriations from the domestic state. With the implementation of the CMO 15, series of 2017 on the Policy and Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through Outcomes Based and Typology-Based QA, learning institutions in the Philippines were all mandated to improve and incorporate such programs and undertakings to realign student skills with the demands of the 4IR to their qualities to the future employability of sophisticated jobs (CHED, 2017).

In OBE, outcomes are significantly achieved through the execution of specific course contents pronounced in aligning the expected competencies of 21st century nursing students. It is contrary to the outmoded learning outcomes in the sense that the learning is conformed in a unilateral manner. Succinctly, students do things more than simply know things. For example, in a nursing skills simulation, the former focuses on the understanding of theories while the latter focuses on the acquisition of cognitive and psychomotor skills in providing an evidence-grounded caring practice to expected clients (De Guzman, et. Al, 2017). Henceforth, transforming traditional students into lifelong learners.

A tool used to complement the OBE implementation is the introduction of Bloom's Taxonomy in various curricula. It was introduced by Benjamin Bloom in 1965 (Agarkhed, 2018). It embodies the cognitive, psychomotor and affective domains that is intuitively measured as yardstick on apprentice's academic and clinical activities including classroom recitations, return demonstrations, aptitude tests, minor and major examinations (Di Floro, et. Al., 1989). In addition, it fosters higher order thinking skills like analyzing situations and critical thinking skills that improve clinical decisions and concept evaluation, more than remembering the facts. It also includes didactic skills like case studies, integrated design project (IDP) and problem-based learning (PBL). This tool was used by the author to quantitatively estimate the performance of the participants in their respective major subjects. On the part of the facilitators, it is sought to showcase congruency of the structured course syllabus with the post-test construction and Table of Specifications (TOS).

Like any other education models, OBE also received drawbacks and negative feedbacks from education critics and devoted stakeholders. A specific problem is pointed to pre-determined outcomes that are too-specific, objective, measurable and too broad that it could not withstand liberation, which observably results into a rigid, reduced, fractional and may substantively fail what it supports to promote (Brody et al, 2004; Jacobs et al, 2005 and Lai and Ramesh, 2006 as cited by Morcke in 2013). Studies also claimed that the OBE curriculum, on the positive side, had higher instances of advantages than its sought infirmities (Mustapha & Konting, 2008).

Homegrown University and College students were rated to have higher acquisition of academic production after each instruction since the implementation of the OBE (Borsoto, et. Al, 2014). It was, otherwise, determined to be more useful in terms of improving education, level of instruction and student aptitude with OBE-knowledgeable faculty contributing significantly to the realization of institutional and program objectives (Laguador & Dotong, 2014).

Isabela State University (ISU) offers different program courses where OBE is formally introduced to its 21st century learners. There is a dramatic and drastic change in the implementation and this noticeable gap seeks to measure the significant relationship of the curriculum with the actual performance of the first-year nursing students through evaluative examinations, one of which is the Battery examination. Multiple choice tests have been a staple of student assessment for decades, and it is likely that they will remain so for a long time to come (Catapano, J. 2018). This type of test was preferred by the author in analyzing the inclusive performances of students with their major subjects.

Transition of traditional learning to learner-centered learning

OBE provides a skeletal framework which works to focus and organize the curriculum towards a prearranged and clearly stated apprentice learner-centered outcome. The vast need to produce a more equipped profile and qualification of competitive learners for the globalized world has led to the newly designed education curriculum system whereby learning is not stated to a unilateral model of educational systems, but the responsibility is borne by the learners. It is transformed from the customary method of teaching which is teacher-focused more than learner-focused (Tam & Biggs, 2014). In OBE, skills are measured through the revision of course contents which is significantly aligned to the new reform to drastically change the conceived behavior of the students. The 21st Century Learners under the spiral curriculum are the initial stakeholders of the curriculum. It is widely known to be contradicting to the old-style curriculum and is now focused on the diverse manner of teaching-learning process that shall impact on the overall attributes of the student. Succinctly, students do things more than simply know things.

Teaching apart from facilitating

Cognitive skills of lower years are highly distinct with the cognitive skills of higher years and should be well measured in the scale wherein during the first two years of the learning experience of students, cognitive skills must be well developed as a foundation of their relative skills (Jshabatu, 2018). Morcke, et. Al., in 2013, established two requirements in OBE implementation; first, a crystal clear, well-defined learning outcome or otherwise an educational outcome that is a dominant issue. Second, the learning outcomes must be communicated by the educators firmly to align the curriculum and pedagogy in module design, activities with expected outcomes and assessment tasks (Dobbins et. al, 2016).

The teacher and facilitator's work in the OBE is hugely different. This is in the sense that the teacher does 'teach' while the facilitator independently 'facilitates'. Students tend to think of the commonalities in teaching and learning in the traditional way. Students tend to feel entertained in the old-fashioned way, wherein, when there is no point to listen, students omit to participate. Scholars have distinguished the context at how students perceive entertainment from educating. Educating is not like entertainment that allows students to sit in a movie house and be entertained and lastly to summarize what they have witnessed in a few sentences. Moreover, in OBE, learning is different from summarizing; it is the process of changing behavior. In the newly adopted curriculum, the facilitators are not the only sole person to be involved in the teaching-learning process. Thus, students take big chunks in the conduct of lifelong learning (Malnuit, 2017).

Philippine implementation and industrialization

The Association of Southeast Asian Nation (ASEAN) was tasked to implement and embody the overall conduct of the OBE of all HEIs in the Philippines. The model developed covered six areas namely: 1) instructional design; 2) teaching methodologies; 3) related learning experience; 4) faculty readiness; 5) learning resources; and 6) evaluation process. It was evident that the validity of the model developed was found to be high, and the outcry for its implementation upon approval of the technical models to execute the conduct of the new learning models by the higher education institutions in the Philippines. OBE has shifted the Philippine education system by the following factors. First is due to the universal adoption of an outcomes-based framework based on the international trends that align the paradigm shift for globalization. Second, there is a humungous acceptance of a borderless and seamless education in the global community. Third, the modern industry has shifted to a competency-driven society and workplace. Fourth, the demand of the 4IR equipped with global proficiencies and fifth, the Philippine Qualification Framework is the conduit to "establish national standards and levels for outcomes of education and training, skills and competencies" (National Institute for Learning Outcomes Assessment, 2019). Morcke also stated that in Constructive Alignment (CA) that, "it is possible for teachers to focus on what outcomes students are expected to achieve and provide them with the assistance to do so". OBE is

designed to assist facilitators to influence students' practice to gear towards a well-cognizant knowledge, skills and attitudes (Borsoto, et. Al., 2014).

The development of students' soft skills is the intended product of the OBE. However, the attainment of soft skills maybe difficult to measure. It is from the fact that the assessment of soft skills must be conducted rigorously to elucidate a prominent development of students' related skills. This is essentially the root cause of challenge in the administration of the OBE-curriculum. The author of the study sought to quantitatively and qualitatively assess the first-year nursing students' cognitive domain performances through the result of their battery examination, identify considerable factors, subject evaluation and to come with the framework and program to enhance student learning and curriculum implementation. Overtime, the curriculum will be evaluated until the identified participants will finally complete their course program. Thus, this will collectively evaluate the impact of the OBE curriculum in nursing education and if the instruction has triumphantly adopted the set-competencies of Industry 4.0.

Summary

The learners of the 21st Century is a diverse class of learners. To prepare them from a drastic transition of the traditional learning methods to a westernized technique in education, international education qualification must be adopted universally by institutions to meet the demands of unilateral globalization. The identified skills of students must have a deliberate and qualitative 'shift' to effectively uphold the expected competency needed in industrialization gained through a well-structured outcomes-based educational reform.

Objectives

This study is conducted to assess, through the battery examination, specifically in the cognitive domain, what are the relative performances of first year nursing students anchored to the OBE Curriculum and their individual perceptions.

Specifically, this study seeks to:

1. Identify the profile of the participants when grouped according to age, gender and strand.
2. Determine the perception of the first-year nursing students of ISU – Ilagan towards an OBE – dized Curriculum.
3. Identify the cognitive ability of first year nursing students in the major subjects anchored in the OBE.
4. Identify the difference on the students' cognitive ability when they are grouped according to profile variables.
5. Identify what subjects were found to be the easiest and most difficult amongst the freshmen Nursing students.

Methods

This study used mixed - method research approach. The researcher used the said research design to identify the perception of the first-year nursing students about the concurrent OBE curriculum and, at the same time, assess their cognitive abilities in the major subjects through the statistically intervened Battery Exam result.

Questionnaires were designed and distributed to the target participants to collect facts or opinions about the phenomena of interest. This was used in the study to understand the first-year nursing students' perception on the OBE Curriculum. On the quantitative side, the test is composed of six major questions with sub – questions.

The battery test is a promotional or qualifying exam conducted to first year nursing students before they are promoted to the sophomore level. The examination is composed of One-hundred-twenty (120) items. The total number of major subjects and disciplines officially included (as per program policy of the curriculum) in the battery exam is eight (8), to mention: Theoretical Foundation of Nursing (NUR 111); Anatomy and Physiology (NUR112), Biochemistry (NUR113); Health Education (NUR121), Fundamentals of Nursing Practice (NUR122); Microbiology & Parasitology (NUR 123); Logic and Critical Thinking (NUR 124) and Health Assessment. Each discipline is intuitively shared by different professors who taught the subject inclusive of the year they were offered. Fifteen items were carefully extracted and collected from each facilitator. With the presence of an expert test analyst, questions were uniformly categorized utilizing the six (6) Bloom's Taxonomy levels. A range of values was used as a basis in interpreting the obtained data.

Simple Random Sampling (SRS) was also used to extract specific and credible participants from a volume of population (Plichta, Kelvin, 2018). The participants of the study were the first year students from the Isabela State University- City of Ilagan, Nursing department. Fifty-one (51) students were statistically selected out of the total one-hundred one (101) population.

RESULTS

The 21st Century Nursing Students' Profile

Table 1: The frequency distribution of the Participants according to their Age

| Age | Frequency | Percent |
|-------|-----------|---------|
| 18 | 12 | 23.5 |
| 19 | 35 | 68.6 |
| 20 | 4 | 7.8 |
| Total | 51 | 100.0 |

As can be seen on the table, majority of the participants fall under the age of 19 (68.60%). However, only 7.8% of the sample size is in age 20. The mean age is 18.84. As can be computed, the sample size is composed of 86.30 % female and 13.70% male participants.

This implies that generally, the students are in the ideal age-bracket of a first-year college student.

Table 2: The frequency distribution of the Participants according to their Gender

| Gender | Frequency | Percent |
|--------|-----------|---------|
| Valid | | |
| Female | 44 | 86.3 |
| Male | 7 | 13.7 |
| Total | 51 | 100.0 |

It is very evident that there are more female participants in the study who preferred to enroll and take the nursing course. It can also be inferred that there is one male for every six females among the BSN students.

Table 3: The frequency distribution of the Participants according to their Strand.

| Strand | Frequency | Percent |
|--|-----------|---------|
| Valid | | |
| Science Technology, Engineering & Mathematics. | 19 | 37.3 |
| General Academic Strand | 11 | 21.6 |
| Accountancy, Business Management | 9 | 17.6 |
| SPORTS | 2 | 3.9 |
| Humanitarian Subjects | 2 | 3.9 |
| Technical Vocational | 8 | 15.7 |
| Total | 51 | 100.0 |

Moreover, most of the first-year students who took Bachelor of Science in Nursing chose STEM Strand (37.30%) during their Senior High School years. This was followed by GAS (21.60%) and ABM (17.60%) as one of the most numbered in the sample size. However, only 3.90% of the sample size came from HUMSS and SPORTS. Subjects directly aligned to Bachelor of Science in Nursing includes STEM, GAS and TVET.

From this data representations, the Science, Technology, Engineering & Mathematics (STEM) are aligned with the allied health mainstream significantly including Doctor of Medicine and Nursing. In a study conducted by Malaga & Oducado in 2018, students who are products of the STEM Strand appeared to have higher levels of preparation to take up nursing course. Institutions offering accredited nursing programs consider academic strands from senior high schools when admitting students in the nursing program.

Table 4: The perceptions of the participants in OBE

| Questions | Responses | Theme |
|--|---|--|
| 1. Have you heard of the Outcomes-based Education (OBE) deciding your course? How do you get such information? | 15 out of 51 participants stated that they have already heard about the OBE. Most of them (11) got such information from their instructors. It can also be noted that only a few searched from the internet (2) to gather information about the said curriculum and only one (1) participant said that he/she heard it from his/her former senior high school teachers. On the other hand, 36 out of 51 participants do not know what OBE all is about. Collectively, the common reasons reveal that they never had an idea about the said curriculum and that they only know the acronym of OBE but admits they do not know what | “Limited knowledge about the phenomena”. |

| | | |
|---|---|---|
| | the concept is all about. | |
| 2. How do you know if the teacher has adopted OBE in the pilot course(s)? | Since 31 of the participants did not have prior knowledge about the OBE curriculum, most of them do not know if their facilitators adopt the abovementioned method in teaching pilot course(s). However, 20 participants said they were familiar with the curriculum. They also realize that the facilitators utilize the method if the facilitator focuses on the outcome/ performance of the students or when they supervise the students to discover the meaning of a certain concept. | “Intricacies in the OBE-adoption in instruction .” |
| 3. How do you describe your perception of OBE? How is OBE different from the traditional teaching approach? | Based on the responses, 34 participants are not quite familiar about the difference between OBE and traditional teaching approach. On the other hand, 17 participants found that OBE is more on activities, independent learning and less on “spoon – feeding” which makes them more productive. The participants also said that OBE approach focuses more on students, on developing critical thinking skills, cooperative learning, guided discovery method and students’ outcome while traditional teaching approaches focuses more on knowledge, memorization, and “spoon-feeding”. | “Familiarity of the nature of OBE”. |
| 4. Do you believe OBE is helpful to your learning? Why? | 40 participants do not know the impact of OBE in learning. Likewise, they do not know if it is helpful or is incorporated on class discussions. However, 8 of them said that OBE is very helpful in learning because they don’t need to depend too much on the facilitator, they can easily incorporate their learnings in the actual performance, they can easily understand the lessons being presented, and they can bring out the best version of themselves. | “Perceived advantage in learning”. |
| 5. How do Intended Learning Outcome (ILO) help you understand the focus of the course and the purpose of the assessment task? | Based from the 21 participants’ responses, Intended Learning Outcomes (ILO), the expected outcome brought about by the OBE, is valuable in identifying the skills, knowledge and attitude needed for the students to learn. In addition, the participants also appreciated the advantages that the curriculum brought to them. However, 27 participants were unaware of the definite purpose of OBE. | “The desired competencies of OBE to expected learners”. |
| 6. How do the teaching and learning activities support the ILOs? Give examples. | 29 participants are unaware about the teaching and learning activities (ILOs) conducted and taught in the OBE Curriculum. With this, they failed to provide concrete examples because of their inadequate knowledge about ILOs. Global competency (4), assessment and independent skills (1), enhancements (1), seminars (1) and brainstorming activities (1), linkage-establishment (5), actual performance (4) are the other perceived means of participants in the academically supportive application of ILOs in the teaching-learning process. | “Teaching and learning the ILOs”. |

Table 5: Cognitive Domains that affect the Learning Process among BSN freshmen students

| | | | |
|-----------|------------------|-----------|----------------|
| Wherein: | | | |
| R | Remembering | E | Easy |
| U | Understanding | A | Average |
| Ap | Applying | D | Difficult |
| An | Analyzing | VD | Very Difficult |
| Ev | Evaluating | | |
| Cr | Creating | | |
| DI | Difficulty Index | | |

Table 6: Learners' Cognitive Abilities in the major subjects anchored in OBE

| Area | Mean Percentage Score of every aspect of Cognitive Domain | | | | | | | | | | | | |
|--------------------------------------|---|----|-------|----|-------|------|-------|-------|-------|-------|-------|-------|---|
| | R | DI | U | DI | Ap | DI | An | DI | Ev | DI | Cr | DI | |
| Microbiology & Parasitology | 29.70 | D | 50.83 | A | 35.31 | D | 20.79 | VD | 66.83 | E | 40.59 | D | |
| Theoretical Foundation of Nursing | 64.02 | E | 51.16 | A | 61.06 | E | 60.40 | A | 25.25 | D | 20.30 | VD | |
| Health Assessment | 44.55 | A | 27.72 | D | 61.72 | E | 48.02 | A | 48.02 | A | 27.23 | D | |
| Logic & Critical Thinking | 61.06 | E | 41.58 | A | 43.56 | A | 36.63 | D | 36.63 | D | 35.64 | D | |
| Anatomy & Physiology | 66.34 | E | 48.84 | A | 50.83 | A | 40.10 | D | 41.09 | A | 46.53 | A | |
| Biochemistry | 66.34 | E | 56.11 | A | 37.29 | D | 54.46 | A | 41.58 | A | 46.04 | A | |
| Nursing 122: Fundamentals of Nursing | 78.88 | E | 63.04 | E | 62.05 | E | 42.57 | A | 61.39 | E | 52.97 | A | |
| Health Education | 78.22 | E | 68.65 | E | 59.41 | A | 43.07 | A | 45.05 | A | 50.99 | A | |
| Overall | 61.14 | E | 50.9 | A | 5 | 1.40 | A | 43.25 | A | 45.73 | A | 40.04 | D |

The result showed that in the Bloom's Taxonomy's Cognitive Domain, "Creating" (MPS = 40.03%) was the learning domain that had the least attainment resulting into inadequacy in the learning process among BSN freshmen students, significantly reflecting a "Lower-Order -Thinking Skills (LOTS)". Most test items categorized under "Creating" were significantly found under the subject Theoretical Foundation of Nursing (TFN). Hereof, the subject "TFN" (MPS = 20.30 %) was evidently considered the lowest means since questions that spark "Higher-Order-Thinking-Skills (HOTS)" under "Creating" were mostly scattered in the said subject. The test questions categorized under "Analyzing" (MPS = 43.25%), apparently, were also one of the least mastered aspect of the cognitive domain. However, it is very evident that "Remembering" was the learning domain where students primarily excelled (MPS = 61.14%). This suggestively means that facilitators had fewer focus in delivering concepts that improve learners' HOTS which generally includes "Analyzing" (MPS = 43.25%), "Evaluating" (45.73%) and "Creating" (40.03%).

Generally, for most of the areas, questions are categorized taking into account their academic level and the disciplines taught by the area facilitators. Overall, results showed that each learning objectives are well – represented. Hence, LOTS questions (remembering, understanding, applying) are way easier to answer than HOTS questions (analyzing, evaluating, and creating).

Table 7: Mean Comparison Between Gender on Battery Exam Result

| Table 6 .Mean Comparison Between Gender on Battery Exam Result | |
|--|-----------|
| Gender (Male & Female) | |
| T= 0.76 | PV = 0.45 |
| Accept H0 | |

Table 8: Mean Difference in Battery Exam Result when grouped according to Strand

| Table 7 Mean Difference in Battery Exam Result when grouped according to Strand | |
|---|------------|
| Strand | |
| T= 0.529 | PV = 0.753 |
| Accept H0 | |

Table 9: Mean Comparison on Battery Exam Results when grouped according to Age

| Table 5 .Mean Comparison Between Age on Battery Exam Result | |
|---|------------|
| Age (18-20) | |
| F= 0.989 | PV = 0.379 |
| Accept H0 | |

(For tables 7,8 and 9) There is NO significant relationship between the participants profile variables (gender, strand and age) in relation to their cognitive ability. The participants' age, gender and strand are not contributive factors in their relative performance in various test-taking activities.

Table 10: Areas of Difficulty of Freshmen 21st Century Nurse Learners according to major subjects.

| Area | Mean Percentage Score | Standard Deviation | D.I. |
|--------------------------------------|-----------------------|--------------------|---------|
| Microbiology & Parasitology | 40.67 | 1.749458791 | Average |
| Theoretical Foundation of Nursing | 49.87 | 1.789306056 | Average |
| Health Assessment | 43.67 | 2.332792145 | Average |
| Logic & Critical Thinking | 44.2 | 2.43565684 | Average |
| Anatomy & Physiology | 50.73 | 2.308941775 | Average |
| Biochemistry | 51.4 | 2.463039922 | Average |
| Nursing 122: Fundamentals of Nursing | 62.33 | 2.081059365 | Average |
| Health Education | 60.4 | 2.529901982 | Average |

As can be gleaned on the table, “N122: Fundamentals of Nursing” (MPS = 62.33, SD = 2.08) and “Health Education” (MPS = 60.40, SD = 2.53) were the subject areas where the Freshmen Nurse Learners excelled. On the other hand, the subject “Microbiology & Parasitology” (MPS = 40.67, SD = 1.75) was considered the toughest subject from among all the offerings. In addition, the learners also had similar difficulties in the subject areas “Health Assessment” (MPS 43.67, SD = 2.33) and “Logic & Critical Thinking” (MPS = 44.20, SD = 2.44). This is based from the slight deviations represented by the learner’s collective scores.

CONCLUSION

From the findings of the study, the intention of the investigator can be affirmed that there is a relevant commencement to initially assess the introduction of the OBE curriculum in the Philippine Nursing Education System in line with the competency standards of the 4th IR. This study is supportive of the following empirical inferences: This implies that generally, the 21st century freshmen nurse learners are within the ideal age-bracket of a level 1 college student. According to a study conducted by Williams in 2017, female nurses outweigh male nurses, numerically due to the common reason which is ‘stereotyping’. This goes to show that the nursing profession is more of a “female job”. Pertaining to the participants’ knowhow in the concurrent curriculum, most of the common reasons divulged were their insufficient ideas about the OBE. Only a scarce fraction of the population had an extensive acquaintance of the curriculum in terms of fundamental concepts and prior knowledge like “the acronym of OBE”. On the deeper facets, the participants failed to express broader concepts of the intention including its purpose and the conventional assimilations to the up-to-date academic curriculum, teacher-utilization in instruction, nation-wide implementation and its primordial backgrounds.

The BSN first year students found that the “Remembering” domain became more flagrant, a Lower-Order-Thinking mental set, than “Evaluating” and “Creating” which are “Higher-Order-Thinking-Skills”. This clearly denotes that their former facilitators from their prior grade levels during the spiral conduct of the curriculum, flopped to prepare set of test questions not conducive to develop the apprentice’s HOTS. Most of these question categories were distributed in the subject area TFN. However, the toughest questions encountered by the learners were in the subject Microbiology and Parasitology. In the train of written-exam difficulty, the scores are in favor of the trend wherein fundamental subjects tend to be easy to answer, and thus, may lead to greater tendencies of acquiring a passing or high score. On the contrary, subjects with higher level of difficulties and complex preparations promote lower chances of acquiring high scores or failures (Elkins, 2015). Lastly, acquiring an “average” mastery level in all subject areas implies that the learners, at this level, have not yet fully mastered the theories and concepts concerning every subject area.

RECOMMENDATIONS

In view of the discussions drawn from the findings of the study, the following recommendations are forwarded. For furtherance of a triumphant curriculum in the field, the quality and quantity of teaching staff should be reinforced. There should be rigorous trainings of facilitators in the profound incorporation of OBE in their syllabus, Table of Specifications (TOS), Clinical Teaching Plans (CTP) and lesson plans. Facilitators opt to avoid unfinished or poor-quality delivery of Course Contents. Since the implementation is cuddled by the Behaviorist’s Theory, it is ideal for facilitators to learn and apply the OBE particularly to their Syllabus and Instructional Materials. Relevant trainings must be undertaken by facilitators to uphold mastery of set skills. Most importantly, teachers must act as facilitators to communicate and flourish HOTS to concretely develop learners projected skills competencies in all areas. Students must also be taught to avoid “spoon-feeding” and hence must not dwell exclusively on activities that develop LOTS (Memorizing, identifications, etc).

The study is only limited to the Cognitive Ability of the participants. Hence, it is also imperative to holistically evaluate the Psychomotor and Affective aspects as students progress from one level to another. Further research studies to improve the curriculum, knowledge and practice of facilitators must be conducted to further the adoption of the OBE Curriculum to the Program Implementation of the University and the College. The progress of the 4IR must also be kept paced to track the most recent education and employability attributes.

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