The Implementation of Outcome-Based Education at a Philippine University

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Date Received: July 26, 2019; Date Revised: November 12, 2019

Asia Pacific Journal of Multidisciplinary Research
Vol. 7 No.4, 37-49
November 2019 Part III
P-ISSN 2350-7756
E-ISSN 2350-8442
www.apjmr.com
CHED Recognized Journal
ASEAN Citation Index

Abstract *– The study examined the extent of implementation of outcome-based education (OBE) at the University of Perpetual Help System DALTA Las Piñas campus, Manila, Philippines in terms of attainment of the intended student outcomes, relevance of the intended student outcomes, course organization, instructional process, support for instruction and assessment. A survey questionnaire was developed to gather information and the data were analyzed using mean, frequency, percentage, rank, standard deviation and t-test. The faculty and the students were utilized as respondents in the study. Findings of the study revealed that the implementation of outcome-based education in the University promoted and enhanced students' acquisition of relevant subject knowledge, critical and problem solving skills as well as moral and ethical values. OBE ensured that learning outcomes are relevant and attainable and drives curriculum design, program delivery in terms of the adoption of more student-centered teaching strategies and the use of balanced assessment. Significant differences were observed on attainment and relevance of the intended student outcomes, instructional process and assessment. Recommendations are put forward to improve the implementation of OBE in the university which include communicating to students expected outcomes upon entry, revisiting the curriculum to ensure progressive development of students' competencies, enhancing the utilization of collaborative learning and independent work, improving library and laboratory resources and utilizing portfolio assessment to keep track of student progress.*

Keywords *– higher education, outcome-based education*

INTRODUCTION

Competencies that students acquire from formal education are crucial to their future success and satisfaction in life, to the country's productivity and its ability to compete in the global economic arena, and in sustaining healthy and civic-minded citizens who are actively engaged in their communities. It has now become not only the individual responsibility of educators but the accountability of higher education institutions to ensure that its graduates are equipped with the relevant knowledge, skills and disposition needed to demonstrate self-efficacy and civic responsibility.

Outcome-based education (OBE) provides a framework for focusing and organizing the curriculum around predetermined and clearly defined student learning outcomes. It has been viewed as a significant paradigm shift in educational philosophy and practice which underscores a learning based model focused on what students know and can do as a result of a learning experience or earning a degree as opposed to a teacher centered model that emphasizes what is presented [1],[2]. "OBE has two requirements. First, that the learning outcomes are identified, made explicit and communicated to all concerned (...). Second, the educational outcomes should be the overriding issue in decisions about the curriculum [3],[4].

According to the National Institute for Learning Outcomes Assessment (NILQA) [5],

> 'learning outcomes statements are most useful when they are crafted to inform effective educational policies and practices. When they are clear about proficiencies students are to achieve, such statements provide reference points for student performance, not just for individual courses but the cumulative effects of a program of study."

Furthermore, when learning outcomes are stated in clear and specific terms, the faculty are able to align curriculum and pedagogy such as module design and delivery, as well as assessment tasks and activities with

the intended outcomes[2],[5],[6]. Thus, the curricula in higher education shifts its emphasis "from input and process to a celebration of student learning"[7].

A predominantly outcome-based instructional design that emphasizes the significance of making explicit what students are expected to learn and how they should demonstrate that learning prior to instruction has been referred to as constructive alignment (CA). This approach to teaching makes it possible for teachers to focus on what outcomes students are expected to achieve and provide them with the assistance to do so. It has filled in part the theory gap in OBE by emphasizing outcomes, the teaching-learning processes and assessment [3].

Although OBE has been advocated for over 60 years and was revived in the 1980s by Spady, it received strong negative feedback from educators, parents and students. One such feedback was on teaching to pre-determined learning outcomes which are viewed as "overly specifiable, observable, quantifiable and so narrow that they can be limiting rather than liberating, which may result in the rigidification of teaching, reductionism, reification, fractionation, serendipity and may fail to achieve the kind of learning and education that it purports to promote"[1]. Young & Allais (2012)[8] reasoned that although learning outcomes were claimed to establish comparable qualifications standards across countries and improve the quality of education, they can be subject to varying interpretations and thus, could not be generalized across different programs, disciplines or subject areas. Issues associated with OBE include how to define and assess abstract conceptualizations such as humanism, altruism, commitment and the like and how to promote excellence when performances that are "good enough" are acceptable descriptions of competence[3]. Unless these are embedded in knowledge within a curriculum, it does not carry sufficient meaning[9]. Lastly, the study of Sin (2014)[10] highlighted the limited relevance of learning outcomes to students.

Compensating for these criticisms are studies that revealed students' self-rating of competence and confidence as having increased over time[3]. Studies revealed that the outcomes-based curriculum facilitated the acquisition of subject related knowledge, skills and attitudes[11]. In some Philippine universities, students were found to have greater tendency to be more productive after instruction since the adoption of OBE[12] and OBE was useful in terms of improving academics, instruction and attitude[13] with OBE-knowledgeable faculty contributing significantly to the realization of institutional and program objectives[14] . There is, however, a substantial lack of research on competency measurement in higher education[15], on the impact of learning outcomes on teaching and learning[3] and on multiple factors that influence the use of learning outcomes by academics[6].

OBE has been adopted by educational systems worldwide including but not limited to the City University of Hongkong and those in Australia, Malaysia, Sri Lanka and the Philippines. With the release of CMO 46 series of 2012 on the Policy and Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through Outcomes-Based and Typology-Based QA, institutions of higher learning were mandated to adopt an outcomes-based approach to teaching and learning.

The shift in educational philosophy and practice with the adoption of OBE in the Philippines was influenced by a number of factors. First, there is a growing international trend in the adoption of outcome-based education as a framework for ensuring the alignment of the curriculum, instruction and assessment to enable graduates to attain degree level expectations. Second, the concept of a borderless and seamless education has gained wider acceptance among educational institutions due to globalization. Third, industry, workplace and stakeholder expectations propel academic institutions to graduate professionals who can be locally and globally competitive and who can contribute to local, national and global development. Fourth, graduates who are equipped with competencies at par with international standards are most likely to succeed in their professional practice and demonstrate greater global mobility. Finally, OBE stems from the need to "establish national standards and levels for outcomes of education and training, skills and competencies" as stipulated in the Philippine Qualifications Framework[16].

The University of Perpetual Help System DALTA Las Piñas campus adopts the outcome-based education (OBE) framework for all its graduate and undergraduate programs in its efforts to ensure continuous institutional and program quality improvement. To achieve this goal, systems and measures are in place to support the implementation of OBE and its processes.

In 2012, the University began its preparations to transition to the outcomes-based approach in teaching and learning. Intensive faculty development seminars were undertaken to prepare educators for the

implementation of OBE. The formulation of the institutional, program and course outcomes was conducted prior to the revision of the course syllabi and the identification and establishment of instructional supports needed to effectively implement the OBE program. Before the implementation of OBE, all stakeholders, particularly the students and non-teaching staff were oriented on the implementation of the new educational approach. A committee was established to monitor the program implementation. However, it has now become imperative to determine whether or not all aspects of OBE are being implemented and to determine to what degree was the implementation effective. Hence, this study was conceptualized to monitor and evaluate the status of implementation of OBE in the university, focusing primarily on programs with higher levels of accreditation.

OBJECTIVES OF THE STUDY

The study examined the level of effectiveness of the implementation of outcome-based education in the University of Perpetual Help System DALTA Las Piñas campus in terms of attainment of intended student outcomes, relevance of the identified intended student outcomes, organization of the course, instructional process, support for instruction and assessment practices.

METHODS

Research Design

The study utilized the descriptive method to gather data using a researcher-made survey questionnaire to determine and describe the effectiveness of OBE implementation in the University.

Respondents of the Study

Two groups of respondents were chosen to participate in the study. These are the faculty members and the 3rd to 5th year students of the colleges with undergraduate programs at Level III accredited status with the Philippine Association of Colleges and Universities Commission on Accreditation (PACUCOA). The Graduate School of Education was included in the study for the uniqueness in the design of its programs which include blended learning, field studies and research-based academic assignments. Random stratified sampling was used to allow for the best representation of the population.

Table 1. Sample Characteristics

	Faculty N (%)	Students N (%)
Gender		
Male	18(31.6)	154(29.8)
Female	39(68.4)	363(70.2)
Year Level		
Undergraduate		
3rd		301(58.2)
4th		192(37.1)
5th		5(0.96)
Graduate		19(3.7)
Highest educational attainment		
Doctorate	5(8.8)	
Master's	33((57.9)	
Bachelor's	19(33.3)	
Teaching Experience		
0-5 years	8(14.0)	
6-10 years	7(12.3)	
11-15 years	10(17.5)	
16-20 years	6(10.5)	
over 20 years	26(45.6)	

There were 57 faculty members across colleges who participated in the study. Student-respondents consisted of 162 BS HRM students, 60 BS Tourism students, 70 BEEd students, 86 BSEd students, 47 Engineering students, 39 BS Nursing students, 34 Liberal Arts students and 19 graduate students for a total of 517 students across the participating colleges. The sample characteristics are presented in Table 1.

Both groups of respondents had more female (68.4% vs. 31.6% and 70.2% vs 29.8%) participants. More than half of the student-respondents are in their 3rd year of study (58.2%). More than half of the faculty-respondents have earned a Master's degree (57.9%) and almost half of them have over 20 years of teaching experience (45.6%).

Instrument

A survey questionnaire was developed based on the OBE implementation guidelines of the University and distributed to the faculty- and student-respondents. The instrument used a 4-point Likert scale which elicited responses from the participants on the extent of implementation of the different aspects of OBE implementation. The instrument was subjected to content validity and to determine if statements could be fairly understood according to the use and meaning in the English language based on its clarity and concise construction.

Data Gathering Procedure

The survey questionnaires were administered to the faculty and students of the colleges of Arts and Sciences, Education, International Hospitality

Management, Engineering and the Graduate School of Education with a retrieval rate of 59% and 24% for faculty and students, respectively. Focus group discussions and informal interviews were conducted to validate the responses of the participating faculty and students.

Data Analysis

Descriptive statistics such as frequencies, percentages, means, ranks and standard deviations were used to describe sample characteristics and summarize study variables.

Data were analyzed using the IBM SPSS Version 24 statistical model to determine if there are significant differences in the perceptions of the two groups of respondents on the aspects of OBE implementation in the University utilizing t-test at p=0.05 level of significance.

RESULTS AND DISCUSSION

The study examined the different aspects of OBE implementation in the University utilizing the faculty and students in selected colleges as respondents in the study. Tables 2 and 3 present the perceptions of student-respondents and the faculty on the extent of attainment of intended student outcomes with the implementation of outcome-based education in program delivery.

Table 2 Student Perceptions on the Extent of Attainment of the Intended Student Outcomes

Aspect	A	B	C	D	E	F	G	H	Overall Mean	Rank
Courses in the previous semester helped students develop										
1.1 relevant subject knowledge	3.49	3.5	3.32	3.47	3.67	3.15	3.32	3.79	3.46	1
1.2 subject-related technical skills	3.34	3.34	3.25	3.3	3.72	3.09	3.09	3.63	3.34	7
1.3 communication skills	3.36	3.56	3.25	3.37	3.67	2.96	3.32	3.74	3.40	3.5
1.4 teamwork skills	3.37	3.49	3.31	3.4	3.59	3.06	3.26	3.63	3.39	5
1.5 critical thinking and problem solving skills	3.41	3.6	3.22	3.48	3.62	3.06	3.32	3.58	3.41	2
1.6 leadership skills	3.27	3.36	3.27	3.23	3.59	2.98	3.26	3.63	3.32	8
1.7 information management skills	3.23	3.28	3.25	3.25	3.49	3.06	3.18	3.42	3.27	9
1.8 life long learning skills	3.54	3.59	3.24	3.57	3.46	3.04	3.15	3.47	3.38	6
1.9 entrepreneurial skills	2.89	2.84	3.2	2.80	3.33	2.83	2.97	3.47	3.04	10
1.10 moral and professional ethics	3.44	3.52	3.29	3.42	3.49	3.04	3.35	3.63	3.40	3.5

A-BS in Elem Educ; **B**-BS in Secondary Educ; **C** - BS in HRM; **D** – BS in Tourism; **E**- BS in Nursing; **F**-Engineering courses; **G**- Liberal Arts; **H**-Graduate Studies

Table 3 Faculty Perceptions on the Extent of Attainment of the Intended Student Outcomes

Aspect	A	B	C	D	E	F	Overall Mean	Rank
Courses in the previous semester helped students develop								
1.1 relevant subject knowledge	4.00	3.69	3.36	3.83	3.58	3.86	3.72	1
1.2 subject-related technical skills	4.00	3.85	3.36	3.83	3.17	3.86	3.68	2
1.3 communication skills	4.00	3.62	3.27	3.33	3.25	3.57	3.51	8
1.4 teamwork skills	4.00	3.54	3.55	3.50	3.17	3.71	3.58	4.5
1.5 critical thinking and problem solving skills	4.00	3.46	3.27	3.83	3.33	3.71	3.60	3
1.6 leadership skills	4.00	3.62	3.18	3.50	3.08	3.86	3.54	6.5
1.7 information management skills	3.88	3.62	2.91	3.67	3.17	3.43	3.44	9
1.8 life long learning skills	3.88	3.38	3.36	3.67	3.08	3.86	3.54	6.5
1.9 entrepreneurial skills	3.75	3.38	2.82	3.17	2.67	3.43	3.20	10
1.10 moral and professional ethics	4.00	3.38	3.55	3.50	3.33	3.71	3.58	4.5

A-Education; **B**-International Hospitality Management; **C**-Nursing; **D**-Engineering; **E**-Arts and Sciences; **F**-Graduate School

As shown in Table 2, the adoption of OBE facilitated the acquisition of relevant subject knowledge (X=3.46), the enhancement of critical thinking and problem solving skills (=3.41), the improvement of communication skills (X=3.40) and the inculcation and development of moral and professional ethics (X=3.40). However, there is a need to examine how OBE can be utilized to develop students' information management (X=3.27) and entrepreneurial skills (X=3.04). The increased focus on

educational activities that promote students' successful demonstration of relevant knowledge, skills and attitudes were found to be significant in improving the quality of education in the University. This finds support in the study of Mohayidin, Mohd Ghazali et al[11] which emphasized the effectiveness of an OBE curriculum in facilitating the acquisition of relevant knowledge, skills and attitudes. On the other hand, since OBE enables students to become self-directed learners who are capable of taking responsibility for their own learning and finding resources to optimize such learning, the University has to make provisions to develop students' ability to intelligently utilize information to further their learning. It was also noted that students' entrepreneurial skills are lacking; hence, the challenge is to embed in the curriculum activities that will inspire students to translate meaningful business ideas into productive ventures.

Table 3 reveals that faculty-respondents perceived the implementation of outcome-based education as having promoted students' acquisition of relevant subject knowledge (X=3.72), subject related skills (X=3.68) and critical thinking and problem solving skills (X=3.60). However, similar to the students' perceptions, information management (X=3.44) and entrepreneurial skills (X=3.20) are areas that need to be addressed by outcome-based teaching and learning processes. It can be noted that the perceptions of the students and the faculty are similar in crucial aspects of OBE implementation. Both groups consider the positive impact of OBE to be on the acquisition of knowledge and skills as well as on enhancing critical thinking and problem solving skills which find support in a number of studies [3],[11],[13][14]. Similarly, the faculty need to incorporate in their teaching learning activities (TLAs) opportunities for students to develop the ability to use information to optimize their learning and to utilize some of these information to generate business ideas and take action on them.

Tables 4 and 5 present the perceptions of student-respondents and the faculty on the relevance of the intended student outcomes with the implementation of outcome-based education in program delivery. As gleaned from Table 4, student-respondents viewed the outcomes statements to be those that reflect the exit requirements that are stipulated in the respective CHED Memorandum Orders (CMOs) for each program (X=3.48), are relevant to their future profession (X=3.38), attainable (X=3.36) and are based on industry/workplace expectations (X=3.36).

Table 4. Student Perceptions on the Relevance of the Intended Student Outcomes

Aspect	A	B	C	D	E	F	G	H	Overall Mean	Rank
2 The program educational objectives (PEOs) and program outcomes (POs) were										
2.1 discussed with students upon admission into the program.	3.16	3.26	3.17	3.27	3.59	2.98	3.15	3.58	3.27	7
2.2 clear and explicit.	3.27	3.28	3.14	3.28	3.62	3.13	3.15	3.47	3.29	6
2.3 relevant.	3.41	3.4	3.2	3.45	3.62	3.13	3.21	3.63	3.38	2
2.4 attainable.	3.4	3.31	3.22	3.37	3.69	3.06	3.18	3.63	3.36	3.5
3. The PEOs and POs were carefully developed based on what										
3.1 CHED requires in terms of the competencies (knowledge, skills and attitude) graduates of the program must possess	3.54	3.65	3.27	3.58	3.59	3.17	3.26	3.74	3.48	1
3.2 the industry expects from the graduates of the program prior to their entry into the labor force	3.37	3.4	3.25	3.4	3.59	3.04	3.21	3.63	3.36	3.5
3.3 students and parents expect from the academic program	3.33	3.38	3.27	3.32	3.46	3.11	3.18	3.58	3.33	5

A-BS in Elem Educ; **B**-BS in Secondary Educ; **C** - BS in HRM; **D** – BS in Tourism; **E**- BS in Nursing; **F**-Engineering courses; **G**- Liberal Arts; **H**-Graduate Studies

These findings can be attributed to the orientations which were held prior to the implementation of OBE in the University. Students are also made aware of the course expectations and how these are relevant to their attainment of the program outcomes and their employability. However, the need to further clarify the outcome statements so that they are clear and explicit (X=3.29) and to communicate these to the students (X=3.27) have emerged from the study. Proficiencies that are important for students to acquire, demonstrate and apply have to be clearly stated and explained to them. These proficiencies become the drivers of student performance.[3],[5]

Table 5 reflects the perceptions of the faculty on the relevance of the intended student outcomes which were formulated for the academic programs. Faculty perceptions on the alignment of the outcomes statements with the requirements of the regulatory body, which is the Commission on Higher Education (CHED, (X=3.68) match student perceptions on the same aspect. The faculty likewise described the outcome statements as clear and explicit (X=3.66), relevant (X=3.63) and attainable (X=3.63).

These findings can be ascribed to the active involvement of the faculty in crafting the outcome statements and in ensuring that these statements are anchored on the University's philosophy, vision and mission and are compliant to the regulatory standards of CHED. Academic sessions on curriculum revisions included a revisit of these outcome statements to constantly update them based on current student needs and industry expectations [3],[4] and to align curriculum delivery and assessment to the intended outcomes[6].

Table 5. Faculty Perceptions on the Relevance of the Intended Student Outcomes

Aspect	A	B	C	D	E	F	Overall Mean	Rank
2 The program educational objectives (PEOs) and program outcomes (POs) were								
2.1 discussed with students upon admission into the program.	3.75	3.69	3.73	3.83	3.17	3.57	3.62	5
2.2 clear and explicit.	3.75	3.62	3.64	4.00	3.25	3.71	3.66	2
2.3 relevant.	3.75	3.62	3.55	3.83	3.17	3.86	3.63	3.5
2.4 attainable.	3.75	3.46	3.64	3.83	3.25	3.86	3.63	3.5
3. The PEOs and POs were carefully developed based on what								
3.1 CHED requires in terms of the competencies (knowledge, skills and attitude) graduates of the program must possess	3.88	3.62	3.73	3.83	3.17	3.86	3.68	1
3.2 the industry expects from the graduates of the program prior to their entry into the labor force	3.88	3.62	3.45	3.83	3.25	3.57	3.60	6.5
3.3 students and parents expect from the academic program	3.88	3.54	3.45	3.83	3.17	3.71	3.60	6.5

A-Education; **B**-International Hospitality Management; **C**-Nursing; **D**-Engineering; **E**-Arts and Sciences; **F**-Graduate School

Table 6. Student Perceptions on the Organization of Courses

Aspect	A	B	C	D	E	F	G	H	Overall Mean	Rank
1. The courses in the curriculum were logically sequenced, with prerequisite clearly identified.	3.41	3.09	3.23	3.40	3.56	2.94	3.18	3.74	3.32	1
2. There were neither repetitions nor overlapping of content within a course.	2.90	3.10	3.12	2.95	3.44	3.17	3.09	3.53	3.16	2.5
3. There were neither repetitions nor overlapping of content among courses.	3.03	3.12	3.12	2.95	3.38	3.11	3.12	3.47	3.16	2.5

A-BS in Elem Educ; **B**-BS in Secondary Educ; **C** - BS in HRM; **D** – BS in Tourism; **E**- BS in Nursing; **F**-Engineering courses; **G**- Liberal Arts; **H**-Graduate Studies

Tables 6 and 7 show the faculty- and student-respondents' perceptions on the organization of courses as reflected in the curriculum of each academic program. As gleaned from Table 6, there is logical sequencing of courses in the curriculum and the pre-requisites are clearly identified, whenever applicable, (X=3.32) based on the perceptions of student-respondents while Table 7 which reflects the perceptions of the faculty-respondents on the organization of the different courses in the curriculum of the various academic programs also indicates that the courses in the curriculum are logically arranged and the prerequisites are identified (X=3.56).

Table 7. Faculty Perceptions on the Organization of Courses

Aspect	A	B	C	D	E	F	Overall Mean	Rank
1. The courses in the curriculum were logically sequenced, with prerequisite clearly identified.	3.88	3.23	3.64	3.67	3.25	3.71	3.56	1
2. There were neither repetitions nor overlapping of content within a course.	3.50	3.23	3.09	3.17	3.08	3.29	3.23	2
3. There were neither repetitions nor overlapping of content among courses.	3.50	3.08	2.91	3.17	3.08	3.29	3.17	3

A-Education; **B**-International Hospitality Management; **C**-Nursing; **D**-Engineering; **E**-Arts and Sciences; **F**-Graduate School

Table 8. Student Perceptions on the Instructional Process

Aspect	A	B	C	D	E	F	G	H	Overall Mean	Rank
7. Teaching and learning activities were appropriate to the course.	3.49	3.43	3.33	3.48	3.59	3.15	3.21	3.47	3.39	1
8. The instructional process is highly student centered.	3.33	3.37	3.17	3.4	3.56	3.11	3.12	3.74	3.35	3.5
9. The learning activities across courses were appropriately sequenced.	3.39	3.27	3.22	3.28	3.67	3.15	3.21	3.63	3.35	3.5
10. Opportunities for collaborative learning were provided to students.	3.33	3.45	3.14	3.33	3.51	3.13	3.26	3.74	3.36	2
11. Provisions for independent learning were incorporated into the instructional process.	3.27	3.35	3.17	3.17	3.59	3.04	3.24	3.58	3.30	5
12. Opportunities for practical application of work skills (e.g. internship, practicum, service learning) were adequate.	3.44	3.31	3.26	3.30	3.41	3.09	3.15	3.37	3.29	6

A-BS in Elem Educ; B-BS in Secondary Educ; C- BS in HRM; D – BS in Tourism; E- BS in Nursing; F-Engineering courses; G- Liberal Arts; H-Graduate Studies

Table 9. Faculty Perceptions on the Instructional Process

Aspect	A	B	C	D	E	F	Overall Mean	Rank
7. Teaching and learning activities were appropriate to the course.	3.88	3.54	3.55	3.83	3.25	3.71	3.63	2
8. The instructional process is highly student centered.	3.75	3.31	3.45	3.67	3.08	4.00	3.54	4
9. The learning activities across courses were appropriately sequenced.	3.75	3.23	3.55	3.83	3.17	3.71	3.54	4
10. Opportunities for collaborative learning were provided to students.	3.75	3.46	3.36	3.5	3.17	3.57	3.47	6
11. Provisions for independent learning were incorporated into the instructional process.	3.75	3.46	3.45	3.67	3.17	3.71	3.54	4
12. Opportunities for practical application of work skills (e.g. internship, practicum, service learning) were adequate.	3.75	3.85	3.82	3.83	3.08	3.71	3.67	1

A-Education; **B**-International Hospitality Management; **C**-Nursing; **D**-Engineering; **E**-Arts and Sciences; **F**-Graduate School

These findings are due primarily to the conduct of regular curriculum reviews by the faculty members and the formulation of curriculum maps to ensure the alignment and relevance of all courses that are identified in the curriculum, and to make sure that the minimum requirements of the standards as stipulated in the CHED Memorandum Orders particular to the academic programs are adhered to or exceeded. Further, any decisions on the curriculum take into consideration the identified institutional and program-specific learning outcomes [3],[4].

Tables 8 and 9 present the perceptions of the students and the faculty on the quality of instruction in terms of the adequacy, appropriateness, quality and organization of the teaching-learning activities (TLAs) which are designed to lead towards students' attainment of the intended student outcomes.

As shown in Table 8, students rated the teaching – learning activities to be appropriate to the course/s (X=3.39), with collaborative learning (X=3.36) incorporated in a student-centered instruction (X=3.35). It was also noted that students regard the TLAs across courses to be appropriately sequenced (X=3.35). With outcomes-based teaching and learning, the University has shifted from a teacher-managed classroom to a more student-centered instruction. Various faculty development activities have been conducted to equip the faculty with strategies that will promote more active student collaborations in the classroom and outside of it. As a result, students are now more actively engaged in activities that demonstrate their proficiencies in a mutually cooperative environment. However, with the greater focus on collaborative learning, the need for independent learning and the practical application of work skills (X=3.29) need to be addressed as well. This underscores the importance of enabling students to not only learn to work well with others, but to also become self-directed and independent learners and to demonstrably apply their knowledge and skills. It is imperative then for the University to establish functional linkages that will provide opportunities for students during practicum, internship or on-the-job training to apply their work skills in a simulated work environment.

It can be gleaned from Table 9 that faculty respondents rated the opportunities for the practical application of work skills as clearly evident in the OBE implementation (X=3.67) and that the TLAs are appropriate to the various courses in the program (X=3.63). It can be noted, however, that there is a need to incorporate more collaborative TLAs during instruction (X=3.47). These findings are not consistent with those of the student-respondents who highlighted the appropriateness of the educational activities in a collaborative learning environment but underscored the lack of opportunities for the application of work skills. These differing perspectives need to be addressed by examining the internship and practicum programs and evaluating the extent to which they are able to give students the opportunities they need to apply what they have learned in the classroom. It will also be feasible to study the kind and number of linkages that the University has forged to find out if the purpose for which these linkages have been established are being met.

Table 10 Student Perceptions on Support for Instruction

Aspect	A	B	C	D	E	F	G	H	Overall Mean	Rank
13. Facilities in the classroom were sufficient and satisfactory.	3.06	3.27	3.06	2.93	3.49	3.13	3.35	3.42	3.21	3
14. Learning resources in the library were adequate.	2.84	3.06	3.16	2.82	3.41	3.11	3.26	3.58	3.15	4
15. Laboratory facilities were sufficient to serve the needs of students.	2.84	2.92	3.15	2.58	3.41	3.15	3.21	3.63	3.11	5
16. Academic counseling was available, when needed.	3.13	3.14	3.08	3.00	3.54	3.23	3.26	3.68	3.26	2
17. Teachers were available for academic consultation.	3.36	3.29	3.13	3.35	3.54	3.11	3.26	3.47	3.31	1

Table 11 Faculty Perceptions on Support for Instruction

Aspect	A	B	C	D	E	F	Overall Mean	Rank
13. Facilities in the classroom were sufficient and satisfactory.	3.13	2.77	3.18	3.17	3.00	3.14	3.06	5
14. Learning resources in the library were adequate.	3.25	2.77	3.27	3.17	3.00	3.14	3.10	4
15. Laboratory facilities were sufficient to serve the needs of students.	3.25	3.00	3.45	3.50	2.83	3.14	3.20	3
16. Academic counseling was available, when needed.	3.75	3.38	3.73	4.00	3.17	3.43	3.58	2
17. Teachers were available for academic consultation.	3.75	3.69	3.55	3.83	3.17	3.71	3.62	1

Tables 10 and 11 show faculty and student ratings on the extensiveness of the support provided for instruction in the areas of physical and laboratory resources, and availability of teacher support.

It can be noted from Table 10 that the availability of the faculty (X=3.31) in providing academic counselling to students (X=3.26) obtained very high ratings from the students. These findings were confirmed in Table 11 which reflects the ratings of the faculty on the extent of support for instruction. Interestingly, when these aspects were ranked, their rankings closely matched those that emerged from the students' ratings with the availability of the faculty (X=3.62).for academic counselling (X=3.58) obtaining the top two ratings. These findings are indicative of the faculty members' commitment to the University's goal of producing competent and globally-competitive graduates. They devote time and effort outside of the classroom to provide assistance and support to students, particularly those who are struggling with their academic workload. They contribute significantly to the realization of the University's educational objectives [14].

There is, however, a need to address inadequacies in the laboratories and library resources as reflected in Table 10. Efforts are underway, primarily because of the accreditation endeavors of the University and its intent to retain its autonomous status which was granted in 2017 by CHED, to maintain compliance to and even exceed CHED standards in the areas of laboratories and library resources and their utilization.

Tables 12 and 13 reflect the perceptions of the faculty and the students on practices relative to assessment of student performance and achievement.

As reflected in Table 12, students identified both objective and performance-based assessments as methods that were used by the faculty to evaluate their performance (X=3.39). Students were also made to assess themselves to determine the degree to which they have acquired the exit competencies required of them after completion of a course or the program (X=3.37). Moreover, the expectations and how compliance to these expectations are measured and assessed are communicated to the students at the start of every semester (X=3.35). In an outcome-based teaching and learning (OBTL) environment, assessment plays a critical role in determining the extent to which the learning outcomes have been achieved, demonstrated and applied by students in simulated or actual work conditions. These findings confirm the importance which students associate with assessment. However, portfolio assessment (X=3.26), timely feedback from the faculty (X=3.29) and the frequency and distribution of assessments (X=3.29) are aspects that need to be addressed in the OBE program implementation. In the University, only a handful of colleges are utilizing student portfolios as a source of assessment data. This finding can be a vital input into the continual improvement efforts of the University since the information that can be gleaned from students' self-assessments and reflections which are integral components of portfolio assessment can be very significant in enabling the institution to identify strengths and opportunities for improvement in its delivery of the academic programs. Moreover, as an authentic form of assessment, it can complement the traditional forms of assessment being conducted in the University to promote balance, fairness and the credibility of the student assessment system. Additionally, feedback from faculty on student performance could be addressed by ensuring that encoding of grades are completed within the specified time frame so that students can view grades online and academic consultations are consistently conducted, particularly for at risk students.

Table 12 Student Perceptions on Assessment

Aspect	A	B	C	D	E	F	G	H	Overall Mean	Rank
18. Assessment methods were explained to the students at the beginning of the courses.	3.27	3.37	3.22	3.33	3.56	3.21	3.21	3.58	3.35	3
19. Assessment covered the essential content of the courses.	3.31	3.44	3.25	3.43	3.54	3.09	3.18	3.26	3.31	6
20. Teachers provided timely feedback on student performance.	3.31	3.22	3.22	3.23	3.46	3.19	3.26	3.42	3.29	7.5
21. The types of assessment used in the courses were appropriate.	3.47	3.29	3.28	3.33	3.59	3.17	3.21	3.32	3.33	4.5
22. The frequency and distribution of assessment over a semester was appropriate.	3.26	3.28	3.22	3.17	3.44	3.21	3.21	3.53	3.29	7.5
23. The types of assessments involved both objective (paper and pen tests) and performance based.	3.49	3.44	3.27	3.43	3.54	3.09	3.21	3.63	3.39	1
24. Assessments adequately measured students' demonstration of intended outcomes (e.g. knowledge, skills and attitudes).	3.46	3.44	3.23	3.37	3.56	3.02	3.18	3.42	3.33	4.5
25. Students maintained and regularly updated a portfolio for the current courses.	3.27	3.22	3.18	3.1	3.69	3.09	3.15	3.42	3.26	9
26. Students are made to reflect on how well they have acquired the expected knowledge, skills and attitudes at the end of the courses.	3.46	3.37	3.2	3.42	3.69	3.04	3.12	3.68	3.37	2

A-BS in Elem Educ; **B**-BS in Secondary Educ; **C** - BS in HRM; **D** – BS in Tourism; **E**- BS in Nursing; **F**-Engineering courses; **G**- Liberal Arts; **H**-Graduate Studies

Table 13 Faculty Perceptions on Assessment

Aspect	A	B	C	D	E	F	Overall Mean	Rank
18. Assessment methods were explained to the students at the beginning of the courses.	3.38	3.62	3.64	3.83	3.33	3.57	3.56	4.5
19. Assessment covered the essential content of the courses.	3.38	3.62	3.64	3.83	3.42	3.57	3.57	3
20. Teachers provided timely feedback on student performance.	3.5	3.54	3.64	3.83	3.42	3.43	3.56	4.5
21. The types of assessment used in the courses were appropriate.	3.63	3.46	3.73	3.83	3.25	3.71	3.60	2
22. The frequency and distribution of assessment over a semester was appropriate.	3.63	3.54	3.27	3.67	3.25	3.57	3.49	7
23. The types of assessments involved both objective (paper and pen tests) and performance based.	3.5	3.69	3.73	3.67	3.33	3.71	3.61	1
24. Assessments adequately measured students' demonstration of intended outcomes (e.g. knowledge, skills and attitudes).	3.5	3.38	3.64	3.67	3.33	3.71	3.54	6
25. Students maintained and regularly updated a portfolio for the current courses.	3.5	3.15	3.27	3.5	3.25	3.14	3.30	9
26. Students are made to reflect on how well they have acquired the expected knowledge, skills and attitudes at the end of the courses.	3.5	3.46	3.64	3.5	3.25	3.29	3.44	8

A-Education; **B**-International Hospitality Management; **C**-Nursing; **D**-Engineering; **E**-Arts and Sciences; **F**-Graduate School

Students' perceptions on assessment are verified in Table 13 which indicates that the faculty utilize a balanced scheme of assessment using both objective types and performance-based assessment (X=3.61) and that these assessments are appropriate (X=3.60) to the content taught. These findings highlight the faculty members' use of constructive alignment[3] to make sure that the proficiencies that students are expected to demonstrate[5] are assessed and evaluated in a variety of ways to surface the whole range of students' knowledge and skills.

Table 14 OBE Implementation

Aspects	Student	Rank	Faculty	Rank
Attainment of Intended Student Outcomes	3.34	**2.5**	3.54	**3**
Relevance of Intended Student Outcomes	3.35	**1**	3.63	**1**
Organization of the Courses	3.21	**5.5**	3.32	**5**
Instructional Process	3.34	**2.5**	3.57	**2**
Support for Instruction	3.21	**5.5**	3.31	**6**
Assessment	3.32	**4**	3.52	**4**

Table 14 presents a summary of the ratings given by faculty and students on the different aspects of OBE implementation in the University. Both the faculty and the students rated the same aspects of OBE implementation with almost the same degree of value and extent of implementation. The aspects which garnered the top three highest ratings are relevance of intended student outcomes (X=3.63, 3.35), the instructional process (X=3.57, 3.34) and the attainment of intended student outcomes (X=3.54, 3.34).

Analysis of the data using t-test revealed significant differences in the perceptions of the respondents on some aspects of OBE implementation in the University.

Table 15. Paired samples t-test results on the Attainment of Intended Student Outcomes

	Mean	SD	t	Remarks
Equal variances assumed	3.34 3.54	0.12 0.14	**0.003**	**Significant**

As reflected in Table 15, the mean difference is statistically significant (t=0.003 at $p < 0.05$). This indicates that there is a significant difference in the evaluations made by the students and faculty on the degree of attainment of the articulated student learning outcomes through the implementation of outcome-based education. While both groups considered the use of the outcomes-based approach to teaching and learning to be instrumental in the acquisition of relevant subject knowledge, technical skills and critical thinking and problem solving skills – competencies that are necessary to adapt to the ever changing expectations of the workplace and industry – they differed significantly in their view as to how well and to what extent students have developed these competencies. It can be noted, however, that the results of the study is validated by the study of Barsoto et al (2014)[13] that OBE is useful in helping students acquire the requisite knowledge and competencies they need to succeed in the practice of their future professions.

Table 16. Paired samples t-test results on the Relevance of Intended Student Outcomes

	Mean	SD	t	
Equal variances assumed	3.35 3.63	0.69 0.30	**0.000**	**Significant**

Table 16 likewise reveals a significant difference (t=0.000 at $p < 0.05$) in the evaluations of the faculty and the students on the relevance of the intended student outcomes which are reflected as program educational objectives, program outcomes and course learning outcomes. While both groups of respondents confirmed that the student outcomes were drawn and developed from the expectancies stipulated in the CMOs which state unequivocally the policies and standards governing the delivery of the academic programs, students claimed that these outcomes were neither clear nor explicit and were not communicated to them when they enrolled in the program. A number of studies emphasized the significance of making students clearly cognizant of the proficiencies they are expected to demonstrate at the end of the academic program and how the acquisition and mastery of these proficiencies will help them in their future careers [3]-[4].

Table 17 Paired samples t-test results on the Organization of Courses

	Mean	SD	t	
Equal variances assumed	3.21 3.32	0.09 0.21	**0.466**	**Not Significant**

On the organization of the courses in the curriculum of the different academic programs, the evaluations

made by both the faculty and the students did not differ significantly with t=0.466 at p < 0.05. However, it can be noted that in comparison with the means for the other aspects of OBE, organization of the courses obtained one of the lowest ratings. This implies a need to review the curriculum and the curriculum map to identify redundancies across courses and ensure that the competencies are progressively developed as students' advance in the academic program.

Table 18. Paired samples t-test results on the Instructional Process

	Mean	SD	t	
Equal variances assumed	3.34 3.57	0.04 0.07	**0.000**	**Significant**

As presented in Table 18, the mean difference is statistically significant (t=0.000 at p < 0.05) for the instructional process based on the evaluations made by the faculty and the students in the participating colleges. The faculty ratings were significantly higher than those given by the students on critical areas in the teaching and learning process. While both groups of respondents recognized the appropriateness of the TLAs, students were critical of the inadequacy of opportunities for the application of work skills which interestingly, was rated the highest by the faculty. This finding implies that in addition to the internship and practicum programs that students take during their last year (4^{th} or 5^{th}) in the program, TLAs that will simulate the actual work environment can be incorporated into the instructional program for lower level students where they can apply the competencies that they have acquired at that level.

Table 19 Paired samples t-test results on Support for Instruction

	Mean	SD	t	
Equal variances assumed	3.21 3.31	0.09 0.26	**0.306**	**Not Significant**

On the availability of support for instruction, the mean difference is not statistically significant (t=0.306 at p < 0.05) as shown in Table 19. This implies that both groups of respondents regarded the support for instruction to have the same degree and extensiveness. Both the faculty and the students considered the availability of academic counselling to be an important enabling and supportive structure for helping students cope with the rigors of the academic program.

Table 20. Paired samples t-test results on Assessment

	Mean	SD	t	
Equal variances assumed	3.32 3.52	0.04 0.10	**0.000**	**Significant**

The data presented in Table 20 indicate that the mean difference on assessment based on the evaluations of the faculty and the students is statistically significant (t=0.000 at p < 0.05). Although both the faculty and the students gave the highest rating on the use of a balanced scheme for assessment utilizing both objective and performance-based types, their ratings significantly differed in the other aspects of assessment, with the faculty giving higher ratings as compared to the students. Both groups likewise placed importance on the appropriateness of assessment types, which underscored constructive alignment as an important aspect of outcomes-based education [3].

CONCLUSION AND RECOMMENDATION

The study examined the implementation of outcome-based education in the University and identified areas of strength and opportunities for improvement. The faculty and students declared that OBE facilitated the acquisition of relevant subject knowledge, the enhancement of critical thinking and problem solving skills and the development of moral and professional ethics. They likewise claimed that the intended student outcomes were clearly aligned with CHED requirements and were relevant to students' development. Teaching and learning activities (TLAs) were deemed to be appropriate to the courses in the program. Assessment practices included a balance of both objective and performance-based types. Further, academic counselling was available for students in the programs.

Faculty and students cited several areas for improvement. Recommendations are put forward that include: clarifying student outcomes to students upon entry into the academic program and the potential career paths that students may venture in after graduation, reviewing the curriculum and curriculum map to remove redundancies and ensure the progressive development of competencies, integrating TLAs that enhance students' information management and entrepreneurial skills, incorporating into the instructional process more opportunities for

collaborative and independent learning as well as the practical application of competencies and work skills, improving library and laboratory resources, utilizing portfolio assessment to keep track of student progress as they advance in the program and ensuring that the frequency and distribution of assessments are adequate with feedback consistently provided to all students.

Since this is an initial assessment of the OBE implementation, it is likewise recommended that the study is replicated to include all academic programs in the university to get a more comprehensive picture of the status of OBE implementation in the university.

Follow-up studies on assessing the impact of learning outcomes on instruction and multiple factors that influence the faculty members' use of student learning outcomes in implementing the curriculum are also recommended to be undertaken.

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