

The Implementation of Outcome-Based Education: The Case of the University of Perpetual Help System DALTA Las Piñas Campus

Custodio, Perlita C.¹, Espita, Gina N.², Siy, Loureli C.³

Faculty, College of Education¹

Document Specialist, DEAC²

Faculty, College of Education³

University of Perpetual Help System DALTA Las Piñas, Manila, Philippines

pearlcargullo1228@gmail.com¹, espita_gina@yahoo.com², lourelisiy@gmail.com³

Abstract – The study examined the extent of implementation of outcome-based education 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. 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.

Keywords – higher education, outcome-based education

INTRODUCTION

Competencies that students acquire in tertiary 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 the teachers, but also the accountability of higher education institutions to ensure that college 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 focusing on what students know and can do as a result of a learning experience or acquiring a degree as opposed to a teacher centered model that emphasizes what is presented (Tam, 2014; Biggs, 2014). "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. "(Morcke, Dornan & Eika, n.d.; Harden, 2009). According to the National Institute for Learning Outcomes Assessment (NILQA),

'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. (NILQA, 2016; Biggs, 1996; Dobbins, Brooks, Scott, Rawlinson & Norman, 2016). 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. (Morcke, et al, n.d).

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 “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.” (Hill, 2012; Tam, 2014). Young & Allais (2012) 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. (Morcke et al, n.d.). Lastly, the study of Sin (2013) 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 (Brody et al, 2004; Jacobs et al, 2005 and Lai and Ramesh, 2006 as cited by Morcke, n.d). Studies revealed that the outcomes-based curriculum facilitated the acquisition of subject related knowledge, skills and attitudes (Perera, 2013; Mohayidin, Suandi, Mustapha & Konting, 2008). In some Philippine universities, students were found to have greater tendency to be more productive after instruction since the adoption of

OBE (An, 2014) and OBE was useful in terms of improving academics, instruction and attitude (Borsoto, Lescano, Maquimot, Santorce, Simbulan, & Pagcaliwangan, 2014) with OBE-knowledgeable faculty contributing significantly to the realization of institutional and program objectives (Laguador & Dotong, 2014). There is, however, a substantial lack of research on competency measurement in higher education (Zlatkin-Troitschanskais, Shavelson, & Kuhn, 2015), on the impact of learning outcomes on teaching and learning (Morcke et al, n.d.) and on multiple factors that influence the use of learning outcomes by academics (Dobbins et al, 2016).

OBE has been adopted by educational systems worldwide including but not limited to the City University of Hong Kong 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 towards OBE in the Philippines is 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.

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.

MATERIALS AND 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.

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.

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		
<i>Undergraduate</i>		
3 rd		301(58.2)
4 th		192(37.1)
5 th		5(0.96)
<i>Graduate</i>		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)

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 different aspects of OBE implementation. The instrument was subjected to content validity, in terms of whether the 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.

improvement of communication skills (X=3.40)

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

Aspect	BEEd	BSEd	HRM	Tourism	BSN	Eng'g	LA	Grad	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

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).

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

outcome-based teaching and learning processes.

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

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.

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

Aspect	BEE d	BSE d	HR M	Touris m	BS N	Eng' g	LA	Gra d	Overa ll Mean	Ran k
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

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

Aspect	Educ	IHM	Nursing	Eng'g	LA	Grad	Overall Mean	Rank
Courses in the previous semester helped students develop								
1.1 relevant subject knowledge	4.00	3.69 ⁵	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	3

outcomes statements with the requirements of the regulatory body, which is 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).

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). However, the need to make the outcome statements clear and explicit (X=3.29) and to communicate these to the students (X=3.27) is also of prime importance.

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.

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

Table 6 Student Perceptions on the Organization of Courses

Aspect	BEEEd	BSEd	HRM	Tourism	Nursing	Eng'g	LA	Grad	Overall Mean	Rank
4. 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
5. 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
6. There were neither repetitions nor overlapping of content among courses.	3.03	3.12	3.12	2.95 7	3.38	3.11	3.12	3.47	3.16	2.5

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

Aspect	Educ	IHM	Nursing	Eng'g	LA	Grad	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	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

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.

Table 7 reflects the perceptions of the faculty-respondents on the organization of the different courses in the curriculum of the various academic programs. Data in Table 7 indicates that the courses in the curriculum are logically arranged and the prerequisites are identified ($X=3.56$). This observation matches the responses of the students relative to course organization.

Table 7 Faculty Perceptions on the Organization of Courses

Aspect	Educ	IHM	Nursing	Eng'g	LA	Grad	Overall Mean	Rank
4. 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
5. 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
6. 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

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)

Table 8 Student Perceptions on the Instructional Process

Aspect	BEE d	BSE d	HRM	Tourism	Nursing	Eng'g	LA	Grad	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

($X=3.35$). There is, however, a need to provide for

Table 9 Faculty Perceptions on the Instructional Process

Aspect	Educ	IHM	Nursing	Eng'g	LA	Grad	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

more opportunities for independent learning and the practical applications of work skills.

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

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 ($X=3.47$).

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.

However, the data reflected in Table 10 imply the need to address inadequacies in the laboratories and library resources.

Table 11 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.

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.

Table 10 Student Perceptions on Support for Instruction

Aspect	BEEd	BSEd	HRM	Tourism	Nursing	Eng'g	LA	Grad	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	Educ	IHM	Nursing	Eng'g	LA	Grad	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 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

Table 12 Student Perceptions on Assessment

Aspect	BEEd	BSEd	HRM	Tourism	Nursing	Eng'g	LA	Grad	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				13						

Table 13 Faculty Perceptions on Assessment

Aspect	Educ	IHM	Nursing	Eng'g	LA	Grad	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

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 ($X=3.35$). 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.

The data in Table 13 indicates that the faculty utilize a balanced scheme of assessment using both objective types and performance-based assessment ($X=3.61$). Assessments are appropriate ($X=3.60$) and covered essential content ($X=3.57$).

Table 14 presents a summary of the ratings given by faculty and students on the different aspects of OBE implementation in the University.

assumed

	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

As can be gleaned from Table 14, 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	Significant
Equal variance	3.34	0.12	0.003	Significant
s	3.54	0.14		

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 Perera (2012) and Borsoto et al (2014) 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	Significant
Equal variance	3.35	0.69	0.000	Significant
s	3.63	0.30		

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 (Morcke, et al, n.d.; Harden, 2009; NILQA, 2016).

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

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

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 variance assumed	3.34	0.04	0.000	Significant
	3.57	0.07		

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 (4th or 5th) 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 variance assumed	3.21	0.09	0.306	Not Significant
	3.31	0.26		

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 variance assumed	3.32	0.04	0.000	Significant
	3.52	0.10		

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 (Morcke et al, n.d.)

CONCLUSIONS AND RECOMMENDATIONS

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.

REFERENCES

- [1] Allais, Stephanie (2012). Claims vs. practicalities: lessons about using learning outcomes. *Journal of Education and Work*, 25(3)
- [2] Allan, Joanna. (1996). Learning outcomes in higher education. *Studies in Higher Education*, 21(1), 93-108
- [3] An, Imelda. (2014). Impact of Outcome-Based Education Instruction to Accountancy Students in an Asian University. *Asia Pacific Journal of Education*, 1(5), 48-52
- [4] Barsoto, Liezel, Lascano, Jerome, Maquimot, Norielyn, Santorce, Mary Jean, Simbulan, Aileen & Pagcaliwagan, Angelita. (2014). Status of Implementation and Usefulness of Outcomes-Based Education in the Engineering Department of an Asian University. *Asian Journal of Management Science and Economics*, 1(1)
- [5] Biggs, John. (2014). Constructive alignment in university teaching. *HERDSA Review of Higher Education*, 1
- [6] Dobbins, Kerry, Brooks, Sara, Scott, Jon, Rawlinson, Mark & Norman, Robert. (2016). Understanding and enacting learning outcomes: the academic's perspective. *Studies in Higher Education*, 41(7), 1217-1235
- [7] Harden, Ronald. (2009). Outcome-based education – the ostrich, the peacock and the beaver. *Medical Teacher*, 29(7)

- [8] Higher Education Quality: Why Documenting Learning Matters. (May 2016). National Institute for Learning Outcomes Assessment.
- [9] Laguador, Jake M. & Dotong, Conrado I. (2014). Knowledge versus Practice on the Outcomes-Based Education Implementation of the Engineering Faculty Members in LPU. *International Journal of Academic Research in Progressive Education and Development*, 3(1)
- [10] Mohayidin, Mohd Ghazali, Suandi, Turiman, Mustapha, Ghazali & Konting, Mohd Majid. (2008). Implementation of Outcome-Based Education in Universiti Putra Malaysia: A Focus on Students' Learning Outcomes. *International Education Studies*, 1(4)
- [11] Morcke, Anne Mette, Dornan, Tim & Eika, Berit. (n.d.). Outcome-based education in undergraduate medical education. URL: www.iced2014.se/proceedings/1091_Morcke.pdf
- [12] Ram, Maureen. (2014). "Outcomes-based approach to quality assessment and curriculum improvement in higher education." *Quality Assurance in Education*, 22(2), 158-168
- [13] Sin, Cristina. (2014) Lost in translation: the meaning of learning outcomes across national and institutional policy contexts. *Studies in Higher Education*, 39(10)
- [14] Tam, Maureen. (2014). Outcomes-based approach to quality assessment and curriculum improvement in higher education. *Quality Assurance in Education*, 22(2)
- [15] Young, Michael & Allais, Stephanie. (2011). The shift to outcomes based frameworks. Key problems from a critical perspective. *Austrian Open Access Journal of Adult Education*, 14
- [16] Zlatkin-Troitschanskaia, Shavelson, Richard & Kuhn, Christiane. (2015). The international state of research on measurement of competency in higher education. *Studies in Higher Education*, 40(3), 393-411