Bridging the Gap Between Knowledge and Practice on the Implementation of Outcomes-Based Education

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ABSTRACT

In response to the need for the standardization of education systems and processes and for the improvement of quality education, the shift towards Outcomes-based Education has become the main thrust of most Higher Education Institutions in the Philippines. The main objective of this study is to identify the extent of knowledge and practice of the faculty members on the Outcomes-Based Education implementation in Isabela State University. Mixed method research design was utilized in the study. Quantitative data was treated with frequency, percentage, mean and standard deviation. Qualitative data collection included one interview session composed of faculty members who are considered knowledgeable and attended training on Outcomes-based Education. Findings revealed that there is a great extent of knowledge and practice on the Outcomes-based Education implementation based on the results in the quantitative data and interview among the faculty members of the College of Education; however, there is a moderate extent on the level of practice of the faculty members on the involvement of the formulation of program outcomes and constructive alignment of teaching and learning activities. There is a significant relationship between the extent of knowledge and practice of College of Education faculty members on the Outcomes-based Education implementation. This is evidenced by the computed p-value of 0.005 which is less than the 0.01 level of significance. This signifies that the higher the knowledge of College of Education faculty members, the higher the extent of application through practice of Outcomes-based Education implementation.

Keywords: Constructive alignment, mixed method, outcomes-based education, program outcomes

INTRODUCTION

There is a need for standardization of education systems in the Philippines to be able to keep abreast on the education trends in the world. This effort was initiated for the improvement of quality education in many higher education institutions in the Philippines which focuses their attention and efforts towards implementing Outcome-Based Education system on school level. The implementation of OBE is the main thrust of most Higher Education Institutions because it is used as a framework by international and local academic accreditation bodies in school-and program-level evaluation, on which many schools invest their efforts into (Macayan, 2017). Philippine Higher Education's are at the crossroads, faced with many new demands and challenges brought by the new typology set by the Commission on Higher Education (CHED) and implementation of the Outcomes-based Education (OBE). There are demands for curriculum revisions to meet the graduate learners' skills required in the fast-changing and global standard workforce needs (Bay, 2013).

OBE offers a compelling and intriguing alternative for restructuring and arranging medical education (Dai et al., 2017), and it can be used in other academic fields as well. The idea of accountability turned out to be one of the factors for the rapid growth of various OBEs in nations like Malaysia, the United States, Australia, South Africa, and many others (Akir, Eng, &Malie, 2012).

This desire for accountability and the growing number of physical therapists, for instance, who are entering the profession without the necessary knowledge and abilities, have raised the emphasis on curriculum design and practical evaluation in Pakistani physical therapy training institutions. Therefore, reorganizing education for the twenty-first century requires a paradigm shift from theoretical material, such as knowledge and conceptual understanding of the curriculum, to competencies and skill development, which includes putting students' abilities to use what they are learning as the center of education and appraisal. OBE is not just the preferred educational approach; it also plays a key role in the teaching and learning process. It highlights the end result, where student achievements are calculable, verifiable, and potentially improvable (De Guzman, Edao, &Umayan, 2017).

The early implications and advantages of OBE include the development of more structured, innovative, and adaptable teaching approaches. For instance, project learning will be encouraged, and professional skill and attitude development will be put into practice. Additionally, educational institutions constantly pay attention to

and keep a close eye on the caliber of graduates they generate and bring to the market (Yusoff, Fuaad, Yasin, & Tawil, 2014). An independent agreement between national agencies that accredit tertiary educational programs externally is known as the Washington Accord. It enables the graduates to fulfill the requirements for entry into the field of professional engineering practice. To ensure that each other's authorized programs are considerably equivalent and that their outcomes are comparable to the published professional engineer graduate attribute exemplar, the signatories begin a well-defined process of episodic peer review. The parties acknowledge that they will accord graduates of each other's accredited programs the same recognition, rights, and privileges as they accord graduates of their own certified programs. Through this, the Accord promotes graduate mobility across member nations as well as a better understanding and acknowledgement of national systems for engineering education and accreditation. There are already 15 Washington Accord signatories, which offer more than 7,000 programs and produce graduates with skills and competences that are noticeably related (Sunyu, 2007).

Due to Pakistan Engineering Council's (PEC) connection with the Washington Accord, Pakistani degrees now have the same value as those from developed nations. They are currently working hard at Iqra National University in Peshawar to join the Washington Accord. In contrast to the current practice in Pakistan's Engineering Degree Awarding Institutes (EDAI), they must be obliged to use OBE. They directed their initial efforts at the Washington Accord accreditation of electrical engineering programs and proposed a Faculty Course Assessment Report (FCAR) for the purpose of assessment and appraisal of student performance in the undergraduate electrical engineering curriculum (Mahmood, Khan, Khan, &Kiani, 2015). The role of OBE and the impact of related elements on students' learning outcomes must be assessed in the domains of social sciences, as opposed to engineering programs. OBE, like other learning principles, has been explained in a variety of ways, but its fundamental tenet—evaluating what is necessary to obtain and carry out learning outcomes—remains constant. Early 1980s up until recently evolved forms of curriculum design, there have been ideas about OBE (Balid, Alrouh, Hussian, &Abdulwahed, 2012).

OBE can be characterized as a comprehensive learning teaching approach that emphasizes the students' accomplishments and production at the conclusion of the lesson. Spady is credited with developing the fundamental idea behind OBE and with making a significant contribution to its theoretical underpinnings (Sekhar, Farook, &Bouktache, 2008).

A change in attitude and frame of mind among educators and educational authorities is required for the evaluation of the educator-centered to student-centered approach in OBE. The change calls for switching from an educator-centered to a student-centered teaching approach (Macayan, 2017). Table 1 shows the comparison between the Traditional learning and OBE approach as presented by (Macayan, 2017).

Table 1: Comparison Between Traditional Learning and OBE Approach

Traditional Learning	OBE Approach
What are our teachers' practices?	What our students have learned and capable to display
Teaching Contribution (theoretical Materials)	Learning (Depiction of practical skills, proficiency and outcomes based on knowledge)
Teacher-Centered Learning	Active Learning
Teaching and Learning Considered as the end	Teaching and Learning as the way to completion
Practice decide the outcomes	Outcomes update and modify practice

The idea of OBE is not new. Since its inception, OBE has emphasized the importance of learning objectives in creating educational experiences (Guskey, 1994). What educational goals the organization should aim to achieve, what learning opportunities should be chosen to achieve those goals, how the learning opportunities should be managed in the best way for effective teaching, and how the effectiveness of learning experiences should be assessed are the four fundamental questions targeted in that. The idea was then introduced, with emphasis being placed on the idea that, given enough time, every student could learn what could only be learned by the brightest students (Carroll, 2012).

The evidence then began to mount, leading to the conclusion that almost all kids could master the core curriculum ideas with the right instruction and additional time to learn (Guskey, 2005). The cognitive hypothesis began to receive attention from educational experts. By mentioning that a condition of instructional alignment has been established when the instructions relate to the test and the test corresponds to the desired outcome, a vital part of the instructional background was provided (Martone &Sireci, 2009). Constructivism or webbing are two new learning strategies that emerged as a result of cognitive theory. Recent developments in cognitive psychology education provide students with strategies to become active learners in their pursuit of knowledge. It has been established that the aspect of student empowerment can be attained when a learner makes use of his or her information.

The approach covered the ability to recall and communicate knowledge as well as the organizing of learning experiences. Thus, the learner was regarded as a cognitive creature, one who was endowed with knowledge and who has control over intellectual resources, enabling him to behave deliberately in a variety of circumstances (Prawat, 1992).

By offering a theoretical foundation for curriculum design and shifting the focus away from cramming course material into every waking moment, OBE seems to represent the next phase. Traditionally, educators have used standardized assessments as the basis for accessing learning. On the other hand, OBE defines learning as what the learner can do with their knowledge. The OBE curriculum was developed in response to a broad set of visionary goals that were created to enable students to successfully manage their lives after they completed their school experience (Barman, Silén, &Laksov, 2014).

OBE is characterized as a comprehensive approach to enhancing educational institutions and, consequently, student learning results. The educational system then develops the most effective strategies based on research and experience to improve every aspect of the institute's learning features in order to ensure achievement of the desired results (Harden, 2007). According to Spady, who redefined the term, OBE refers to managing institutional strategies and educational initiatives in order to achieve clearly defined goals that we want our students to be able to demonstrate once they have graduated from the institution.

Despite these paradigm shift in education, OBE is not new to Isabela State University, especially to the colleges, whose academic programs have been mandated to follow the CHED Memorandum Order (CMO) No. 46, series 2012 entitled "Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through an Outcomes- Based and Typology-Based QA" that explains the role of the state in providing quality education to its citizens. It also discussed how quality in higher education has been defined in different ways, often as "excellence" or "fitness for purpose", but also as "transformation" of stakeholders, especially for mature institutions. Taking these important elements as bases, CHED defines quality as the "alignment and consistency of the learning environment with the institution's vision, mission, and goals demonstrated by exceptional learning and service outcomes and the development of a culture of quality." This kind of teaching-learning system will have its appropriate assessment of student performance.

The relatively recent introduction of system-wide quality assurance policy has played a considerable role in pushing Isabela State University (ISU) towards OBE by requiring that academic programs should have appropriates assessment tools to measure performance and to check if the mechanisms, procedures, and process actually deliver the desired quality. Such systems and processes, when properly implemented could lead to quality outcomes as well as sustainable programs and initiatives. In response, ISU have begun to develop various initiatives that will help satisfy the system-wide policy requirements.

One of the initiatives of ISU, OBE seminars and workshops were conducted to orient and train the faculty members to be adept in OBE concepts, principles and standards and to equip them with the necessary knowledge, understanding and skills in preparation for OBE implementation and International Accreditations. The said training is essential for meaningful and successful application of OBE principles and standards in the teaching and learning process. This has led faculty members to revise their syllabi, improve their teaching and assessment practices. However, these knowledge and practices have been poorly documented and thus have not been shared widely within ISU communities. Further, there has been little effort in ISU to examine OBE knowledge and practices. There is a gap in literature when it comes to understanding how OBE principles and standards has been implemented into practice in Isabela State University.

This study is significant for discussions of the outcomes-based approach knowledge and practices of faculty members in a few ways. It helps fill the gap by documenting outcomes-based practices at ISU. Moreover, will consider how OBE principles and standards have been embedded into educational practices. Additionally, it intends to illustrate the interconnection between pedagogy and curriculum on one hand and policy implementation on the other hand. Thus, this study will reflect the use of OBE approach to tertiary education at both the curriculum and policy level.

Hence, this study focused on Outcomes-Based Education knowledge and practice of the faculty members of the College of Education (CED) in ISU-Cauayan Campus. OBE practices are actions undertaken by faculty members directed at defining, teaching towards, and assessing learning outcomes in their educational practices. This includes the articulation of learning outcomes, the creation and utilization of teaching and learning activities and the assessment of student learning based on the defined learning outcomes.

The following three research questions guided the inquiry in this study: How is outcomes-based education is implemented at ISU-Cauayan campus? What is the level of knowledge and practice of the faculty members of the College of Education on the implementation of the Outcomes-based Education? What are the teachers' observations and practices in applying OBE principles in the teaching and learning process? Figure 1 shows the initiatives conducted by the University to help the community in implementation of OBE.

Figure 1: Seminar-Workshop on Outcomes-Based Teaching and Learning Framework

Objectives of the Study

This study aimed to assess the extent of knowledge and practice of the faculty members of the College of Education on the outcomes-based education implementation at Isabela State University. Moreover, this study Evaluated the extent of the knowledge of the College of Education faculty members of Outcomes-based education implementation; Determine the extent of actual practice on the implementation of OBE in the College of Education; Determine if there is a significant relationship between the faculty members' extent of knowledge and practices on the Outcomes-based Education implementation; and Describe the teachers' observations and experiences s in applying outcomes-based education in the teaching and learning.

METHODOLOGY

The sequential explanatory mixed method approach design was utilized in gathering the necessary data and information regarding the knowledge and practices as well as the experiences of the CED faculty members on the Outcomes-based Education implementation. The mixed method approach was adopted as a process to gather and integrate data collected in both quantitative and qualitative processes. An explanatory sequential design consists of first collecting quantitative data and then collecting qualitative data to help explain or elaborate on the quantitative results. The rational for this approach is that the quantitative data and results provide a general picture of the research problem; more analysis, specifically through qualitative data collection is needed to refine, extend or explain the general picture (Creswell, 2011)

Quantitative data collection and analysis → Follow up with → Qualitativedata collection and analysis → Interpretation →

Figure 2: Explanatory Sequential Design

Quantitative analysis was employed to determine the extent of knowledge and practices on OBE implementation and the significant relationship between the faculty members' extent of knowledge and practices on the Outcomes-based Education implementation. In order to validate the findings in the quantitative data, qualitative analysis was also utilized to determine the CED faculty members' experiences in the implementation of Outcomes-bas education in the teaching and learning process.

Participants

This study was conducted in the College of Education of Isabela State University, Cauayan City Campus during the first semester of the school year 2018-2019. The respondents in the quantitative data were obtained by complete enumeration, where all the respondents of the whole population were assessed. The survey was carried out with 39 CED faculty members for the quantitative data. The respondents on the qualitative data were composed of five (5) CED faculty members and were selected through purposive sampling. The interview sessions were conducted during the second semester of the school year 2018-2019.

Data Collection

The quantitative data were collected through a research-made questionnaire to assess the participants' extent of knowledge and practice towards OBE implementation. The questionnaire dealt with the knowledge and practice of Teaching and Learning and Outcomes-based Assessment. Content validation was conducted wherein experts

were asked to evaluate the indicators in the survey questionnaire and was piloted to selected faculty members from other campus to confirm the interpretation of the questions and the validity of the survey. Qualitative data were collected using interview to describe the experiences and observations of the CED faculty members in an Outcomes-based Teaching and Learning framework.

Data Analysis

During the quantitative analysis, data from the survey was analyzed using Statistical Package for the Social Sciences. Weighted mean was used to interpret the extent of knowledge and actual practice of the faculty members on the implementation of OBE. Pearson Product Moment Correlation Coefficient was used to test if there is a significant relationship between the level of knowledge and actual practice of the CED faculty members on the OBE implementation.

On the qualitative part of the study, data were analyzed using thematic analysis. The transcripts of the interview were organized, synthesized, and search for common statements and ways of thinking. The data were arranged according to themes.

A 5-point Likert scale was utilized to determine the extent of knowledge and practice of the CED faculty members on OBE implementation. A description of scale of the questionnaire is as follows:

Table 2: 5-Point Likert Scale Used

Scale	Verbal Interpretation
4.20– 5.00	Very Great Extent
3.40 – 4.19	Great Extent
2.60 – 3.39	Moderate Extent
1.80 – 2.59	Less Extent
1 -1.79	No extent

RESULTS AND DISCUSSIONS

The following are the presentations of the findings of the study.

Table 3: Knowledge of OBE Implementation

Items	Mean	SD	Rank	Verbal Interpretation
1. I understand the alignment of institutional outcomes to the University's mission and vision.	4.33	0.73	1	Very Great Extent
2. I can figure out how institutional or graduate attributes are formulated.	4.07	0.68	6	Great Extent
3. I have a clear understanding on Outcomes-based Teaching and Learning framework.	4.19	0.62	4	Great Extent
4. I am familiar with the alignment of intended learning outcomes to Teaching & Learning Activities (TLA's) and Assessment Tasks (ATs).	4.11	0.64	5	Great Extent
5. I understand how the OBTL approach is being facilitated in the class.	4.11	0.64	5	Great Extent
6. I know how to deliver instructions through student-centered approach.	4.15	0.66	5	Great Extent
7. I have knowledge on constructing course intended outcomes using Bloom's taxonomy.	4.00	0.62	8	Great Extent
8. I am aware of the difference between traditional method of teaching and Outcomes-based Teaching and Learning framework.	4.19	0.79	4	Great Extent
9. I have knowledge on the assessment techniques for OBE and OBTL.	4.00	0.78	8	Great Extent
10. I understand the principle of designing rubrics for outcome-based assessment.	3.89	0.75	9	Great Extent
11. I am aware of the different teaching methods that will best facilitate in achieving the learning outcomes.	4.07	0.78	6	Great Extent
12. I am familiar with the alignment of learning outcomes with assessment task.	4.04	0.71	7	Great Extent

13. I know and understand that trainings on OBE are effective in the delivery of instruction.	4.00	0.73	8	Great Extent
14. I know where to start with an Outcomes-based Teaching and Learning approach in the classroom.	4.22	0.70	3	Very Great Extent
15. I am aware that Outcomes-based Teaching and Learning necessitates teachers to devise interactive teaching and learning activities.	4.26	0.66	2	Very Great Extent
Overall Mean	4.11	0.41		Great Extent

Table 3 shows the result about knowledge of the OBE Implementation. The weighted mean of 4.33 shows that Item number 1 (I understand the alignment of institutional outcomes to the University's mission and vision) ranked number 1. Item number 15 (I am aware that Outcomes-based Teaching and Learning necessitates teachers to devise interactive teaching and learning activities), ranked number 2 with a mean of 4.26, both were described as very great extent The results showed that CED faculty members have a thorough grasp on the alignment of the institutional outcomes to the University's mission and vision and recognize the importance of interactive teaching strategies in an outcomes-based teaching and learning framework. However, item number 10 (I understand the principle of designing rubrics for outcome-based assessment) obtained the least weighted mean score of 3.89 although it was also described as great extent. The computed overall mean score of 4.11 implies that there is a great extent on the knowledge of the OBE implementation among the faculty members of the College of Education. This is the fruit of labor of the management and administrators of Isabela State University in providing series of seminars for the faculty members and staff on how the OBE would be implemented on different levels and areas of instruction. Since the bulk of the implementation belongs to the faculty members, more emphasis on developing their knowledge and skills on how to deliver and document each process of OBE must be addressed properly.

Table 4: Practice of OBE Implementation

Items	Mean	SD	Rank	Verbal Interpretation
1. I was involved in the formulation of program outcomes of the College/Institute	2.63	0.84	11	Moderate Extent
2. I prepared syllabi that shows the alignment of institutional/graduate attributes to the intended learning outcomes and course outcomes.	3.37	0.93	8	Moderate Extent
3. I conducted teaching and learning activities that are highly student-centered.	3.26	0.76	9	Moderate Extent
4. I utilize teaching methods and strategies that are most applicable for implementing the learning outcomes and aligned with the assessment task.	3.22	0.75	10	Moderate Extent
5. I utilized authentic assessment activities to determine student learning.	3.89	0.85	4	Great Extent
6. I provided opportunities for collaborative learning.	3.67	0.68	7	Great Extent
7. I used appropriate verbs in my syllabi to express the desired learning outcomes.	3.70	0.67	6	Great Extent
8. I designed teaching and learning activities to facilitate students in achieving the outcomes.	3.81	0.79	5	Great Extent
9. I provided feedback on my student performance.	3.81	0.74	5	Great Extent
10. I employed rubrics to assess the degree of learning that has taken place in a given course.	4.04	0.76	2	Great Extent
11. I employed innovative and interactive teaching and learning activities that will stimulate the minds of the students and help them create and integrate knowledge about the course content and intended learning outcomes.	4.00	0.62	3	Great Extent
12. I evaluated my students' performance based on the outcomes that they are required to demonstrate.	3.81	0.74	5	Great Extent
13. I attended series of OBE trainings and seminars to improve my instruction.	3.89	0.75	4	Great Extent
14. I utilized constructive alignment that starts with clearly stating the learning outcomes which	4.04	0.71	2	Great Extent

are statements of what the learner is supposed to be able to do and at what standard.				
15. I employed several teaching and learning activities that make my students apply, invent, generate new ideas, diagnose and solve problems.	4.07	0.68	1	Great Extent
Overall Mean	3.68	0.41		Great Extent

Table 4 shows that there is a great extent on the practice of the faculty members in terms of employing several teaching and learning activities that make the students apply, invent, generate new ideas, diagnose and solve problems with a weighted mean of 4.07 on rank number 1, followed by a great extent employing rubrics to assess the degree of learning that has taken place in a given course with a weighted mean of 4.04 and utilizing constructive alignment that starts with clearly stating the learning outcomes which are statements of what the learner is supposed to be able to do and at what standard with a mean of 4.04, both ranked number 2.

Having involved in the formulation of program outcomes of the College/Institute and utilizing teaching methods and strategies that are most applicable for implementing the learning outcomes and aligned with the assessment task obtained the least weighted mean scores of 2.63 and 3.22 interpreted as moderate extent. This signifies that these items are the least being practiced by the CED faculty members.

The overall mean of 3.68 proves that the CED faculty members are greatly practicing the Outcomes-based education in the teaching and learning process. Educators cannot effectively put into reality the ideas and concepts they are not a master of. This assertion is based on the Cognitivist theory that what people think impacts their behavioral responses (Wijayanti, 2013). This implies that educators cannot put into practice educational theories that they do not know and understand. On the other hand, theories they know and understand are indicators of what they can probably apply in their instruction. As stated by Ramoroka (2007), if educators do not understand OBE, they cannot practice or implement it correctly and effectively.

Table 4: Test of Relationship between Knowledge and Standards and Practices on OBE Implementation

	r	p
Knowledge of OBE Implementation and Standards and OBE Practices and Standards	.525**	0.005

**Significant at 0.01 level of significance

It is reflected from the table 4 that there is a significant relationship between the extent of knowledge and practice of CED faculty members on OBE implementation. This is evidenced by the computed p-value of 0.005 which is less than the 0.01 level of significance. This signifies that the higher the knowledge of CED faculty members, the higher the extent of application through practice of OBE implementation.

Educators have a significant role in implementing outcomes-based education. Hence, it is important that they know what is required of them in an OBE classroom. Killen (2003) states that when educators attempt to define what they want students to learn, they may decide that understanding is the capacity to use explanatory concepts creatively to think logically, or capacity to tackle new problems, or the ability to re-interpret objective knowledge. This indicates that understanding impacts practice.

To say that educators understand OBE, they should be able to accommodate OBE concepts such as outcomes, premises and principles and assessment standards in their classroom practices. Their capacity to think logically can be realized when they are able to plan and present their classroom practices following the concepts in different situation (Ramoroka, 2006).

Qualitative Data Analysis
The results of the study were also generated from the responses during the interview conducted by the researcher. The data collected were analyzed to gain better insights on the observations and experiences on OBE implementation. Three questions were posed to them: (1) How is OBE different from the traditional approach? What OBE teaching and learning strategies you utilize for effective delivery of instruction? (3) How would you monitor, assess and report your students' progress and performance?

1. Traditional approach versus OBE
The participating teachers were asked to express their opinions about the difference between the traditional method and OBE approach in order to determine whether the teachers have changed their classroom practices from that of a lecturer to a facilitator. One of the participants pointed out that in the traditional method of teaching, teachers rely heavily on instruction dominated by textbooks and using the textbook as the only source of information:

"I believe that traditional method relies heavily on use of textbook while
while the modern method is based on hands-on-activities" (Teacher 1)
Also, the participant believed that OBE approach relies on hands-on-materials. In this approach, teachers guide students through learning with scaffolded and hands-on activities to support student engagement with hands-on materials or new materials and encourage the application of developing knowledge and skills. Olivier (2002) argues that traditional learning is seen as a linear process which is directed by prescribed content captured in textbooks, and is input and content or competency driven while outcomes-based learning is based on achievements of end-results and is learner-driven. Since OBE is learner-driven, hands-on learning is a method that directly involves the learner, by actively encouraging them to do something in order to learn about it. This difference relates to the idea given by Teacher 1.

In another viewpoint expressed during the discussion, traditional teaching was regarded as heavily emphasize rote traditional learning. Mda&Mothana (2000) indicate that the traditional teaching approach encourages rote-learning with passive learners and that the focal point is on what the teacher should do. OBE approach on the other hand is an approach where in learners are actively engaged in their learning to acquire and demonstrate critical thinking, reasoning, reflective thinking and other skills in order to provide the best practice (Chabeli, 2006). This opinion is shared by one of the participants:

Memorization given emphasis in the traditional method while in OBE approach the emphasis is on enhancement of 21sy century skills such as critical thinking, reflection and collaboration." (Teacher 2)
In addition to the aforementioned idea, another respondent cited that learners receive only information and no feedback from the teacher, hence they are passive in the traditional approach. The teacher talks and the students exclusively listen while in OBE approach, the students take an active participatory role in the learning process. This was mentioned in the interview:

"In the traditional method, the teacher talks most of the time. There is no interaction from the students. In OBE, the students are active." (Teacher 3)
The above statements confirm the idea of Chabeli 2006 who claimed that the traditional education practice encouraged rote learning and passiveness of learners. The curriculum was exam-driven, content-based and non-negotiable. Teachers were responsible for learning instead of learners taking responsibility for their learning. Motivation depended on the personality of the teacher.

The opinions raised by the above participants were also pointed out by another participant who explained that direct teaching is the focus of traditional teaching where teacher gives emphasis on their teaching objectives. OBE approach on the other hand, is a learner-centered approach that focuses on what the student should be able to do at the end of a learning experience. OBE demands the adoption of specific outcome:

"In the traditional method, emphasis is on what the teacher wants to accomplish achieve while in the OBE emphasis is on the outcomes." (Teacher 4)
This confirms the idea of Schalkwyk (2015) who opined that the instructor in higher education setting facilitates the actions aimed at achieving the intended learning outcomes.

The aforementioned statements proved that the respondents can distinguish a traditional approach from an OBE approach. This means that people can understand what they need to do if they compare the new approach with the old one.

2. OBE teaching and learning strategies utilized for effective delivery of instruction.
Any teacher involved with OBE must be able use interactive teaching and learning strategies. The participants were asked what strategies they used for effective delivery of instruction. One participant reported:

"In OBE, there must be a constructive alignment from the institutional outcomes down to the intended learning outcomes.....and the learning outcomes should be aligned with the teaching and learning activities. Also. I employ highly interactive teaching strategies, give feedbacks on their works, especially that my subject is Mathematics (Teacher 1)
The point that Teacher 1 made was similar to the view of Teacher. He felt confident and empowered to apply the principles of OBE through the learner-centered approach. He mentioned that:

"In my English class, I exert effort in making my class very active. I usually start with warming up activities so that my students can actively participate. Also, the learners are divided in groups. Then the groups discuss the topic without my intervention. I only act as facilitator." (Teacher 2)
The same sentiment was expressed by Teacher 3 who affirmed that learner-centered teaching methods shift the focus of activity from the teacher to the leaners. The participants believed that a learner-centered environment facilitates a more collaborative way for students to learn. Also, they pointed out that the teacher acts as a facilitator. Moreover, learners are engaged working with others or alone depending on the type of activity. This indicates that students are the center focus of instruction, as they are engaged in active learning strategies. The participants explained this as follows:

"My objective, it has to be in an outcome-based objective. The teachers act as a facilitator .We facilitate and the students process them. We give the idea then students process it. I see to it that all students must be given equal

opportunities because they are capable of learning. Classroom activities must be collaborative and highly interactive." (Teacher 3)

These opinions were highlighted by other participants who also agreed with the aforementioned statements that active learning is essential in the learner-centered instruction wherein students are engage in active learning strategies. Some participants mentioned the teaching strategies and learning activities they are utilizing in their classroom:

"I've been studying strategies about learning and teaching in professional education courses. Thus, I believe that the "brainstorming" is a good way to encourage student participation (Teacher 4)

"I usually use think, pair, share. It is highly engaging and interactive". (Teacher 5)

Oreta 2014 points out that OBE principle which states "what is important is not what you teach, it is what they learn" should be a guiding principle in the selection of teaching and learning activities. Teacher must employ innovative and student-centered teaching strategies and learning activities that will stimulate and challenge the minds of the students

3. OBE assessment strategies

In the last part of the interview, the participants were asked to describe the assessment strategies the used to monitor students' performance. One participant cited:

"I asked open ended questions in my discussions to help my students grasp ideas." (Teacher 1)

Another participant followed the same line of thought:

"I asked my students to reflect on the lesson and give short quiz after the discussion. (Teacher 2)

Another participant responded:

"I utilized several assessment strategies such as paper and pencil test, rurics, formative and summative assessment ." (Teacher 3)

According to Carles 2015, assessment is required in education to demonstrate students' learning, judge their performance, satisfy demands for accountability and more importantly, support and advance student learning. Assessments focus on the immediate assessment task, but also prepare students for lifelong learning (Boud&Falchikov 2006; Boud& Soler 2016; Nguyen &Walke 2016). Planning for innovative assessment is therefore necessary as part of an OBL approach.

The above findings from the interview showed that participants have knowledge on OBE implementation and were consistent with many sources and with the concepts and ideas found during the review of the literature. Moreover, the participants were able to describe Outcomes-based teaching and learning approach and how they were able to utilized this approach in their classrooms. They have knowledge about the theory of OBE and these theories were put into practice based on the results of interview conducted. According to Killen (2003), the instruction cannot be considered an outcomes-based education if the OBE theories are not applied in the classroom. Moreover, educators play a major role towards the implementation of OBE. As such, it is important that they know what is required in an OBE classroom.

Knowledge and understanding can be realized when educators plan their activities, facilitate learning and assess learners' performance. If educators know the principles of OBE, they will know what is required of them in the teaching and learning process. Their knowledge can also be revealed during their classroom practices. What they do in the classroom can reveal whether they know OBE or not. This indicates that knowledge influence practice.

Discussion for Quantitative and Qualitative Data

This study used a triangulated mixed method whereindata were analyzed in two stages. In stage one, both qualitative and quantitative data were analyzed separately. In stage two, the data sets were merged to show the complete picture.

Knowledge of OBE implementation

The results from the survey showed that item 1 I understand the alignment of institutional outcomes to the University's mission and vision got the highest rating with a mean of 4.33 and was described as great extent. This result indicates that CED faculty members are knowledgeable in terms of the constructive alignment of institutional outcomes and the University's mission and vision. This corroborated the findings on the qualitative data since one of the participants strongly recognized the importance of constructive alignment from the institutional outcomes down to the course and intended learning outcomes. The survey results and interview responses are a clear indication that CED faculty members have thorough grasp in constructive alignment.

To make the OBE learning system successful, constructive alignment is one of the approaches that is used, which can attract students and improve their understanding of mastery learning (Kadir, Salleh, Kadir, &Mohd.Ali, 2009). This view is confirmed by MD Jani (2020) who claimed that the implementation of constructive alignment in a precise and consistent manner will help the institution in producing graduates who meet the standards of schooling, which include the knowledge, teaching and learning skills, the ability to

manage the co-curriculum, the duties of the school and to have high soft skills. Besides, its implementation helps in achieving the vision, mission, objectives, functions and charter of TEI towards its customers.

Practice of OBE Implementation

The findings in the survey revealed that item number 15 I employed several teaching and learning activities that make my students apply, invent, generate new ideas, diagnose and solve problems got the highest rating with a mean of 4.07 and was described as great extent. This validates the findings on the interview that CED faculty members utilized acting teaching and learning activities and strategies in their discussions.

According to Biggs 2003, in order to realize the attainment of the outcomes, the teachers must be guided by the Constructive Alignment Principle which is an OBE principle that emphasizes the need to "set up an environment that maximizes the likelihood that students will engage in the activities designed to achieve the intended outcomes. Thus, the teacher should employ a variety of teaching and learning activities in the delivery of course content and in the honing of student's skills to achieve the learning outcomes.

CONCLUSIONS AND RECOMMENDATIONS

There is a great extent in terms of knowledge and practice on OBE implementation among the faculty members of the College of Education, however, there is a moderate extent on the level of practice of the faculty members on the involvement of the formulation of program outcomes and constructive alignment of teaching and learning activities in the quantitative data. This finding is consistent with the study of Laguador, J. M., &Dotong, C. I. (2014) who found out that faculty members may possess appropriate knowledge in certain area of the OBE implementation but may not practice.

Research findings showed that there was a significant relationship between knowledge and practice of Outcomes Based Education. This shows that to improve OBE practices, faculty members should be knowledgeable on OBE concepts and principles. Faculty members with high level of knowledge and understanding on the implementation of OBE have also higher possibility to contribute in the realization of the objectives of OBE through practice.

In view of the above, it is recommended that the administrators of ISU fully support faculty professional development like continuous participation of the faculty members in training and seminars on syllabus preparation and constructive alignment of teaching and learning activities. Moreover, the school administrators should provide enough resources geared towards successful implementation of Outcomes-based Education. There is also the need for future study to increase the sample size. It is also suggested by (Asim et al., 2021) that the necessity for additional studies with big sample sizes and robust methodology is still up for dispute. Additionally, there is a measurement vacuum for outcomes like student satisfaction, a thorough grasp of the implementation phase, concerns about time consumption, and assessment dependability. The examined studies cannot be applied to all higher education institutions. advising future studies to take into account this danger to internal validity and create studies that might be applied generally.

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