

## DEVELOPMENT OF AN INSTRUMENT FOR EVALUATING FACULTY TEACHING PERFORMANCE USING OUTCOMES-BASED TEACHING AND LEARNING (OBTL) FRAMEWORK

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### ABSTRACT

This study aimed to develop and validate instruments for evaluating faculty performance in the planning and implementation of Outcomes-based Teaching and Learning (OBTL) at the level of classroom practice in higher education courses. Anchored on the Constructive Alignment Theory in OBTL and the Evaluation of Teaching Performance (EPT) model, this study used the mixed methods sequential exploratory research design following the steps outlined by Creswell (2014) where a sequence of qualitative and quantitative methods were used to explore, develop and validate items for the proposed instruments. Items for the instruments were derived from key informants' interview of administrators and faculty members of a private university in Ozamiz City in addition to the review of literature on OBTL. Content and construct validity of the instruments were established using expert validation, exploratory factor analysis (EFA) and inter-rater agreement while reliability was established using Cronbach's *alpha* coefficient as a measure of internal consistency of the items in the entire scale and its subscales. Content validity evidences include experts' and stakeholders agreement on the appropriateness of the items for the instruments in line with related literature on OBTL. The instrument for observation of teaching practice yielded an inter-rater agreement index using *Cohen's Kappa* statistic with values ranging from 0.65 to 0.82 indicating substantial to almost perfect agreement. Construct validation using factor analysis yielded three factors for the instrument for evaluating the course syllabus in planning for OBTL; namely: *Articulation of Learning Outcomes*, *Design of Teaching-Learning Activities*, and *Design of Assessment Tasks*. For the instrument on evaluating classroom implementation of OBTL, three factors were also identified as: *Communication of Learning Outcomes*, *Implementation of Teaching-Learning Activities*; and *Implementation of Assessment Tasks*. Reliability analysis of the two instruments yielded high and acceptable Cronbach's *alpha* values of 0.92 and 0.95 for the two instruments, respectively. The practicality of the instruments was established through a survey considering its ease of administration, scoring and interpretation. The final

instruments developed in this study are named *Evaluation of Constructive Alignment in Planning (Syllabus) for OBTL* with 26 items, and *Evaluation of Constructive Alignment in Classroom Implementation of OBTL* with 22 items, both in a five-point rating scale format. The validation processes provided evidences that both instruments are valid and reliable for evaluating the implementation of Outcomes-based Education at the level of assessing teacher planning for OBTL through the course syllabus and through observation of classroom teaching practice. It is recommended that these instruments be used by tertiary institutions for the purpose of evaluating their faculty performance in the planning and implementation of OBTL.

**Keywords:** *Assessment, Instrument development, Learning outcomes, Outcomes-based education, Outcomes-based teaching and learning, Validation*

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## Chapter 1

### INTRODUCTION

#### Rationale of the Study

Higher education institutions around the world have continually evolved in the quest to provide quality education to cope with the challenges of the 21<sup>st</sup> century. The shift from a content-driven model to a student-outcome model is considered to be a significant paradigm shift in how tertiary institutions are conceptualizing programs and course quality (Barr & Tagg, 1995). Implementing Outcomes-based Education (OBE) in the educational setting leads to a more innovative approach to curriculum planning and implementation among learning institutions (Berlach & O'Neill, 2008), creating a new model to approach specific outcomes. Spady (1994) defined OBE as a process of “clearly focusing and organizing everything in an educational system around what is essential for all students to be able to do successfully at the end of their learning experiences. This means starting with a clear picture of what is important for students to be able to do, then organizing the curriculum, instruction and assessment to make sure this learning ultimately happens” (p.1). Hence, movements to shift current educational practices are directed from a content-driven to an outcomes-driven curriculum (Tam, 2014).

Biggs and Tang (2007) identified three versions of outcomes-based education. The first version is that of Spady (1994) in which OBE, at the individual program level, is designed to equip students with the necessary knowledge, skills and abilities required as culminating outcomes after finishing the program. The second version of OBE pertains to outcomes at the institutional level towards ensuring accountability in meeting the demands of external stakeholders, such as policy-makers and employers. The third version of OBE,

which is also referred to as Outcomes-based Teaching and Learning (OBTL), pertains to OBE at the course level in which learning outcomes are developed and used primarily for enhancing teaching and learning (Biggs & Tang, 2007).

As the version of OBE at the level of courses or classroom practice, OBTL uses the principle of constructive alignment to address what students could be able to do after instruction based on specific standards (Biggs and Tang, 2010). Constructive alignment (CA), as an outcomes-based approach to teaching defines the learning outcomes first prior to instruction, and teaching-learning activities and assessment are then strategized in order to help students attain the outcomes and demonstrate the extent to which the outcomes have been achieved based on clear assessment standards (Biggs, 2014). OBTL therefore, is concerned with curriculum design to ensure that the content, teaching-learning activities, and assessments are all aligned to help facilitate students to attain specific intended learning outcomes (Pang, Ho, & Man, 2009).

Recently, there have been developments in higher education institutions (HEIs) in terms of their curriculum implementation and quality assessment in the OBE framework (Tam, 2014). HEIs continue to seek to improve the quality of their graduate programs. Current practices include a high regard on identifying the intended outcomes or goals of a certain course and then aligning teaching, learning, and assessments in order to make students achieve such outcomes (Deneen, 2009; Spady, 1994).

In the Philippines, the reform to implement OBE requires HEIs to revisit their schools' vision, mission and objectives (VMO) along with achieving specific program and/or course outcomes. This mandate is contained in the Commission on Higher Education (CHED) Memorandum Order No. 46, series of 2012, on the implementation of policies and standards following OBE curriculum (CHED, 2012). As Spady (1994)

contended, OBE focuses on assessing the attainment of the intended learning outcomes as a result of instruction and thus, it necessitates the demonstration of a set of learned competences or skills. This implies that after finishing a certain program of study, students are equipped with the needed competences and dispositions to cope with the challenges of the 21<sup>st</sup> century workplace, including those required by the industry. Hence, the implementation requires the need to review the implementation of different curricular programs among HEIs and their alignment with the essentials of OBE.

Basically, the role of the faculty in the OBE implementation is as important as achieving its purpose. Teachers need to fully understand the essentials of OBE as they are the key implementers at the level of the courses within programs. This suggests that teachers need to self-assess their own knowledge, skills and approaches towards alignment with the requisites of outcomes-based education. As teachers demonstrate the implementation of OBE, it is but of equal importance to assess teachers' understanding of OBE as evidenced in the course syllabus and instructional materials they produced, and in their actual practice in the classroom. Hence, there is a need to evaluate the performance of teachers in the context of OBE.

Several studies on OBE were conducted on various interests. For example, the study of Dela Cruz and Ortega-Dela Cruz (2017) revealed the educators' positive attitudes and high motivations towards OBE implementation in a local university in Laguna. Another study by Pattaguan (2016) on the implementation of OBE in the Accountancy program of the University of Saint Louis in Tuguegarao City found that the types of students and learners, instructional resources, types of teachers, and the curricula are the key factors in the successful implementation of OBE. Further, the study of Laguador and Dotong (2014) revealed high level of knowledge and understanding among the College of

Engineering faculty of the Lyceum of the Philippines in Batangas on the implementation of OBE.

These aforementioned local studies in the Philippines on Outcomes-based Education are geared towards understanding OBE and the success of its implementation at an institutional level. Moreover, evaluating the implementation of OBE in HEIs also require instruments that are aligned to OBE principles and processes, and there is need for instrument development and validation studies in this area, particularly at the level of classroom practice. At the university where the researcher is affiliated, the instrument for faculty evaluation currently utilized did not define clearly the process of evaluating OBTL in teachers' classroom practice. Specifically, the areas of evaluation include: Teaching Skills, Learner Centeredness, and Classroom Environment. The statements that evaluate classroom teaching performance need to be clearly defined and categorized in order to fit into the key areas for evaluation under the OBTL framework. Hence, this study was conducted to develop an evaluation instrument that will gauge the implementation of OBE at the level of classroom practice. Specifically, its focus will be on the development and validation of a tool that will evaluate the teachers' classroom teaching performance in the context of OBTL.

It is the goal of this study to contribute to the education sector, specifically in higher education in the Philippines by providing a valid instrument that will evaluate the success of implementation of outcomes-based education at the level of classroom practice. Specifically, this study will provide a reference in evaluating the teaching performance of faculty in an OBTL classroom.

## Statement of the Problem

This study aimed to develop and validate an instrument in evaluating faculty teaching performance in the implementation of Outcomes-based Teaching and Learning (OBTL) at the level of classroom practice in higher education courses. Specifically, this study sought to answer the following questions:

1. What are the conceptions of university administrators and faculty on constructive alignment within OBTL in terms of:
  - 1.1 Planning
  - 1.2 Development
  - 1.3 Evaluation of results
2. What items may be developed in aligning the teaching and learning activities (TLAs) and assessment tasks (ATs) with the intended learning outcomes (ILOs) of the course as evidenced in the course syllabus?
3. What is the extent of validity of the instrument in terms of
  - 3.1 content-related validity;
  - 3.2 construct-related validity; and
  - 3.3 criterion-related validity?
4. What is the extent of reliability of the instrument through inter-item consistency inter-rater reliability measures?
5. What is the extent of practicality of the instrument in terms of:
  - 5.1 administering the instrument; and
  - 5.2 scoring and interpreting the results?

## Significance of the Study

In the light of CHED Memorandum Order No. 46, series of 2012 on “Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through an Outcomes-Based and Typology-Based QA”, higher education institutions are faced with the challenge of implementing OBE at institutional, program and course levels. The development of an instrument to monitor and evaluate outcomes-based teaching and learning at the course level is essential in assessing whether classroom instructional processes are geared toward the attainment of the intended student learning outcomes. Clear understanding and articulation of the intended learning outcomes at the classroom level facilitates the implementation of outcomes-based education, in general. This study may help different groups of individuals of any social community, wherein quality education is at its primary concern.

**Higher Education Institutions (HEIs).** Results of this study may provide higher education institutions with models in developing and/or utilizing instruments for evaluating the implementation of OBE, particularly in teacher planning and classroom implementation of OBTL.

**School Administrators.** This study may be useful to school administrators as the evaluation tool may be used in monitoring the classroom implementation of OBE among faculty. Further, the results will aid in the processes of curriculum planning and evaluation based on the principles of OBE.

**Teachers.** The results of this study will give valuable inputs for tertiary teachers in terms of designing and aligning their teaching and learning activities, and assessment tasks to the intended learning outcomes of their courses and programs.

**Students.** This study will provide relevant information to students in terms of the



expected features of an outcomes-based teaching and learning environment that will facilitate their attainment of the learning outcomes of the course or subject.

**Future Researchers.** This study serves as reference that may be used by researchers on studies in instrument development and OBTL implementation.

## **Review of Related Literature**

This section consists of four parts. The first part discusses the philosophy of Outcomes-based Education (OBE) as the theoretical bases which provide lens in the conduct of the study. The second part highlights outcomes-based education in learning institutions from both international and local settings, including OBE in the context of classroom teaching and learning. The third part presents models of Faculty Evaluation Instrument Development and Classical Test Theory as the theoretical basis for instrument validation. Finally, the conceptual framework of the study is presented.

**Outcomes-based Education as a Theory of Education.** William Spady, recognized as the Father of OBE, defines outcomes as “clear demonstrations of learning” which take many forms, ranging from specific content skills to complex performances important in life (Spady, 1994). He explains that outcomes are not simply the things students believe, feel, remember, know, or understand; rather, outcomes are what students actually can do with what they know and understand. Outcomes-based education provides an environment for developing life skills. Hence, OBE is highly focused on the demonstration of learning outcomes rather than mastery of learning the content. Such shift in approach requires teachers to redesign the curriculum in such a way that the content, instructional strategies, learning activities, and assessments are developed from the desired learning outcomes (Espiritu & Budharani, 2015).

The outcomes-based approach is completely student-centered which focuses on what students know and can actually do. Sharpening the focus onto student learning outcomes goes beyond mere tinkering with traditional structures and methods; it constitutes a paradigm shift in educational philosophy and practice (Tam, 2014). An integrated or systemic approach is needed for the most effective practice of outcomes-based education also especially relevant for addressing relatively simple, as well as more complex problems (Richards, 2015).

The outcomes-based approach (OBA) of teaching and learning is thought by many as an effective way to assure high quality education especially in the post-secondary sector by better motivating students (Lee & Cheung, 2015). Desired competencies are expected to be developed among students for an outcome-based learning based on significant factors such as effective instructional delivery, state-of-the-art facilities and appropriate teaching strategies geared towards greatness and excellence (Rosaroso, Yap, & Gador, 2015). Outcomes-based practice, also known as outcomes management, has now become a vital tool in providing a highly valuable learning experience (Patil, 2015).

Outcomes-based Teaching and Learning (OBTL) is a version of OBE at the level of classroom practice that focuses on the outcome that a student can demonstrate at the end of a course. The primary emphasis of OBTL is that the teaching and learning activities and assessment methods are constructively aligned with the intended learning outcomes for the course (Biggs & Tang, 2010). Hence, outcomes determine the curriculum content, the teaching methods and strategies, and the assessment process. The outcomes also provide a framework for curriculum evaluation (Centre for Holistic Teaching and Learning, 2017).

A shift in emphasis from educational inputs to academic outcomes as the basis for judgments on educational quality in many parts of the world has intensified efforts to

develop assessment practices that provide convincing evidence that students have achieved or made progress towards the graduate learning outcomes specified for a programme of study (Hughes, 2013). A *learning outcome* for a specific degree attainment would be mapped down to courses in the curriculum. Those courses would also have pre-defined learning outcomes to which the individual learning activities would be associated (Donald, Wolf, & Moore, 2015). In these courses, classroom activities are highly student-centered to provide the students the opportunity to be able to develop the needed competencies to demonstrate the outcomes of learning. Hence, learning outcomes are those measurable performance of students at the end of a course or program of study (Kaliannan & Chandran, 2012).

There are beliefs about teaching and learning within which activities take place in the context of OBE. Spady (1994) proposes three basic assumptions; namely: (1) All learners can learn and succeed; (2) Success breeds success; and (3) Teaching institutions control the conditions of success. Outcomes may be written with traditional, transitional, or transformational goals in mind. Spady advocates transformation goals. Transitional OBE sits between traditional subject matter curriculum structures and planning processes and the future-role priorities inherent in transformational OBE (Hamid, Mujaini, & Mohamed, 2017). Transformational OBE provides a relevant theoretical basis for designing curriculum with learning goals that focus on what is “essential for all students to be able to do”. Well-defined educational visions, curriculum design and teacher preparation and support have been identified as key factors for successfully integrating technology in the classroom (Edwin, 2017).

Spady (1994) introduced the four organizing principles of OBE, namely: clarity of focus, designing down, high expectations, and expanded opportunities. *Clarity of focus*

means that all teaching and learning activities must be systematically related to the broad and specific outcomes identified for the educational program and these must be clearly identified for students. These outcomes may be achieved in different ways. *Designing down* means that curriculum content should flow clearly from the most general valued outcomes, to related more specific outcomes, to class lesson activities. Assessment should be integrated with these outcomes in a coherent manner. In this way the program of study for a student within and across year levels would have a clear relationship to curriculum goals. For *high expectations for all students*, this principle requires that successful and challenging learning experiences and achievement of high standards be part of learning for all students. Identification of the achievement of high standards of performance in relation to criteria established for achievement of outcomes becomes the focus of assessment in OBE. Finally, teachers must provide *expanded opportunities* to allow for achievement of outcomes in a variety of ways. Different learners may take different routes, and different amounts of time or different numbers of attempts, to achieve the same outcome.

The Constructive Alignment (CA) model views outcomes-based education as an approach to teaching in which the learning outcomes that students are intended to achieve are defined before teaching takes place (Biggs & Tang, 2015). CA starts with clearly stating what the outcome of that teaching is intended to be. This is expressed as the Intended Learning Outcome (ILO), which is a statement of what the learner is supposed to be able to do and at what standard at the end of a teaching unit in a course. When students attend lectures, however, their main activity is receiving, not doing. Hence there is a need to design Teaching-Learning Activities (TLAs) that require students to apply their knowledge to invent, generate new ideas, diagnose and solve problems—or whatever other things they

are expected to be able to do after they graduate. Similarly Assessment Tasks (ATs) are designed to gauge how well students can use knowledge in academically and professionally appropriate ways, such as solving problems, designing experiments, or communicating with clients, in line with course and program outcomes. The university's Graduate Attributes express these in a generic form that needs to be adapted to suit each programme, and which the various units address as appropriate. It is often difficult to assess these applied and higher order outcomes in the examination room context (Biggs & Tang, 2010).

***Outcome-based Education in Learning Institutions.*** The continuous revision of curricula and development of new academic programs demand a system to train and retrain instructors and academic leaders on continuous bases (Seyoum, 2012). Outcomes- Based Learning (OBL), which is rapidly gaining attention worldwide, is most well known as a systematic approach to curriculum reform in the school sector in countries such as the United States, Australia, and South Africa (Lixun, 2011). Learning may be defined as the retention of knowledge often achieved through repetition and recitation, or it can be an interpretative process aimed at understanding reality (Schmeck, 2013).

Since the introduction of OBE in South Africa, teachers have been exposed to current trends in assessment through workshops, in-service training and an abundant supply of curriculum documents, all in the quest for fast-tracking transformation and improving quality teaching and learning (Jane, 2013). In Western Cape, teachers questioned whether outcomes-based education can be successfully implemented in South Africa considering many differences in which this approach was adopted. Educators have expressed concerns that increasing frustration, classes of fifty to sixty pupils per teacher, high stress, over-hasty implementation of the system and a lack of sufficient information could create chaos. Changes were "being rushed" and were "bound to fail as long as the

imbalances of the past were not addressed" (Giessen-Hood, 2014).

In Hong Kong, there is systemic emphasis on defining quality by focusing on the learner through the adoption of an outcome-based approach (Deneen et al., 2012). In many universities in Malaysia, OBE has compelled many faculties to re-examine the programmes as well as the courses offered, to consider if they are aligned with the requirements of the Malaysian Qualification Agency (MQA) (Kaliannan & Chandran, 2012).

In the Philippines, the Commission on Higher Education (CHED) encourages higher education institutions to achieve and maintain high quality standards in the implementation of their programs. Hence, 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" was issued to provide the guidelines for evaluating quality in view of the important role of the state in providing quality education to its citizens. Quality in higher education is defined in different ways, often as "excellence" or "fitness for purpose," but also as "transformation" of stakeholders, especially for mature institutions.

OBE has so much to offer as its approach is based on sound educational principles and it provides institutions a comprehensive framework for the learners to acquire the fitness to practice (Tam, 2014). A study on the knowledge of engineering faculty members revealed that there is a great extent in terms of knowledge and practice on OBE implementation among the faculty members of the College of Engineering of Lyceum of the Philippines University in Batangas, however, there is a moderate extent on the level of understanding of faculty members on the appropriate assessment method to be utilized. Continuous participation of the faculty members in training and seminars was highly encouraged to provide them updates of the OBE (Laguador & Dotong, 2014).

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 (Laguador & Dotong, 2014). An assessment of level of preparedness among the faculty of the College of Arts and Sciences in a Philippine university for the implementation of OBE pointed that the current status of faculty preparedness levels is very low, and therefore, there is the need for an andragogy-based change-model to facilitate improvement in OBE faculty preparedness in the College of Arts and Sciences (CAS) (Sampa, 2014). In the Lyceum of the Philippines University – Batangas (LPU-B), OBE is opposed because of the burden it imposes on instructors and educational institutions (An, 2014).

A study on the factors that affect the integration of Outcomes-Based Education (OBE) in the Home Economics (HE) education curriculum of the Technology and Livelihood Education (TLE) program of a State University in the northern part of the Philippines disclosed that there is little understanding of the new paradigm shift—OBE: there are limited instructional resources for the faculty; laboratory equipment are inadequate; and physical facilities available do not maximize the competencies required by OBE (Limon & Vallente, 2016). But through strategic leadership and innovative management, faculty members may be guided accordingly to attain the objectives of the OBE. With proper orientation and demonstration of support from the management, organizational satisfaction may be achieved through unity and harmony of goals (Bay & Laguador, 2014).

***OBE in the Teaching-Learning Process.*** As teachers are driven to redesign and plan for new approaches in instruction to fit into the OBE criteria, they are at the same time faced with the challenges of whether they have acquired adequate understanding of the

concepts and standards underlying outcomes-based education. Planning helps a teacher chart a course for the achievement of OBE goals. The process begins with reviewing the current practices of the organization and identifying what needs to be improved operationally to realign new methods of teaching to OBE. With this, the need to evaluate teachers' level of success of their implementation of OBE is of high concern.

Effectiveness of teaching can also be measured through managing the time suitably to the kind of situations that may possibly ensue in or out of the classroom setting (Laguador, Jake, & Edwin, 2013). Evaluating students' perceptions of the quality of a teacher's teaching is an important issue for higher education (Yun-Chen & Shu-Hui, 2014). In education, student evaluation on the performance of their respective teachers in professional courses serve as a substantial input to determine the efficiency and effectiveness of the teaching strategies and classroom management employed by their professors (Laguador & Deligero, 2015).

In an outcomes-based approach to student learning (also known as OBASL, OBL), the instructors must ask themselves what they want students to learn (outcomes), how students learn (learning activities), and how student's learning is measured (assessments) (Porter, King, Goodkin, & Chan, 2012). With the shift to evaluating the outcomes of higher education (student learning and development gained) came an increased understanding and awareness of the idea that learning can take many different forms and can even take place outside traditional walls in the co-curricular environment (Ludvik, Gardner, & Hickmott, 2012).

Teachers play an important role in the implementation of the curriculum. No matter how excellent is the design of the curriculum, the goal of achieving the Outcomes-based Education would never be realized and accomplished if teachers are not proficient in the



implementation of the principles of OBE (Laguador & Dotong, 2014). Educators across diverse disciplines agree that competency- or outcomes-based education can improve individual performance, enhance communication and coordination across courses, and provide an impetus for curriculum development (Ramsay, Sorrell, & Hartz, 2015). Teachers, therefore, should continuously compare, analyze and evaluate the methods being used in order to motivate students and to make the learning as effective as possible (Camello, 2014).

Teachers with different perceptions of teaching effectiveness may either subscribe to the philosophy of OBE, or have their own interpretation of OBE. This insight is important because in terms of educational change, initiation and implementation are only part of the change process; it is equally important to internalize the change into the institutional culture to make it sustainable in long term (Lee & Cheung, 2015).

OBE places students in the center making them active and responsible learners, and on the other hand, it modifies the role of a teacher from being a “giver” and “presenter” of knowledge to a facilitator of the learning process (Akhmadeeva, Hindy, & Sparrey, 2013). With OBE, the assessments methods of various skills, knowledge and attitudes become diverse and various learning pedagogies are introduced to ensure the achievement of the outcomes (Rajae et al., 2013). OBE makes the students more productive after instruction regardless of age and gender (An, 2014).

Student-centered teaching and learning is the recommended approach to modern day pedagogy especially in OBE where the teachers served as the facilitator of learning activities rather than performing the traditional lecture method (Laguador, 2014). OBE focuses on what is essential for all students to be able to do successfully at the end of their learning experiences. These essentials are known as outcomes. Although OBE requires that

students demonstrate and show they have learned the necessary skills, no singular style of teaching is specified (Linsangan et al., 2011). Outcomes-based assessment of student learning is often geared toward determining what students learn in a particular situation or how they develop overtime as a result of participation in a specific activity or experience (Ludvik, Gardner, & Hickmott, 2012).

According to Donaldson and Papay (2015), monitoring of teachers through evaluation provides support for instructional decisions. With an evaluation scheme in place, teachers are checked against specific standards that are to be met. Hence, the results of evaluation serve as basis on how instruction is actualized. The result of teacher evaluation further provides administrators and teachers a blueprint of how teachers are doing. Further, the goal of having students demonstrate what they have learned over a specific period of time is clearly monitored and assessed. Faculty in private institutions are usually assessed through their students, peers, office or department heads, and school administrators.

**Faculty Teaching Performance Evaluation in Higher Education.** Teacher evaluation is a very complex process. A key challenge is to consider what constitutes an objective evaluation on the effectiveness of teaching, including its strengths and areas of development, followed by feedback, coaching, support and opportunities for professional development (OECD, 2009). Evaluation criteria include specifications with respect to the weights and whether or not the evaluator is objective (Chang & Wang, 2016). Practice of tracing teacher accountability begun with the best of intentions and a well-accepted understanding about the critical role that teachers play in promoting student learning. The focus on teacher accountability has been rooted in the belief that every learner deserves no less than good teaching to realize his or her potential (Danielson, 2016).

There are several models of faculty performance evaluation. The Multi-Source Method for Evaluation (MME) introduced by Lyde, Grieshaber, & Byrns (2016) comprises three primary data sources: (1) student evaluations; (2) a portfolio prepared by faculty describing attributes of their own teaching, including, reflection on student evaluation data, development of a teaching philosophy, and construction of a professional development plan; and (3) reflection on a formative external review. The primary purpose of MME is to facilitate growth and professional development. MME supports two purposes; namely: (1) develop individual faculty member teaching performance (process/formative); and (2) provide employee performance review information upon which personnel decisions are made (product/summative).

The version of Moreno-Murcia, Torregrosa, & Pedreo (2015) of the Evaluation of Teaching Performance (ETP) questionnaire looked into three factors: planning, development, and results. Teacher planning refers to everything related to the previous process of reflection and design of subject matter (the curriculum, the organization of courses, labs, tutorials, planning of anticipated learning activities, evaluation criteria and methods, teaching materials and resources). The development of the course involves everything related to the execution of and compliance with the curriculum, the design of the teaching and learning activities, as well as the application of assessment and evaluation procedures. The results, in terms of educational outcomes, refer to the achievements made by the students, and to the aspects involving the revision and improvement of teaching activity, external recognition of teaching duties, and creation of teaching materials.

The Marzano Teacher Evaluation Model (MTEM) is designed to encourage communication between evaluators and teachers about instructional practice (Marzano, Toth, & Schooling, 2011). The MTEM is a standards-based evaluation model that identifies

the cause and effect relationship between a teacher's instructional practice and student achievement. The MTEM, in compliance with new teacher evaluation policies, relies heavily on a teacher's reflective practice as a component of effective instruction. The ability of teachers to reflect on their understanding of the model and describe how they have changed their practice will allow school leadership to plan professional development to support teachers within the model (Donahue, 2016).

An outcomes-based evaluation model, the ICOPER Reference Model (IRM) proposed by Crespo, Najjar, Leony, Neumann, Oberhuemer, Totschnig, Simon, Gutierrez, and Delgado (2010) provides basis in evaluating faculty performance. The model is contextualized based on the unit of learning as the means by which learners achieve the intended learning outcomes. The model includes three steps; namely: (1) Define the intended learning outcomes; (2) Define the process that will be used to assess the achievement of the learning outcomes; and (3) Apply a teaching method in reference to the attainment of the learning outcome. The proposed ICOPER model captures the influence of learning outcomes in the learning assessment process, which determines appropriate assessment methods and resources to be used.

In this study, the Evaluation of Teaching Performance (Moreno-Murcia et al., 2015) model served as the basis in evaluating faculty teaching performance in OBTL. The model provides an evaluation process, which starts from planning learning outcomes, carrying out classroom activities and providing assessments in compliance or attainment of the learning outcomes.

**Instrument Development and Validation Process.** The processes of item development and validation by Colton and Covert (2007) outlined specific steps which guide the phases of this study. These steps are: (1) Articulate the purpose and focus of the

study; (2) Obtain feedback from stakeholders to clarify the purpose of the study; (3) Identify the research methodology and type of instrument to use for data collection and measurement; (4) Begin to formulate questions or items; (5) Pretest items and preliminary draft with content experts, stakeholders, potential respondents or raters ; (6) Revise instrument based on the feedback and prepare for pilot testing; (7) Pilot test and revise prior to final administration; and (8) Administer instrument and analyse and report results. These processes are described as systematic yet creative as they require continual refinement and revision.

**Validity.** Colton and Covert (2007) defined validity as measurement accuracy that ensures that an instrument elevates what it is supposed to collect (Colton & Covert, 2007). Validity refers to the evaluation of the relationship between the desired knowledge (the nature of the construct) and the knowledge one has (the measured behaviour) and the judgements regarding whether or not this relationship justifies the use of a measure for decision-making (Hughes, 2018).

In building the validity of a developed research instrument, Colton & Colvert (2007) recommended to start with a review of related literature as basis in defining the topic of interest; thus providing evidence that the instrument directly measures the underlying constructs. Additionally, they suggested that experts can help establish instrument validity by having content experts identify the appropriateness of each item in relation to its purpose. Exploratory factor analysis, on the other hand, provides another measure of validity which ascertain the number and nature of latent factors that explain their observed variables (Warne & Larsen, 2014).

**Reliability.** An instrument has reliability when it produces the same information at a given time or over a period of time. Some synonyms for reliability are stability,

dependability, repeatability and consistency (Colton & Covert, 2007). Reliability is the index of how precisely the instrument measures the desired outcomes and is a necessary condition to achieve instrument validity (Althouse, 2000). It has been suggested that reliability can be improved by increasing the number of items in a measurement tool, like that of an examination or questionnaire (Ali, Carr, & Ruit, 2016).

Assessing instrument reliability is important in order to support the stability of the obtained information (Colton and Colvert, 2007). Internal consistency, or inter-item consistency, describes how well various items of an instrument correlate with each other (Gerdner & Wickstrom, 2015). This can be done by using Cronbach *alpha* coefficients which measures how well-related are the items in the instrument that are designed to measure similar qualities. High value of Cronbach *alpha* indicates that items are more inter-connected while low value indicates the opposite (Aleksic & Ivanovic, 2016).

There are several studies that deal with the development and validation of instruments related to OBE. In particular, one such study is that of Aldridge, Laugsh, Seeopa & Fraser (2006) which described the development and validation of an instrument to monitor the implementation of outcomes-based learning environments in Science classrooms in South Africa. The instrument known as the Outcomes-Based Learning Environment Questionnaire (OBLEQ) consists of seven dimensions or scales with eight items per scale. These dimensions include involvement, investigation, cooperation, equity, differentiation, personal relevance and responsibility for one's own learning. Validity evidences included the results of factor analysis for the different dimensions as factors and qualitative case studies. Reliability of the instrument was estimated using Cronbach *alpha* coefficient as a measure of internal consistency and the results showed that reliability ranges from 0.62 to 0.79 for the different subscales for the actual version of OBLEQ. A

convenient discriminant validity index (namely, the mean correlation of a scale with the other five scales) was used as evidence that raw scores on each scale in the actual and preferred versions of the Outcomes-Based Learning Environment Questionnaire (OBLEQ) measure a separate dimension that is distinct from the other scales within the questionnaire (Aldridge et al., 2006).

Further, Deneen, Brown, Bond, and Shroff (2013) developed an instrument, called the Student Evaluation of Outcome-Based Learning Survey (SEOBLS version 1) course evaluation instrument which was designed to address specific components of OBE which were most directly affected by OBE course modifications. Questionnaire items were classified as to whether they focused on the propriety, feasibility, utility, and accuracy aspects of the OBE innovation. The survey consisted of 26 questions; questions 1 to 12 were related to the four identified constructs, with randomized distribution of three items per construct. Questions 13-17 asked students to compare the OBE-adjusted course to other courses they had taken. Questions 18-24 solicited demographic information and the final two questions related to voluntary participation in a focus group. Instrument responses were analysed using Rasch and exploratory/confirmatory factor analyses.

### **Conceptual Framework**

The conceptual framework of this study is anchored on Outcomes-based Education (OBE) as a theory in Education. The implementation of OBE in higher education institutions in the Philippines was declared through the CHED Memorandum Order No. 46, s. 2012 containing the policies, guidelines and standards following the Outcomes-based Education curriculum. Specifically, the framework of Outcomes-based Teaching and Learning (OBTL), the third version of OBE by Biggs and Tang (2007), describes that

learning outcomes at the course level are developed and used primarily in enhancing the quality of teaching and learning at the level of classroom practice. Presented in Figure 1 is the framework which provides an understanding on the interrelationships of different concepts underlying the purpose of developing an instrument for evaluating faculty teaching performance in an OBTL classroom.

Outcomes-based Teaching and Learning (OBTL), as introduced by Biggs and Tang (2010) is a specific version of the general and broad concept of OBE. Van der Horst and MacDonald (2004), as cited in Van Schalkwyk (2015), defined OBTL as “an approach that requires educators and students to focus their attention on the desired end result of each learning process and the instruction and learning processes that guide students to achieve these end results. Teachers following this approach use the course outcomes as basis in designing activities and in making instructional decisions. The Constructive Alignment Theory justifies and provides a clear framework of the primary focus of OBTL in planning and implementing an outcomes-based curriculum following the typology on curriculum representations by van den Akker (2004) consisting of intended, implemented and attained curricula. This implemented curriculum pertains to practices, activities and institutional arrangements in the educational context, particularly in classrooms. Practices occur to implement the vision, aims and goals specified in the intended curriculum.



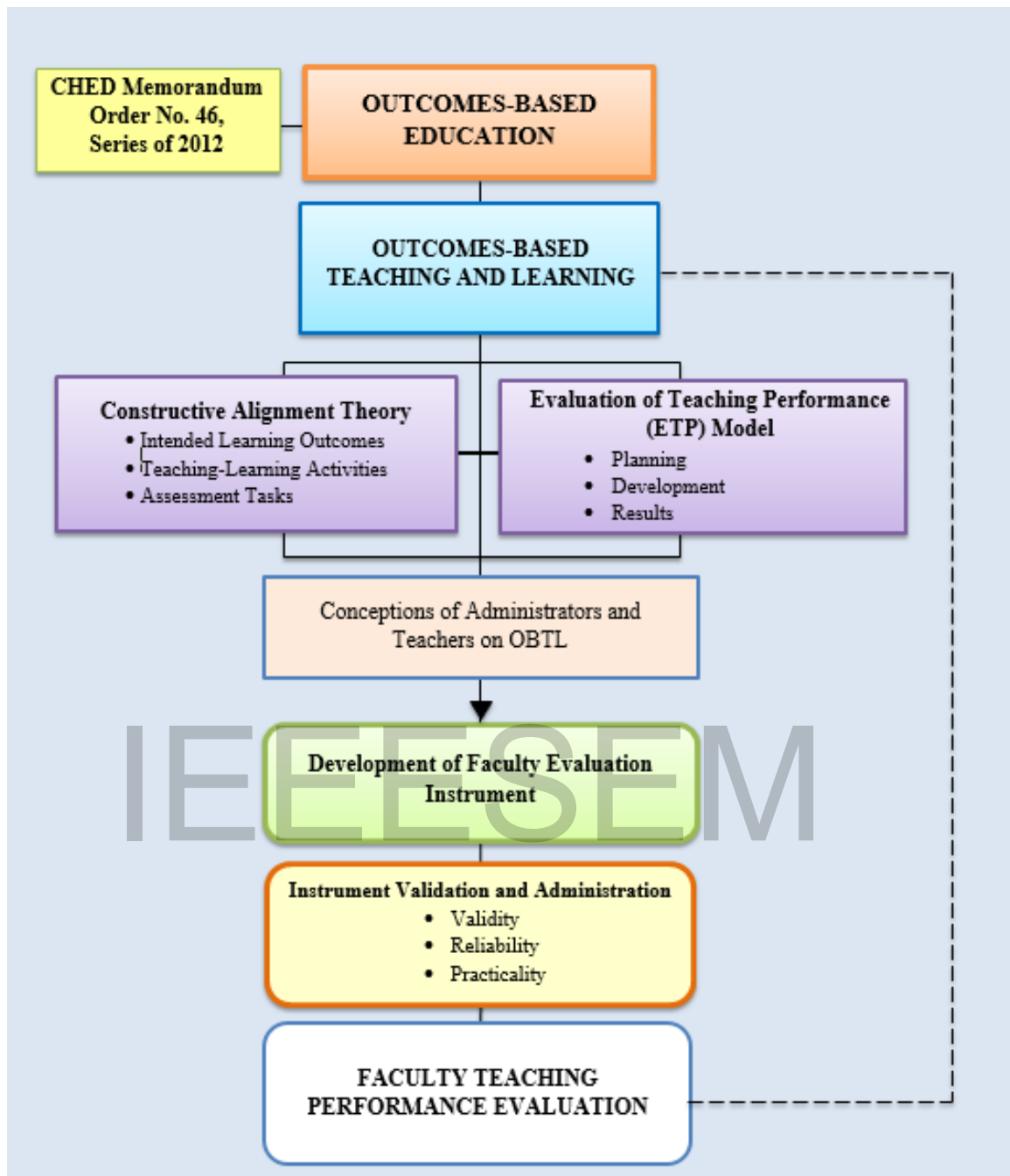


Figure 1. Conceptual Framework of the Study.

As presented in Figure 1, the central concept of constructive alignment points out that teachers plan and implement curriculum based on the principle of alignment of intended learning outcomes, teaching-learning activities and assessment tasks. Since the teachers are the key persons in the implementation of the OBE curriculum, an instrument for evaluating their teaching performance must relate application of these constructive alignment principles in planning, developing and implementing the curriculum. Further, the proposed instrument that will be developed will be anchored on the Evaluation and Teaching Performance (ETP) model of Moreno-Murcia et al. (2015) which comprise three key areas of evaluation, namely: planning, development, and evaluation of results. Planning suggests that faculty identify the intended learning outcomes of their course and design the course activities based on these outcomes. The development phase involves the execution of the planned activities and the evaluation of results involve identifying the achievement of students in relation to the attainment of the outcomes.

The conceptual framework further shows the flow of the methodology in the development and validation of the proposed instrument. Grounded on the Constructive Alignment Theory of OBTL and the ETP model of teaching performance evaluation, the conceptual framework shows that item development is based from the conceptions provided by administrators and teachers regarding OBTL, alongside with the support from literature review. Instrument validation is based on the psychometric concepts of validity and reliability, and instrument administration addresses issues on practicality. Finally, the methodology leads to the development of a valid instrument for evaluating faculty teaching performance in planning and implementing OBTL for use in higher education institutions and as basis for future reference in developing evaluation tools in OBE.

## **Research Methodology**

This section presents the research design, environment, respondents, instruments used and the methods for collection and treatment of data to answer the research questions in the Statement of the Problem.

### **Research Design**

This study used the mixed methods sequential exploratory design in the development and validation of an instrument for evaluating faculty teaching performance in the implementation of OBTL in higher education courses. This design was utilized in this study following the steps outlined by Creswell (2014), namely: (1) Collect and analyse the qualitative data; (2) Examine the results from the qualitative analysis (e.g., the themes and use the information to design a quantitative component, such as new measures, new instruments, or new intervention activities because it is grounded in the actual experiences of key informants; (3). Pre-test the items with a small sample using factor analysis; (4) Conduct reliability analysis of the scales. This design used a sequence of qualitative and quantitative methods to explore, develop and validate items for the proposed instrument.

### **Research Environment**

This study was conducted in a private higher education institution in Ozamiz City during the Academic Year 2019-2020. It is a private non-sectarian institution of learning. For its quality management system, it is ISO certified by Det Norske Veritas, the Netherlands. The university offers varied academic programs designed in a comprehensive and flexible learning environment to meet global challenges and demands for quality graduates in which some of these programs have reached different levels in accreditation status through the Philippine Association of Colleges and Universities Commission on

Accreditation (PACUCOA). These academic programs are offered in the College of Agriculture and Forestry, College of Arts and Sciences, College of Business and Management, College of Criminology, College of Computer Studies, College of Dentistry, College of Education, College of Engineering and Technology, College of Maritime Education, College of Medical Technology, and College of Nursing and Midwifery. For eighty-nine years, the university advocates a progressive and dynamic learning environment through its vision-mission that puts God as the center of its existence, and education its service offering to God and country.

### **Research Respondents**

College deans, program heads, subject chair and faculty from the eleven colleges were the respondents in this study. They were selected through purposive sampling. Only those who attended seminars, trainings, and workshops on outcomes-based teaching and learning were considered as respondents. There were 11 College Deans, 31 Program Chairs, 50 Faculty and 2 Vice President for Academic Affairs (VPAA) representatives who served as the respondents of this study.

### **Research Instruments**

The following were the instruments used in this study:

The **interview guide**, which contained open-ended questions (see Appendix B-2), was utilized to probe from the VPAA representatives, deans, program chairs and faculty on their perceptions regarding the implementation of OBTL in the university.

A **record sheet** was used for content validation from the transcripts of the interview. Specifically, it documented interview questions and responses of the key informants during the conduct of the interview. Interview responses were used in

developing themes that provided the basis for item development for the proposed questionnaire in evaluating outcomes-based teaching learning at the level of classroom practice.

An **audio recorder** was used to capture the responses of the key informants in verbatim. This allowed the researcher to refer back to the interview to ensure that no details were missed out in the transcription and description from the responses.

The **proposed instrument for faculty teaching performance evaluation in an OBTL classroom** is the main instrument of this study. It was developed from the transcripts of the interview and body of literature and was subjected to pretesting and pilot testing. The responses from the deans, program heads, subject chair, and faculty were analyzed to establish the reliability, validity, and practicality of the instrument.

### **Data Gathering Procedure**

Data gathering for this study consisted of the following phases:

**Preliminary Phase.** In this stage, the researcher secured permission from the Office of the Vice President for Academic Affairs for an in-depth interview with the key informants, the key informants who attended several seminars, workshops and training on Outcomes-based Education in order to explore their perceptions on OBE and outcomes-based teaching and learning (OBTL) in particular.

**Item Development Phase.** Responses generated from the key informants interview and those concepts generated from the review of literature provided the basis in the development of items for evaluating faculty performance in OBTL. The interview was conducted individually based on the convenience and time preference of the key informants. During the interview, the interview guide was used containing probing, open-

ended questions on the view of the key informants regarding the implementation of OBTL at the level of classroom practice.

**Pretesting Phase.** Three external experts assessed the sufficiency and correctness of the items which measured the teaching performance of faculty in OBTL. The experts were university professionals who had trainings on OBE. After recommendations were incorporated, and finally approved by the experts, the proposed instrument was utilized for a pilot test with the deans, program chairs, VPAA representatives and selected faculty conducting the evaluation.

**Instrument Validation Phase.** This phase includes the pilot test administration of the instrument and the analyses on the results from three classroom observations conducted by the VPAA representatives, deans, program chairs and faculty during the pretesting phase. Then, factor and reliability analyses of the results were conducted. Finally, the extent of practicality of the instrument as to administration, scoring and interpretation was assessed by the researcher, deans, program chair, and faculty and evidence of practicality of the instrument was established.

### **Treatment of Data**

Different approaches or techniques were utilized in treating the data gathered in this study. Thematic analysis was used in developing item statements into dimensions that evaluate faculty teaching performance in an OBTL classroom from the key informants' interview with administrators and faculty. Transcripts from the interview were presented to the key informants for verification. Items were enriched and improved in reference to the literature which provided support on the relevance of the developed items. Then, external experts assessed the developed themes or dimensions and item statements in

relation to the desired purpose of the instrument.

Kappa Statistic ( $\kappa$ ) was used in determining the consensus index of inter-rater agreement that supplements Content Validity Index (CVI) to ensure that the agreement among experts is beyond chance. Hoang et al. (2018) proposed the evaluation criteria for Kappa as follows:  $< 0$ , less than chance agreement; 0.1–0.2, slight agreement; 0.21–0.40, fair agreement; 0.41–0.60, moderate agreement; 0.61–0.80, substantial agreement; 0.81–0.99, almost perfect agreement.

For construct validation, factor analysis was employed in determining whether the items belong to the same dimension. Exploratory factor analysis was run using principal component analysis (PCA) for extraction of factors and Varimax for factor rotation. Reliability analysis using Cronbach *alpha* as a measure of internal consistency of the items was done for the items in each construct. The Statistical Package for the Social Sciences (SPSS) was used in the conduct of factor analysis and reliability analysis of the data.

### Definition of Terms

The following terms are defined theoretically and/or conceptually as they are used in the study:

**Constructive Alignment** refers to the extent to which teaching and learning experiences (and therefore content and methods) and assessment tasks are linked to the desired unit of study learning outcomes.

**Intended Learning Outcomes** are statements of what the students are expected to be able to do as a result of the learning experience.

**Teaching and Learning Activities** are activities based on the subject matter content designed to help students achieve the intended learning outcomes.

**Assessment Tasks** are tasks used to gather information about student learning as basis for evaluating whether students' performance meet the criteria that address the intended learning outcomes.

**Faculty Evaluation** refers to the process of making value judgments on the performance of faculty in the classroom in terms of planning, development and evaluation of results of OBTL.

**Planning** involves the organization of the course syllabus, putting emphasis on the constructive alignment of teaching and learning activities and assessment tasks to the intended learning outcomes of the course.

**Development** involves the implementation of and compliance with the curriculum as defined in the syllabus, the teaching and learning activities carried out, anticipated pedagogical activities, as well as applied evaluation procedures.

**Results** refers to the achievement made by the students, and to the aspect involving the revision and improvement of the teaching and learning activities.

**Practicality** refers to the extent to which the developed OBTL instrument may be easily administered, answered, scored and interpreted.

**Reliability** pertains to the extent to which the developed instrument is a dependable and stable tool for evaluating teachers' implementation of OBTL.

**Validity** is the extent to which the developed evaluation instrument measures teachers' knowledge and practice of OBTL implementation through the alignment of ILOs, TLAs and ATs at the level of the courses they teach.



## Chapter 2

### ITEM DEVELOPMENT PROCESS

The purpose of this study was to develop and validate items that will comprise a faculty teaching performance evaluation instrument in an Outcomes-based Teaching and Learning (OBTL) classroom. This chapter presents the process of item development and the initial set of, items related to evaluating teaching in an OBTL classroom based from the results of in-depth interviews with the key informants and the concepts derived from the review of literature.

#### Conceptions of Administrators and Faculty on OBE

To generate the initial set of items, eight administrators and faculty participated in in-depth interviews to explore their conceptions regarding the implementation of Outcomes-based Education, particularly, Outcomes-based Teaching and Learning (OBTL) in classrooms in the university. Specifically, these administrators and faculty were selected as they have attended a series of seminar-workshops on OBE, both in-campus and off-site. Generally, it took about half an hour for the interview with each of the administrators or faculty as key informant. The interview questions are found in Appendix B-2.

**Planning for Instruction.** The first part of the interview deals on the planning of instruction within OBTL framework. The core interview question was: *In OBE, what are the important aspects to consider when planning instruction/teaching-learning activities and assessment in terms of learning outcomes?*

Results of the interview revealed four themes on the important aspects to consider when planning lessons following the Outcomes-based teaching and learning framework (OBTL); namely: (1) sensitivity to the different learning needs and capabilities of students;

(2) focus on outcomes as the culminating demonstration of learning; (3) an alignment of teaching-learning activities and assessment to the intended learning outcomes of the course; (4) learner-centeredness.

*Sensitivity to the different learning needs and capabilities of students.* One of the recurring themes that surfaced during the interview is that an OBE classroom requires teachers to demonstrate awareness and sensitivity of the learning styles of students. This has been mentioned in the following responses:

*“A teacher who knows how to **adjust to the diversity** of students in the class and be able to achieve the learning outcome at the end of the term is a good indicator that OBE was fully imbued and learnt by heart.” [KI 1]*

*“He helps the students develop their **knowledge, skills and personalities** to achieve the intended outcomes.” [KI 2]*

*“The teacher must be familiar with the **students’ capacity** before choosing a teaching-learning activity.” [KI 3]*

*“The teacher should design activities that will enable students to **discover their own learning**.” [KI 4]*

*“We always bear that all students **do not learn at the same time**. So we need to design learning that will **cater all types of students**.” KI 5*

*“Since not all students can learn all at the same time, the plan also reflects **different opportunities** so that all students are geared toward the demonstration of the culminating course outcomes.” [KI 7]*

These responses from the key informants suggest that teacher plan their instruction in relation to the nature or characteristics of their students. Students attain and demonstrate the learning outcomes if facilitated well by their teachers based on their pace and abilities for learning. This implies that in planning for teaching, teachers have to utilize multiple means of addressing the needs of students with different learning abilities. When teachers implement activities that recognize the potentials of students, it provides students with opportunities in accomplishing these tasks (Johnson, Coles, & Clarke, 2017). It also shows

that teachers have to be mindful to students' challenges in accomplishing their course work (Suryawati & Osman, 2017).

*Focus on outcomes as the culminating demonstration of learning.* An OBE compliant syllabus reflects culminating outcomes that are learner-centered, which suggests that students are guided toward the demonstration of these outcomes as an evidence of their learning. The “*focus on outcomes*” ideas have been emphasized in the following interview responses:

*“In the OBE, the first and foremost to consider is to understand the **program outcomes**. OBE is specific and direct to the point. The main focus here is that it must be learner-centered.” [KI 1]*

*“When planning instruction/teaching-learning activities and assessment in terms of **learning outcomes**, I need to consider the aspects like vision, mission of the school, including its goals and philosophy; the **institutional outcomes**, which include the ideal attribute of students, the program learning outcomes, the course outcomes, and the **intended learning outcomes**.” [KI 2]*

*“The important aspects to consider when planning instruction or teaching-learning activities and assessment in terms of **learning outcomes** are: 1) the alignment of the **sub-outcomes** and the **unit outcomes** to the culminating or intended learning outcome of a course, 2) the alignment of the teaching-learning activities and assessment tools on the **sub-unit outcomes**.” [KI 6]*

These excerpts from the key informants' interview showed that teachers think of outcomes in different types and levels. Learning outcomes may be considered in terms of levels from more specific to broad outcomes; namely: sub-unit outcomes, unit outcomes, course outcomes, program outcomes and institutional outcomes. These levels of outcomes constitute a hierarchy from specific unit outcomes to broad institutional outcomes.

In OBE, the learning outcomes need to be clear and observable. The observations are on the 'demonstrations of students' learning that occur after a significant set of learning experiences (Kaliannan & Chandran, 2012). Stated outcomes must be realistically achievable by the students and should not merely constitute a teacher's “wish list”

(Castillo, 2014). A well-defined outcome will have clearly defined content or concepts and be demonstrated through a well-defined process beginning with a directive or request (Haque, 2017). Hence, any outcome-based model may start by defining the end product, or with performance-oriented activities that relate to the work of a professional (Harden as mentioned in Barman, Silen, & Klara, 2014).

Communication of learning outcomes is expected to provide a clear framework that guides and encourages students to self-directed learning (Harden as mentioned in Barman, Silen, & Klara (2014). At the start of the class, the students are given an overview of OBTL. The desired skills and outcomes are articulated in consideration of the intended learning outcomes and institutional intended learning outcomes (Deocariss, 2014). Precise outcomes enables clarity of purpose in teaching and learning and run as a “thread of quality control” through the planning of curriculum, selection of instructional strategies, choice of learning experience, and preparation of tests (Mahadevan, 2018).

**Alignment of outcomes.** Conceptions on alignment of outcomes were also evident in some of the responses during the interview, such as the following:

*“‘The **alignment of outcomes** must be clearly illustrated. OBE syllabus shows a clear picture on how to achieve the outcomes. Classroom activities must be **aligned to learning outcomes** and the understanding that all outcomes has a means to measure.’ [KI 1]*

*“In OBE, the important aspect to consider in planning instruction or teaching-learning is **alignment**.” [KI 4]*

*“When planning teaching-learning activities and assessment in terms of learning outcomes, it is important to make sure that all of these are **vertically and horizontally aligned**. Learning outcomes must be **aligned** to the general learning outcome which is the goal of the course. All activities and assessments designed must be **aligned** towards the achievement of the end outcome.” [KI7]*

One key informant emphasized the need for vertical and horizontal alignment of outcomes. Vertical alignment in the different levels of outcomes refers to the alignment of

unit outcomes to course outcomes, and the alignment of course outcomes to program outcomes, and then program outcomes to institutional outcomes.

These responses confirm with the literature claims that instructional planning in OBE is geared toward the realization of learning outcomes at the program, course and unit levels, and this is achieved through alignment (Biggs and Tang, 2007). Moreover, the need for horizontal alignment is achieved through Constructive Alignment (CA) Model which emphasizes the alignment between the intended learning outcomes (ILOs), teaching and learning activities (TLAs) and assessment tasks (ATs) (Biggs & Tang, 2011). Grounded on the Constructivist Theory of Learning, the CA principles guide the design of courses that will enhance student-centered learning by encouraging students to take an active and independent role in constructing their own knowledge (Thadani, Kwong, Chong, & Wong, 2013).

**Learner-Centeredness.** This is another theme in the key informants' responses that OBE is learner-centered. Ideally, outcomes are stated clearly allowing students to discover knowledge, manipulate things and utilize their learning in practical life situations. Hence, planning necessitates circumstances where students utilize their knowledge to prepare them for future life roles. This learner-centeredness theme is evident in the following interview responses:

*In the OBE, the first and foremost to consider is to understand the program outcomes. OBE is specific and direct to the point. The main focus here is that it must be **learner-centered**.” [KI 1]*

*When a teacher makes a plan for teaching, he or she has to **consider first the different abilities of students** for them to perform their best in relation to the outcome. Since not all students can learn at the same time, the plan also reflects different opportunities so that all students are geared toward the demonstration of the culminating course outcomes.” [KI 8]*

These responses support the OBE philosophy which recognizes the need to involve

the entire education community in determining what students need to learn and then in doing whatever is necessary and reasonable to be certain that each student does learn (Lixun, 2013). Learner- centeredness means giving attention on the learning and the learner within an educational setting, rather than what information the teacher can provide (Jensen et al., 2017). In particular, independent learning is an essential outcome element in OBTL as students, with the help of effective teaching and learning activities, are encouraged to explore the intended outcomes beyond information, conception and understanding (Biggs & Tang, 2007). With learning-centeredness, students need to be provided more learning materials and activities that are informative and can fit into their learning abilities (Hidayat, Gunarhadi, & Hidayatulloh, 2017).

**Developing the Teaching-Learning Activities and Assessment to Attain Outcomes.** As to the aspect involving the implementation of the curriculum in the classroom, two themes emerged from the results of the interview. These were alignment to learning outcomes and student-centered approach.

***Alignment to learning outcomes.*** Designing instructional activities in OBTL suggests that the implementation of the teaching-learning activities and assessments will lead to the attainment of the learning outcomes. One key informant disclosed that teachers have to develop classroom activities and assessments that are consistent with the intended learning outcomes of the course. This theme is evident in the following responses from the key informants:

*“Classroom activities must be **aligned to learning outcomes** and the understanding that all outcomes has a means to measure. Students can be evaluated objectively on what he/she learned and deliver and not on how he/she memorize the lessons.” [KI 1]*

*“An OBE syllabus follows **constructive alignment**. This means that all the components in the teaching system like the teaching-learning activities assumed in*

*the intended outcomes.” [KI 2]*

*“The activities and assessments must enhance the students to **achieve** the intended learning outcome.” [KI 3]*

*“An OBE compliant teacher is a designer of learning; he guides his students **towards the outcome**. He does not merely impart knowledge but coach the students to acquire knowledge in order to acquire the skills and outcomes.” [KI 5]*

Alignment describes the direct relationship of teaching and learning activities and assessment tasks to the learning outcomes, which is important in teaching in an OBTL classroom (Biggs, 2016). Teachers have to be sensitive to students’ learning styles and provide them with expanded opportunities during activities, assessment and grading that will support and draw out the abilities of students. As has been emphasized, alignment focuses about how teaching-learning activities develop students’ ability to demonstrate key outcomes (Mulder, 2017). Further, accurate assessment techniques should be selected to assure that the learning outcomes are attained (Bralic & Divjack, 2018).

**Student-centered approach.** This theme which is derived from the interview of key informants implies that the activities are focused on the students’ ability to discover their own potential and develop the skills needed for lifelong learning. This is inherent in the concept of OBE that students shall demonstrate with what they know at the end of the learning experience. This student-centered approach theme is evident in the following key informants’ responses:

*“The teacher must be familiar with the **student’s capacity** before choosing a teaching-learning activity. The activities and assessments must **enhance the students** to achieve the intended learning outcome.” [KI 3]*

*“A classroom should be designed in such a way that students can freely move to do **cooperative or collaborative** works, and be able to **manipulate objects**. A teacher should only serve as facilitator and guide in the learning process. Hence, the teacher should design activities that will enable the students to **discover their own learning**.” [KI 4]*

*“Teaching and learning activities should consider instructional materials that promote the **use of performance tasks** that are applicable to **real life** so that students can easily relate to and accomplish doing them.” [KI 8]*

According to Priya (2016), the Teaching and Learning Activities (TLAs) and Assessment Methods (AMs) are to be constructively aligned with the Intended Learning Outcomes (ILOs) for the course. Teaching activities are based on what abilities the students should possess on the completion of the course. In other words, the outcomes determine the curriculum content, the teaching methods and strategies, and the assessment process. The outcomes also provide a framework for curriculum evaluation. Teaching and assessment are subsequently geared towards the acquisition of appropriate knowledge and skills and the building of student competencies as defined by disciplinary and multi-disciplinary communities of scholars and OBE has various interpretations (Castillo, 2014).

Simion (2016) mentioned that in OBE, the teachers should try integrating the teaching-learning strategies involving the following principles: (1) Provide students opportunities of learning independently and from one another, focusing on the skills that they need; (2) Use techniques in which lectures are replaced by active learning experiences; (3) Assign students with open-ended problems involving critical or creative thinking and not only problems that can be solved by merely following the text examples; and (4) Involve his students in simulations and role-plays using cooperative learning.

In order for successful learning to happen, teachers must use a variety of instructional methods, both direct and “student-centered”; provide a variety of opportunities for students to practice new knowledge; help students bring each learning episode to personal closure so as to show them where this new knowledge will lead. A good course experience geared students towards performing the best and achieve the desired outcomes which is the aim of OBE. Moreover, students’ course experience



provides a valuable insight into important level of support that promotes student learning (Yusof, Othman, Norwani, Ahmad, & Jalil, 2017). This also leads to the essential requirement for '*clarity in communication*' with the students regarding what they are expected to accomplish in a programme or in a course (Tripathi, 2018).

**Evaluating Results.** In terms of the assessment on the attainment of the learning outcomes, results of the interview revealed "*lifelong learning*" as a theme. Key informants mentioned that graduates have to be lifelong learners who can engage and compete globally. Additionally, students can be able to work in diverse teams in accomplishing a project, such as capstone and others.

**Lifelong learning.** This theme describes that the culminating outcome of an Outcomes-based Education (OBE) curriculum is for the learners to utilize their learning in real life, demonstrating their knowledge, skills and values. This theme on lifelong-learning is evident in the following responses from the key informants:

*"The game plan is to produce graduates who can **engage and compete globally**; graduates who are lifelong learners."* [KI 1]

*"OBE implementation is successful, if in the end students can **work effectively in groups** of different personalities and eventually accomplish a project, such as capstone."* [KI 7]

*"Student reflections are good source of evidence showing how the outcomes are achieved. With reflections, students will be able to **tell how much they grow** as a person and to what extent they can demonstrate a particular competence as expected of them in the course."* [KI 8]

**Professional competence.** This theme explains that graduates can demonstrate high level of performance in their fields. This is evident in the interview response:

*"Graduates can engage and compete globally."* [KI 1]

*"Students can demonstrate a particular competence as expected of them in the course."* [KI 8]

Assessment plays a major role in OBE because it is an integral part of achieving the culminating outcomes. Therefore, it is important to identify whether learning had taken place during the course of teaching by conducting an assessment to establish competency in what has been taught. In this instance, assessment is used as a tool of evaluation to ascertain and certify learning. Furthermore, assessment is considered an important element of all formal education and has a remarkable influence on learning and teaching (Kola, 2018). For example, reflective journals could be used as an assessment method which provide evidence of what the students knew, what they could do with what they knew and their self-reflection on their confidence and motivation levels which are obvious and easily traced through their journal entries (Majid, 2016).

With the implementation of OBE, students will be able to write project proposals, complete projects, analyze case studies, give case presentations, show their abilities to think, question, research, and make decisions based on the findings. They will be more creative, able to analyze and synthesize information and will be able to plan and organize tasks, able to work in a team as a community or in entrepreneurial service teams to propose solutions to problems and market their solutions (Priya, 2016). After the course, a graduate should develop cognitive ability in the particular subject and also should cultivate values such as teamwork, communication skills and emotional values (Academics applaud centre initiative on outcome-based education, 2018). In the end, graduates will become more “relevant” to industry and other stakeholders. They will be able to do create and contribute to society and do more challenging tasks than memorizing and reproducing what was taught.

*Use of multiple sources as evidences in the attainment of outcomes.* Knowing that the OBE approach requires the demonstration of outcomes, teachers have to use different

means that will require students to validate their learning. This connotes that teachers have prior knowledge and understanding on the use of a variety of assessment strategies to allow students to demonstrate what they have learned. This is evident in the following responses from the key informants:

*“**Practical exams and written exams** are evidences to measure the learning outcomes.” [KI 1]*

*“The evidences that the teaching-learning activities and assessment are aligned with the intended learning outcomes of the course are syllabus that follows constructive alignment, the **tangible outputs** of students that resulted from the lesson.” [KI 2]*

*“I can say that **what the student can demonstrate at the end of the course** which will verify that there is alignment from learning outcomes, TLAs and assessment.” [KI 7]*

The responses from the key informants suggest that there are different ways by which students' learning can be measured. This can be done through written and/or performance tasks that allow students to apply what they have learned, for example solving scenarios or real-life problems. To validate learning, students must be able to demonstrate their knowledge and skills in actual environments.

The strong OBE is designed to cover the total system and is organized around the achievement of authentic outcomes that will enable students to fulfill the complex life roles they will ultimately assume as adults (Castillo, 2014). Many international professional certification systems established in accordance with the concept of OBE have clearly defined the knowledge, ability and professional qualities that students should possess. The application of OBTL mode in higher education requires setting a series of evaluable learning outcomes, each of which represents the technical level and potential ability of the graduate in the corresponding major (Wang & Ning, 2018).

The conceptions of the university administrators and faculty revealed that in the

implementation of Outcomes-based Education at the level of classroom practice, teaching-learning activities and assessments must be aligned to the intended learning outcomes of the course. These conceptions as specified in the themes provided support in the development of items that evaluate faculty teaching performance in OBTL.

### **Initial Items for the Proposed Instrument for Evaluating Faculty Teaching Performance in OBE Implementation**

The initial items for evaluating faculty teaching performance in the implementation of OBTL were developed from the responses of the interview among administrators and faculty along with the support from the review of related literature. Based from the responses of the key informants, themes were formulated to put together similar conceptions. The themes were named as Learning Outcomes, Teaching-Learning Activities, and Assessment Tasks. There were two forms of the instruments developed in evaluating faculty teaching performance. The first instrument is intended to evaluate teacher's performance in planning using Constructive Alignment principles and the second instrument is intended for teacher evaluation of classroom implementation of OBTL. Table 1A presents the initial items for *Constructive Alignment in Planning (Syllabus for OBTL)* which is comprised of 30 items.

Table 1A

*Initial Items of Constructive Alignment in Planning (Syllabus for OBTL) Instrument*

<b>Initial Items</b>
<b><i>Learning Outcomes</i></b>
<ol style="list-style-type: none"> <li>1. The outcomes are relevant to students' career needs.</li> <li>2. Realistic opportunities for student success are implied in the outcomes.</li> <li>3. Outcomes reflect the highest possible levels of student performance.</li> <li>4. Culminating outcomes are clearly stated for the course.</li> <li>5. Learning outcomes are expressed from the students' perspective.</li> <li>6. Outcome verbs are observable.</li> <li>7. Outcome verbs are measurable.</li> <li>8. Learning outcomes are aligned with the program outcomes as well as the university vision and mission.</li> <li>9. Outcomes reflect the application of various forms of knowledge.</li> <li>10. Outcomes focus on demonstrating application of skills</li> </ol>
<b><i>Teaching-Learning Activities (TLAs)</i></b>
<ol style="list-style-type: none"> <li>11. The TLAs provide students with expanded opportunities for quality learning.</li> <li>12. The TLAs are aligned to the intended learning outcomes of the course.</li> <li>13. The TLAs are well-structured to meet students' career needs.</li> <li>14. The TLAs engage students in class activities where they construct meaning related to their lesson.</li> <li>15. The TLAs include reading materials/texts that support the development of knowledge.</li> <li>16. The TLAs use instructional materials that reflect real-life scenarios.</li> <li>17. The TLAs promote collaboration among students.</li> <li>18. The TLAs are relevant to real-world applications.</li> <li>19. The TLAs provide students with challenges for lifelong learning.</li> <li>20. The TLAs provide transition from one learning experience to the next.</li> </ol>
<b><i>Assessment</i></b>
<ol style="list-style-type: none"> <li>21. Assessment tasks match with the given teaching-learning activities.</li> <li>22. Assessment tasks match with the intended learning outcomes of the course.</li> <li>23. Assessment tasks allow students to demonstrate their own learning.</li> <li>24. Assessment tasks promote new learning through reflections.</li> <li>25. Assessment tools, like rubrics, are indicated to minimize subjectivity in scoring student performance.</li> <li>26. Assessment tasks include objective tests to measure knowledge and understanding.</li> <li>27. Assessment tasks include real-world application of learning.</li> <li>28. Assessment tasks are doable within the specified term.</li> <li>29. Assessment tasks encourage students to work collaboratively in groups.</li> <li>30. Assessment tasks develop students' higher order thinking skills.</li> </ol>

These items in Table 1 were developed to evaluate the evidence of constructive alignment shown in the course syllabus. The initial items for the instrument, *Constructive Alignment in Classroom Implementation of OBTL* is composed of 23 items as presented in Table 1B. This instrument will be used to evaluate classroom teaching performance in the

implementation of OBTL.

Table 1B

*Initial Items of Constructive Alignment in Classroom Implementation of OBTL Instrument*

Initial Items
<b>Learning Outcomes</b> <ol style="list-style-type: none"> <li>1. The teacher communicates the learning outcomes to students.</li> <li>2. The teacher follows the intended learning outcomes as stated in the course syllabus.</li> <li>3. The teacher sets realistic expectations from students in the attainment of the learning outcomes.</li> </ol>
<b>Teaching-Learning Activities (TLAs)</b> <ol style="list-style-type: none"> <li>4. The teacher aligns the activities for the specific lesson observed with the outcomes specified in the syllabus.</li> <li>5. The teacher connects the new lesson with the previous lessons.</li> <li>6. The teacher relates the lesson to real-world applications.</li> <li>7. The teacher provides interesting activities to facilitate student understanding.</li> <li>8. The teacher encourages students to interact to class activities.</li> <li>9. The teacher gives students different opportunities for deepening the understanding of concepts.</li> <li>10. Students work collaboratively in group activities.</li> <li>11. Students write reflections about their own learning.</li> <li>12. Students engage actively in activities involving real-life situations.</li> <li>13. Students synthesize their ideas based on their own understanding.</li> </ol>
<b>Assessment</b> <ol style="list-style-type: none"> <li>14. The teacher aligns the given assessment with the intended learning outcome(s) specified in the syllabus.</li> <li>15. The teacher uses questioning techniques to gauge students' understanding of concepts.</li> <li>16. The teacher provides constructive feedback to students' answers/task performance.</li> <li>17. The teacher gives students the opportunity for reflection of what they have learned.</li> <li>18. The teacher provides clear directions in doing a task.</li> <li>19. The teacher uses a scoring tool, such as rubric in grading student performance.</li> <li>20. The teacher evaluates students' work objectively.</li> <li>21. Evaluative measures are fair.</li> <li>22. The evaluation standards are communicated to students.</li> <li>23. The evaluation standards are clear.</li> </ol>

These results on the conceptions of university administrators and faculty in evaluating faculty teaching performance in implementation of OBTL and the items generated by themes addressed sub-problems 1 and 2 of this study. Based on the Evaluation of Teaching Performance (ETP) Model, the proposed evaluation instrument will consist of two forms corresponding to its first two phases; that is, planning and development. The

first instrument is named *Evaluation of Construcive Alignment in Planning (Syllabus for OBTL)* which covers evaluation of the syllabus as the course plan for OBTL and the second form will be on *Evaluation of Constructive Alignment in Classroom Implementation of OBTL*.

IEEESEM

### **Chapter 3**

#### **VALIDITY AND RELIABILITY OF THE INSTRUMENT FOR EVALUATING TEACHING PERFORMANCE IN THE IMPLEMENTATION OF OBTL**

This chapter presents the extent of validity and reliability of the developed instrument for evaluating faculty teaching performance in the planning and implementation of Outcomes-based Teaching and Learning (OBTL). Validity is the extent to which the developed evaluation instrument serves its purpose; that is, the extent to which the instrument measures teachers' knowledge and practice of OBTL in planning and classroom implementation through the alignment of ILOs, TLAs and ATs at the level of the courses they teach. In this study, the sources of validity evidence of the instrument will be described in terms of content-related, construct-related validity; and criterion-related validity evidences. On the other hand, reliability is the extent to which the data generated by the instrument is internally consistent and stable across raters and over time.

##### **Content-Related Validity**

The initial items of the instruments for faculty evaluation were derived from the conceptions of the selected administrators and faculty based on the interview responses and the review of literature on OBTL. The key informants verified the correctness of their responses when the transcripts of the interview were presented to them. Further, content experts affirmed that the items are capable of measuring faculty teaching performance in OBTL.

Content validity requires the evaluation of each item in the instrument for its relevance to the intended construct, that is, whether the items are clearly and correctly worded, whether there is appropriate scaling to ensure that the items of the instrument "are



representative samples of the universe of content and/or behavior of the domain being addressed” (Yassir, McIntyre, & Bearnm, 2016; Krikorian, 2016).

Establishing content validity is a systematic and two-stage process. In this study, the first phase was a qualitative review of the instrument by three experts to solicit their feedback based on their expert judgment on the acceptance of each item corresponding to the two domains: (1) Constructive Alignment in Planning (Syllabus for OBTL), and (2) Constructive Alignment in Classroom Implementation of OBTL. The experts were asked to review on the content alignment of each item to the specified domain. Their decision on the item was based on three categories: Accept, Revise, or Reject.

Using a separate evaluation sheet, the experts evaluated the appropriateness of the items by putting a check mark to the corresponding column on their decision and used the “Remarks” column for their comments or recommendation to improve the item. Based on the experts’ responses and comments, the instrument was revised and modified accordingly. Majority of the items were marked “Accept.” Some items were due for revision in order to add clarity to the item pool. No item was marked “Reject” for the two domains as presented in Table 2.

Based on the content expert validators, two items were to be revised which fall in the evaluation on *Constructive Alignment in Planning (Syllabus for OBTL)*. Specifically, these items were “Assessment tasks match with the given teaching-learning activities.” and “Assessment tasks match with the intended learning outcomes of the course.” Accordingly, the phrase “match with” in the two items be replaced with “are consistent with”. In addition, experts recommended revision of four items on *Constructive Alignment in Classroom Implementation of OBTL*, such as “The teacher encourages students to interact to class activities.” This item was replaced with “The teacher encourages students to

participate in class activities.” Further, the item “The teacher gives students different opportunities for deepening the understanding of concepts” was revised into “The teacher provides varied opportunities for students to learn with deep conceptual understanding.” All these recommendations were considered in the revision of the instruments.

Table 2

*Results of Content Validation by Three Experts*

Domain	Number of Items	No. of Marked Items (Percent)	
		Accept	Revise
A. Constructive Alignment in Planning (Syllabus for OBTL)			
Learning Outcomes	10	10 (100.00)	-
Teaching-Learning Activities	10	10 (100.00)	-
Assessment	10	8 (80.00)	2 (20.00)
B. Constructive Alignment in Classroom Implementation of OBTL			
Learning Outcomes	3	3 (100.00)	-
Teaching-Learning Activities	10	8 (80.00)	2 (20.00)
Assessment	10	8 (80.00)	2 (20.00)

**Inter-rater Agreement of Content Validation by Experts.** There were three sets of content expert evaluation conducted. First, the Superintendent of the College of Maritime Education and the Academic Supervisor (representing the Office of Vice President for Academic Affairs) evaluated the teaching performance of one faculty

teaching a major subject in the Marine Engineering program. Second, two peer evaluators sat down with a faculty teaching an English course in the College of Arts and Sciences. Lastly, the Dean of the College of Business and Management and one faculty (as peer evaluator) conducted a classroom evaluation of one faculty teaching an Accountancy course. For purposes of this study, the faculty were informed that they will be evaluated in terms of the learning outcomes, teaching-learning activities, and assessment.

To establish inter-rater agreement of these different content validators, *Cohen's Kappa* statistic,  $\kappa$  was run for the three sets of classroom observations to determine if there was agreement between two evaluators' judgement on the teaching performance of faculty in an OBTL classroom. These results shown in Table 3 provide evidence that the instrument possessed content validity in terms of interrater agreement of content evaluation. Based on interpretations of the *Kappa* statistic value, the raters of Classroom Observation 1 and Classroom Observation 3 showed substantial agreement while the raters of Classroom Observation 2 showed almost perfect agreement (Hoang et al., 2018).

Table 3

*Inter-rater Agreement of Content Validators on the Instrument for Evaluating Constructive Alignment in Classroom Implementation of OBTL*

Observation	Number of Raters	Kappa ( $\kappa$ ) Value	Remark
Classroom Observation 1	2	0.658	Substantial agreement
Classroom Observation 2	2	0.820	Almost perfect agreement
Classroom Observation 3	2	0.663	Substantial agreement

*Note. Kappa Scale: <0 (Less than chance agreement); 0.1-0.2 (Slight agreement); 0.21-0.40 (Fair agreement); 0.41-0.60 (Moderate agreement); 0.61-0.80 (Substantial agreement); 0.81-0.99 (Almost perfect agreement)*

Table 4 shows the summary of the original and rephrased items based on the raters' recommendations and qualitative remarks.

Table 4

*Original and Revised Items in the Proposed Instrument for Evaluating Faculty Teaching Performance in the Implementation of OBTL Content Experts' Recommendations*

Original Items	New Reformulated/Phrased Items
<b>A. Constructive Alignment in Planning (Syllabus for OBTL)</b>	
Assessment tasks match with the given teaching-learning activities. (Item 21)	Assessment tasks are consistent with the teaching-learning activities.
Assessment tasks match with the intended learning outcomes of the course. (Item 22)	Assessment tasks are consistent with the learning outcomes of the course.
<b>B. Constructive Alignment in Classroom Implementation of OBTL</b>	
The teacher encourages students to interact to class activities. (Item 8)	The teacher encourages students to participate in class activities.
The teacher gives students different opportunities for deepening the understanding of concepts. (Item 9)	The teacher provides varied opportunities for students to learn with deep conceptual understanding.
The teacher uses a scoring tool, such as rubric in grading student performance. (Item 19)	The teacher uses a scoring tool, such as rubric in assessing student performance.
The teacher evaluates students' work objectively. (Item 20)	The teacher assesses students' work objectively.

For the instrument on evaluating Constructive Alignment in Planning, an expert marked two items “*Revise*” which fall under “Assessment.” These items were suggested to be improved by using “in consistent with...” instead of “match with...” The rest of the categories were marked “*Accept*.” On the other hand, the instrument evaluating Constructive Alignment in Classroom Implementation of OBTL had four items marked “*Revise*” from the experts, two of which fall under “Teaching-Learning Activities” and the

other two under “Assessment.” These items were revised based on the recommendations given.

### **Construct Validity of the Course Syllabus Evaluation Instrument**

Construct validity is most directly related to the question of what the instrument is in fact measuring, that is, what construct, trait, or concept underlies an individual's performance or score on a measure (Churchill, 1979). This refers to the degree to which inferences can be legitimately made from the observed scores to the theoretical constructs about which these observations are supposed to contain information (Podsakoff et al., 2013). Construct validity can be assessed with the use of exploratory factor analysis (EFA), confirmatory factor analysis (CFA), or with convergent, discriminant, predictive/nomological, criterion, internal, and external validity.

**Exploratory Factor Analysis on Evaluation of Constructive Alignment in Planning (Syllabus for OBTL) Instrument.** Exploratory factor analysis (EFA) is a statistical procedure used to reduce a large number of observed variables to a small number of "factors/components", reflecting that the clusters of variables are in common (Osborne & Banjanovic, 2016). In this study, EFA was used to establish the construct validity of the instrument. In EFA the correlations among a group of observed variables which comprise the responses to the items are identified and transformed into a small number of related factors. In brief, EFA captures the groups of observed variables which are consistently moving together and they are identified through factor extraction and factor rotation. EFA is a useful tool for investigating the relations among observed variables and a small number of underlying factors (Hadi, Abdullah, & Sentosa, 2016).

*Suitability of Data for Factor Analysis.* There were 94 cases of classroom observations which were the source of data for validating the developed instrument comprising 30 items. Using the Statistical Package for the Social Sciences (SPSS), EFA was run on the data on the evaluation of the course syllabus in OBTL using principal component analysis (PCA) for extraction of factors and Varimax for factor rotation to improve interpretability. Moreover, prior to performing factor analysis, the suitability of the data for factor analysis was assessed. The adequacy of the sample was assessed by the Kaiser Meyer Olkin (KMO) measure in SPSS. According to Kaiser's criterion the sample size is adequate or sufficient if the KMO value of is larger than 0.5. The results showed a KMO value of 0.704 which exceeded the recommended minimum value of 0.50 (Kaiser, 1970, 1974). Hence, the sample size was adequate for factor analysis.

Further, factor analysis depends on the strength of correlation of variables representing the ratings in the items of the instrument. The Barlett Test of Sphericity in SPSS was used and the results reveal a statistically significant ( $p < 0.01$ ) intercorrelations of the variables which support the factorability of the correlation matrix. Thus, the data is suitable for factor analysis.

*The Factor Solution.* The results of EFA using Principal Components Analysis with a total of 30 components extracted representing the underlying dimensions called factors in the developed instrument. However, based on the Kaiser criterion to retain only components or factors with eigenvalues greater than one, then there are only three components or factors extracted with a total variance explained of 80.34%. These results are summarized in Table 5.

Table 5

*Components/Factors Extracted from the Responses on Constructive Alignment in Planning (Syllabus for OBTL) Instrument with Total Variance Explained*

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
<b>1</b>	<b>20.891</b>	<b>69.638</b>	<b>69.638</b>	20.891	69.638	69.638
<b>2</b>	<b>1.793</b>	<b>5.977</b>	<b>75.615</b>	1.793	5.977	75.615
<b>3</b>	<b>1.418</b>	<b>4.725</b>	<b>80.340</b>	1.418	4.725	80.340
4	.906	3.021	83.361			
5	.697	2.322	85.684			
6	.634	2.114	87.797			
7	.629	2.097	89.894			
8	.483	1.609	91.503			
9	.382	1.274	92.777			
10	.348	1.160	93.937			
11	.263	.877	94.814			
12	.252	.840	95.655			
13	.232	.772	96.427			
14	.193	.645	97.072			
15	.179	.595	97.667			
16	.153	.509	98.176			
17	.118	.394	98.570			
18	.109	.364	98.934			
19	.071	.238	99.172			
20	.058	.194	99.366			
21	.054	.179	99.545			
22	.034	.114	99.659			
23	.030	.101	99.761			
24	.022	.073	99.834			
25	.019	.062	99.896			
26	.013	.044	99.940			
27	.008	.028	99.968			
28	.006	.020	99.987			
29	.003	.010	99.998			
30	.001	.002	100.000			

For the three-factor rotated solution, the results are summarized in Table 6.

Table 6

*Sorting of Items in the Constructive Alignment in Planning (Syllabus for OBTL)  
Instrument based on the Rotated Component Matrix in the First EFA*

Item No.	Item	Components		
		Factor 1	Factor 2	Factor 3
4.	Culminating outcomes are clearly stated for the course.	.824		
8.	Learning outcomes are aligned with the program outcomes as well as the university vision and mission.	.818		
1.	The outcomes are relevant to students' career needs.	.781		
7.	Outcome verbs are measurable.	.779		
9.	Outcomes reflect the application of various forms of knowledge.	.768		
2.	Realistic opportunities for student success are implied in the outcomes.	.731		
10.	Outcomes focus on demonstrating application of skills for life-long learning	.712		
5.	Learning outcomes are expressed from the students' perspective.	.712		
3.	Outcomes reflect the highest possible levels of student performance.	.700		
28.	Assessment tasks are doable within the specified term.	.683	.568	
29.	Assessment tasks encourage students to work collaboratively in groups.	.672		
6.	Outcome verbs are observable.	.596		
18.	The TLAs are relevant to real-world applications.		.815	
17.	The TLAs promote collaboration among students.		.784	
15.	The TLAs include reading materials/texts that support the development of knowledge.		.780	
13.	The TLAs are well-structured to meet students' career needs.		.780	
20.	The TLAs provide transition from one learning experience to the next.		.744	
12.	The TLAs are aligned to the intended learning outcomes of the course.		.693	
16.	The TLAs use instructional materials that reflect real-life scenarios.		.687	
11.	The TLAs provide students with expanded opportunities for quality learning.		.681	
14.	The TLAs engage students in class activities where they construct meaning related to their lesson.		.637	
27.	Assessment tasks include real-world application of learning.	.546	.633	
19.	The TLAs provide students with challenges for lifelong learning.		.632	
30.	Assessment tasks develop students' higher order thinking skills.	.500	.612	
24.	Assessment tasks promote new learning through reflections.			.850
25.	Assessment tools, like rubrics, are indicated to minimize subjectivity in scoring student performance.			.811
22.	Assessment tasks match with the intended learning outcomes of the course.			.810
23.	Assessment tasks allow students to demonstrate their own learning.			.803
26.	Assessment tasks include objective tests to measure knowledge and understanding.			.671
21.	Assessment tasks match with the given teaching-learning activities.			.568

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

The results in Table 6 show the how the items of the instrument are distributed to any one of the three components or factors based on their factor loadings. The factor



loadings generated after factor analysis represent the relationship between the items and the extracted components or factors and may be interpreted like correlation coefficients with values closer to 1 indicating stronger relationships. In this study, five exploratory factor analyses were conducted before the desired factor structure with no cross-loading was satisfied. Samuels (2017) suggested that cross-loading items should be removed one by one until the solution satisfies all the requirements.

In Table 7, only factor loadings greater than or equal to 0.50 are considered significant. It shows that more items loaded in Factor 1 and Factor 2 than in Factor 3. Factor 1 comprised eleven items (items 4, 8, 1, 7, 9, 2, 10, 5, 3, 29, and 6 with items 28, 19 and 30 cross-loading into Factor 2). Factor 2 is composed of 10 items (items 18, 17, 15, 13, 20, 12, 16, 11, 14, and 27 with items 28, 19 and 30 crossloading with Factor 1. Factor 3 comprised six items (items 24, 25, 22, 23, 26, and 21). Following the recommendations of Maskey, Fei and Nguyen (2018) and Samuels (2017), Item 28 (*“Assessment tasks are doable within the specified term.”*) was deleted before the second run of the EFA since it has significant cross-loadings in Factors 1 and 2.

Results of the second to fifth EFA showed that five items were removed which showed crossloadings to other factors. These items were Item 27 (*Assessment tasks include real-world application of learning.*), Item 28 (*Assessment tasks are doable within the specified term.*), Item 29 (*Assessment tasks encourage students to work collaboratively in groups.*) and Item 30 (*Assessment tasks develop students' higher order thinking skills.*) The fifth and final rotated component matrix in Table 7 shows that the extraction criteria in this study were met. All factor loadings are greater than .50 with no crossloadings of items to other factors. For the final items for evaluating syllabus in OBTL after EFA, Factor 1 has 10 items, Factor 2 has 10 items, and Factor 3 has 6 items.

Table 7

*Sorting of Items in the Constructive Alignment in Planning (Syllabus for OBTL)  
Instrument based on the Rotated Component Matrix in the Fifth EFA*

Item No.	Item	Component		
		Factor 1	Factor 2	Factor 3
8.	Learning outcomes are aligned with the program outcomes as well as the university vision and mission.	.835		
4.	Culminating outcomes are clearly stated for the course.	.830		
7.	Outcome verbs are measurable.	.785		
1.	The outcomes are relevant to students' career needs.	.774		
9.	Outcomes reflect the application of various forms of knowledge.	.765		
2.	Realistic opportunities for student success are implied in the outcomes.	.742		
5.	Learning outcomes are expressed from the students' perspective.	.713		
10.	Outcomes focus on demonstrating application of skills for life-long learning	.705		
3.	Outcomes reflect the highest possible levels of student performance.	.682		
6.	Outcome verbs are observable.	.610		
18.	The TLAs are relevant to real-world applications.		.824	
17.	The TLAs promote collaboration among students.		.798	
13.	The TLAs are well-structured to meet students' career needs.		.793	
15.	The TLAs include reading materials/texts that support the development of knowledge.		.783	
20.	The TLAs provide transition from one learning experience to the next.		.744	
12.	The TLAs are aligned to the intended learning outcomes of the course.		.694	
16.	The TLAs use instructional materials that reflect real-life scenarios.		.690	
11.	The TLAs provide students with expanded opportunities for quality learning.		.689	
14.	The TLAs engage students in class activities where they construct meaning related to their lesson.		.649	
19.	The TLAs provide students with challenges for lifelong learning.		.634	
24.	Assessment tasks promote new learning through reflections.			.845
22.	Assessment tasks match with the intended learning outcomes of the course.			.816
25.	Assessment tools, like rubrics, are indicated to minimize subjectivity in scoring student performance.			.813
23.	Assessment tasks allow students to demonstrate their own learning.			.786
26.	Assessment tasks include objective tests to measure knowledge and understanding.			.652
21.	Assessment tasks match with the given teaching-learning activities.			.572

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

The results of factor analysis showed that the items were reduced and those retained belong to any one of three factors. Factor analysis resulted to sorting the items of the instrument to these dimensions called factors. They provide evidence of construct validity

on what the instrument measures based on the internal structure of the instrument. The next step is to name the factors based on the items which load heavily on these factors. Factor 1 contained 10 items which relate to the expected outcomes expressed in the planning of instruction through the course syllabus. Specifically, the outcomes in the syllabus were written in such a manner that they are to be attained within a particular period of time. Hence, Factor 1 is named *Articulation of Learning Outcomes*. Factor 2 contained 10 items which refer to classroom activities expressed in the course syllabus that are to be implemented in order to attain the learning outcomes. Factor 2, was therefore named *Design of Teaching-Learning Activities*. Factor 3 contained 6 items which describe the use of assessment tasks and other activities in order to ensure that student learning is well-demonstrated; thus, Factor 3 was named *Design of Assessment Tasks*. As such, the purpose of the three factors is to show that there is constructive alignment in planning for instruction for Outcomes-based Teaching and Learning as expressed in the course syllabus. The complete items of the revised instrument follows in Table 8.

Table 8

*Factors and Items in the Evaluation of Constructive Alignment in Planning (Syllabus for OBTL) Instrument*

Item No.	Factor 1. Articulation of Learning Outcomes
8.	Learning outcomes are aligned with the program outcomes as well as the university vision and mission.
4.	Culminating outcomes are clearly stated for the course.
7.	Outcome verbs are measurable.
1.	The outcomes are relevant to students' career needs.
9.	Outcomes reflect the application of various forms of knowledge.
2.	Realistic opportunities for student success are implied in the outcomes.
5.	Learning outcomes are expressed from the students' perspective.
10.	Outcomes focus on demonstrating application of skills for life-long learning
3.	Outcomes reflect the highest possible levels of student performance.
6.	Outcome verbs are observable.
	<b>Factor 2. Design of Teaching-Learning Activities</b>
18.	The TLAs are relevant to real-world applications.
17.	The TLAs promote collaboration among students.
13.	The TLAs are well-structured to meet students' career needs.
15.	The TLAs include reading materials/texts that support the development of knowledge.
20.	The TLAs provide transition from one learning experience to the next.
12.	The TLAs are aligned to the intended learning outcomes of the course.
16.	The TLAs use instructional materials that reflect real-life scenarios.
11.	The TLAS provide students with expanded opportunities for quality learning.
14.	The TLAs engage students in class activities where they construct meaning related to their lesson.
19.	The TLAs provide students with challenges for lifelong learning.
	<b>Factor 3. Design of Assessment Tasks</b>
24.	Assessment tasks promote new learning through reflections.
22.	Assessment tasks match with the intended learning outcomes of the course.
25.	Assessment tools, like rubrics, are indicated to minimize subjectivity in scoring student performance.
23.	Assessment tasks allow students to demonstrate their own learning.
26.	Assessment tasks include objective tests to measure knowledge and understanding.
21.	Assessment tasks match with the given teaching-learning activities.

**Exploratory Factor Analysis on the Evaluation of Constructive Alignment in Classroom Implementation of OBTL Instrument.** There were twenty-three items of the instrument for evaluating constructive alignment in classroom implementation of OBTL. The data from the responses to these items were subjected to factor analysis for construct validation. The principal component analysis (PCA) with Varimax rotation methods were

used for extraction and rotation of factors, respectively. The results of running factor analysis in SPSS showed that sample size was adequate for factor analysis as indicated the Kaiser-Meyer-Olkin (KMO) value of 0.799 which exceeded the recommended minimum value of 0.50. Results presented in Table 10 reveals that the data was also suitable for factor analysis based on the results Barlett Test of Sphericity which shows a statistically significant correlation matrix ( $p < 0.01$ ) which supports its factorability. Based on Kaiser's criterion, only factors with eigenvalues greater than 1 were retained and all factor loadings less than 0.50 were suppressed.

*The Factor Solution.* Principal component analysis revealed the existence of the initial five factors with 74.40% explanatory power of the total variance. These results are shown in Table 9. Since there should be as many factors as possible with at least 3 non-cross-loading items with an acceptable loading score (Samuels, 2017), there is a need to remove any item with cross-loadings greater than 75% starting with the one with the lowest absolute maximum loading on all the factors and re-run the analysis. For some items with cross-loadings (items loading positively on two factors, or loading positively on one factor and negatively on the other), it is necessary to exclude these items that disturbed the factor structure because the main aim of factor analysis is to acquire a set of theoretically meaningful factors with easy interpretation and accounts for the bulk of the variance (Hair et al., 2003 as mentioned in Maskey, Fei & Nguyen, 2018).

Table 9

*Components/Factors Extracted in the Constructive Alignment on Classroom Implementation of OBTL Instrument Responses with Total Variance Explained*

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	<b>9.558</b>	<b>41.557</b>	<b>41.557</b>	9.558	41.557	41.557
2	<b>3.593</b>	<b>15.623</b>	<b>57.180</b>	3.593	15.623	57.180
3	<b>1.761</b>	<b>7.655</b>	<b>64.835</b>	1.761	7.655	64.835
4	<b>1.141</b>	<b>4.962</b>	<b>69.797</b>	1.141	4.962	69.797
5	<b>1.060</b>	<b>4.608</b>	<b>74.404</b>	1.060	4.608	74.404
6	.867	3.770	78.174			
7	.676	2.938	81.112			
8	.664	2.886	83.998			
9	.538	2.339	86.337			
10	.465	2.021	88.358			
11	.443	1.924	90.282			
12	.356	1.547	91.829			
13	.293	1.272	93.101			
14	.265	1.154	94.255			
15	.250	1.087	95.343			
16	.221	.962	96.305			
17	.205	.893	97.199			
18	.156	.677	97.876			
19	.144	.626	98.502			
20	.129	.563	99.065			
21	.097	.423	99.488			
22	.077	.334	99.822			
23	.041	.178	100.000			

**First Exploratory Factor Analysis (EFA).** The first run of EFA reveal that five factors were extracted. All item loadings are greater than 0.50, except for item 21 with no loading of at least 0.50, hence will be removed for the second EFA. Factor 1 is comprised of nine items (items 10, 5, 15, 6, 8, 11, 9, 14, and 12) with item 13 crossloading to Factor 4. Factor 2 is composed of six items (items 19, 18, 17, 22, 16 and 23. Factor 3 has three items (items 2, 3 and 1). Factor 4 has 3 items, item 13 was crossloading to Factor 1. Factor 5 has only one item. This implies the need to re-run EFA considering that one factor should have at least 3 non-crossloading items (Samuels, 2017). For the second EFA, the number

of factors extracted using the SPSS software were reduced to three. The results are shown in Table 10.

Table 10

*Sorting of Items in the Constructive Alignment in Classroom Implementation of OBTL Instrument based on the Rotated Factor Loadings in the First EFA*

Item No.	Item	Component				
		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
10.	The teacher allows students work collaboratively in group activities.	.835				
5.	The teacher connects the new lesson with the previous lessons.	.802				
15.	The teacher uses questioning techniques to gauge students' understanding of concepts.	.763				
6.	The teacher relates the lesson to real-world applications.	.748				
8.	The teacher encourages students to interact to class activities (lectures, debates, reporting, etc.)	.726				
11.	The teacher encourages students to relate to class about their own learning.	.674				
9.	The teacher gives students different opportunities for deepening the understanding of concepts.	.630				
14.	The teacher aligns the given assessment with the intended learning outcome(s) specified in the syllabus.	.623				
13.	The teacher asks students to make a synthesis of what they learned based from their own understanding.	.536			.530	
12.	The teacher engages students in activities involving real-life situations.	.536				
19.	The teacher uses a scoring tool, such as rubric in grading student performance.		.908			
18.	The teacher provides clear directions in doing a task.		.903			
17.	The teacher gives students the opportunity to make reflections of what they have learned.		.878			
22.	The teacher communicates the evaluation standards to students.		.876			
16.	The teacher provides constructive feedback to students' answers/task performance.		.856			
23.	The teacher uses evaluation standards that are clear.		.568			
2.	The teacher follows the intended learning outcomes as stated in the course syllabus.			.826		
3.	The teacher sets realistic expectations from students in the attainment of the learning outcomes.			.816		
1.	The teacher communicates the learning outcomes to students.			.726		
20.	The teacher evaluates students' work objectively.				.674	
7.	The teacher provides interesting activities to facilitate student understanding.				.636	
21.	The teacher uses evaluative measures that are fair.					
4.	The teacher aligns the activities for the specific lesson observed with the outcomes specified in the syllabus.					.788

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 12 iterations.

***Second and Final EFA.*** For the second run of EFA, item 21 was removed from and the number of factors was reduced from five to three after Factor 4 and Factor 5 did not meet the criteria. Results presented in Table 11 show that the desired factor structure was met, without item loadings less than 0.50 and crossloadings. Factor loadings show slight changes. Factor 1 is composed of 11 items (items 10, 6, 11, 8, 15, 5, 13, 12, 9, 7, and 14), Factor 2 has seven items (items 19, 22, 17, 18, 16, 23 and 20) and Factor 3 has 4 items (items 4, 2, 1, 3).

For Factor 1, its 11 items collectively describe activities in the classroom that teachers do in the implementation of Outcomes-based Teaching and Learning. Consequently, Factor 1 is named *Implementation of Teaching-Learning Activities*. For Factor 2 consisting of 7 items, the items refer to the use of measures and tools in assessing student's demonstration of learning. Thus, Factor 2 is labelled as *Implementation of Assessment Tasks*. Factor 3 is comprised of 4 items which express the conditions through which teachers have to communicate in relation to the expected outcomes of the course or lessons. Hence, Factor 3 is named *Communication of Learning Outcomes*. For purposes of the presentation of the refined instrument following Constructive Alignment in OBTL, Table 12 shows that items in Factor 3 (Communication of Learning Outcomes) come first, followed by those in Factor 1 (Implementation of Teaching-Learning Activities), then Factor 2 (Implementation of Assessment Tasks).



Table 11

*Sorting of Items in the Constructive Alignment in Classroom Implementation of OBTL Instrument based on the Rotated Component Matrix in the Second EFA*

Item No.	Item	Component		
		Factor 1	Factor 2	Factor 3
10.	The teacher allows students work collaboratively in group activities.	.811		
6.	The teacher relates the lesson to real-world applications.	.805		
11.	The teacher encourages students to relate to class about their own learning.	.754		
8.	The teacher encourages students to interact to class activities (lectures, debates, reporting, etc.)	.748		
15.	The teacher uses questioning techniques to gauge students' understanding of concepts.	.747		
5.	The teacher connects the new lesson with the previous lessons.	.743		
13.	The teacher asks students to make a synthesis of what they learned based from their own understanding.	.713		
12.	The teacher engages students in activities involving real-life situations.	.636		
9.	The teacher gives students different opportunities for deepening the understanding of concepts.	.635		
7.	The teacher provides interesting activities to facilitate student understanding.	.626		
14.	The teacher aligns the given assessment with the intended learning outcome(s) specified in the syllabus.	.566		
19.	The teacher uses a scoring tool, such as rubric in grading student performance.		.915	
22.	The teacher communicates the evaluation standards to students.		.884	
17.	The teacher gives students the opportunity to make reflections of what they have learned.		.879	
18.	The teacher provides clear directions in doing a task.		.871	
16.	The teacher provides constructive feedback to students' answers/task performance.		.854	
23.	The teacher uses evaluation standards that are clear.		.627	
20.	The teacher evaluates students' work objectively.		.613	
4.	The teacher aligns the activities for the specific lesson observed with the outcomes specified in the syllabus.			.784
2.	The teacher follows the intended learning outcomes as stated in the course syllabus.			.767
1.	The teacher communicates the learning outcomes to students.			.743
3.	The teacher sets realistic expectations from students in the attainment of the learning outcomes.			.742

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Table 12

*Factors and Items in the Constructive Alignment in Classroom Implementation of OBTL Instrument*

Item No.	Item
<b>A. Communication of Learning Outcomes</b>	
4.	The teacher aligns the activities for the specific lesson observed with the outcomes specified in the syllabus.
2.	The teacher follows the intended learning outcomes as stated in the course syllabus.
1.	The teacher communicates the learning outcomes to students.
3.	The teacher sets realistic expectations from students in the attainment of the learning outcomes.
<b>B. Implementation of Teaching-Learning Activities</b>	
10.	The teacher allows students work collaboratively in group activities.
6.	The teacher relates the lesson to real-world applications.
11.	The teacher encourages students to relate to class about their own learning.
8.	The teacher encourages students to interact to class activities (lectures, debates, reporting, etc.)
15.	The teacher uses questioning techniques to gauge students' understanding of concepts.
5.	The teacher connects the new lesson with the previous lessons.
13.	The teacher asks students to make a synthesis of what they learned based from their own understanding.
12.	The teacher engages students in activities involving real-life situations.
9.	The teacher gives students different opportunities for deepening the understanding of concepts.
7.	The teacher provides interesting activities to facilitate student understanding.
14.	The teacher aligns the given assessment with the intended learning outcome(s) specified in the syllabus.
<b>C. Implementation of Assessment Tasks</b>	
19.	The teacher uses a scoring tool, such as rubric in grading student performance.
22.	The teacher communicates the evaluation standards to students.
17.	The teacher gives students the opportunity to make reflections of what they have learned.
18.	The teacher provides clear directions in doing a task.
16.	The teacher provides constructive feedback to students' answers/task performance.
23.	The teacher uses evaluation standards that are clear.
20.	The teacher evaluates students' work objectively.

Summing up, these EFA results in the construct validation of the two forms of the evaluation instrument suggest that the items conform with the three themes for each of these instruments as derived from the conceptions of OBTL during the interview with selected key informants and the literature review.

## Reliability of the Instrument

Reliability is a measure of score consistency, usually measured by use of internal consistency, test-retest reliability, split-half, item-total correlation/inter-item reliability, and inter-observer reliability (DeVellis, 2003). Reliability is an important psychometric property of an instrument and a necessary condition for validity. In this study, there were 74 cases of classroom observations conducted using the instrument for pilot test. To determine the scale's reliability and internal consistency of the refined instrument, the Cronbach *alpha* reliability coefficient was calculated for the entire instrument and for each factor (Biasutti & Frate, 2017). Table 13 shows the reliability coefficients for the entire scale and subscales based on the results of the pilot test administration of the final instruments.

Table 13

*Reliability of the Constructive Alignment in Planning (Course Syllabus for OBTL) and Classroom Implementation of OBTL Instruments and their Components*

Component	Cronbach Alpha
Constructive Alignment in Planning (Syllabus for OBTL)	0.92
Articulation of Learning Outcome	0.89
Design of Teaching-Learning Activities	0.90
Design of Assessment Tasks	0.92
Constructive Alignment in Classroom Implementation of OBTL	
Communication of Learning Outcomes	0.95
Implementation of Teaching-Learning Activities	0.77
Implementation of Assessment Tasks	0.86
	0.91

As shown in Table 13, the reliability coefficient is a value ranging from 0 to 1 with values closer to 1 indicating good or high reliability. George and Mallery (2003) described *alpha* values as: excellent (more than .90); good (0.80-0.89); acceptable 0.70-0.79; questionable (0.60-0.69); poor (0.50-0.59); and unacceptable (less than 0.59). From the Cronbach *alpha* values in Table 13, the results show that reliability of the over-all scales for the two instruments are excellent while the reliability of the subscales ranges from acceptable to good.

Summing up, both qualitative and quantitative evidences of validity and reliability were established for the two forms of the instruments on evaluating faculty teaching performance in both the planning and the implementation of OBTL. Content-related validity evidence was established through expert judgment on the acceptability of the items by three experts, and their inter-rater agreement. As to construct validity, a series of exploratory factor analysis resulted to the sorting of the items into components o factors that measure underlying constructs related to planning and implementation of OBTL at the course level. The scale's and subscales' reliability were established via internal consistency using calculated Cronbach *alpha* reliability coefficients. These results provide the evidences of validity and reliability of the proposed instruments in answer to sub-problems 3 and 4 of this study.

## Chapter 4

### **PRACTICALITY OF THE EVALUATION OF CONSTRUCTIVE ALIGNMENT IN PLANNING AND IMPLEMENTING OBTL INSTRUMENTS**

Practicality is another desired trait of any instrument used to measure or evaluate a phenomenon. It is also referred to as utility or practicability which encompasses various aspects in the usefulness of the administration of the instrument. Practicality of an instrument takes into account its ease of administration, scoring and interpretation (Neukrug & Fawcett, 2019). In general, a good instrument should be convenient and economical to administer and easy to score and interpret its results. Assessment of the practicality of an instrument is also important because a valid instrument may not be practical for use in certain educational settings.

#### **Final Instruments**

There are two instruments for evaluating faculty teaching performance in OBTL. The first instrument is the *Evaluation of Constructive Alignment in Planning (Syllabus for OTBL)* Instrument consisting of 26 items in three subscales; namely: Articulation of Learning Outcomes (10 items), Design of Teaching-Learning Activities (10 items), and Design of Assessment Tasks (6 items). The second instrument is the *Evaluation of Constructive Alignment in Classroom Implementation of OBTL Instrument* which consists of 22 items in three subscales; namely: Communication of Learning Outcomes (4 items), Implementation of Teaching-Learning Activities (11 items), and Implementation of Assessment Tasks (7 items). The instruments are presented in the succeeding pages.

## EVALUATION OF CONSTRUCTIVE ALIGNMENT IN PLANNING (COURSE SYLLABUS FOR OBTL)

**Instructions:** Below are statements that will evaluate the course syllabus as an evidence of planning for Outcomes-based Teaching and Learning (OBTL). Please encircle the number which indicates your evaluation for each of the criteria using the given scale below:

5 - Strongly Agree      3 - Neutral      1 - Strongly Disagree  
4 - Agree                  2 - Disagree

Criteria	Rating				
	5	4	3	2	1
<b>Articulation of Learning Outcomes</b>					
1. Learning outcomes are aligned with the program outcomes as well as the university vision and mission.	5	4	3	2	1
2. Culminating outcomes are clearly stated for the course.	5	4	3	2	1
3. Outcome verbs are measurable.	5	4	3	2	1
4. The outcomes are relevant to students' career needs.	5	4	3	2	1
5. Outcomes reflect the application of various forms of knowledge.	5	4	3	2	1
6. Realistic opportunities for student success are implied in the outcomes.	5	4	3	2	1
7. Learning outcomes are expressed from the students' perspective.	5	4	3	2	1
8. Outcomes focus on demonstrating application of skills for life-long learning	5	4	3	2	1
9. Outcomes reflect the highest possible levels of student performance.	5	4	3	2	1
10. Outcome verbs are observable.	5	4	3	2	1
<b>Design of Teaching-Learning Activities</b>	5	4	3	2	1
11. The TLAs are relevant to real-world applications.	5	4	3	2	1
12. The TLAs promote collaboration among students.	5	4	3	2	1
13. The TLAs are well-structured to meet students' career needs.	5	4	3	2	1
14. The TLAs include reading materials/texts that support the development of knowledge.	5	4	3	2	1
15. The TLAs provide transition from one learning experience to the next.	5	4	3	2	1
16. The TLAs are aligned to the intended learning outcomes of the course.	5	4	3	2	1
17. The TLAs use instructional materials that reflect real-life scenarios.	5	4	3	2	1
18. The TLAs provide students with expanded opportunities for quality learning.	5	4	3	2	1
19. The TLAs engage students in class activities where they construct meaning related to their lesson.	5	4	3	2	1
20. The TLAs provide students with challenges for lifelong learning.	5	4	3	2	1
<b>Design of Assessment Tasks</b>	5	4	3	2	1
21. Assessment tasks promote new learning through reflections.	5	4	3	2	1
22. Assessment tasks match with the intended learning outcomes of the course.	5	4	3	2	1
23. Assessment tools, like rubrics, are indicated to minimize subjectivity in scoring student performance.	5	4	3	2	1
24. Assessment tasks allow students to demonstrate their own learning.	5	4	3	2	1
25. Assessment tasks include objective tests to measure knowledge and understanding.	5	4	3	2	1
26. Assessment tasks match with the given teaching-learning activities.	5	4	3	2	1

## EVALUATION OF CONSTRUCTIVE ALIGNMENT IN CLASSROOM IMPLEMENTATION OF OBTL

**Instructions:** Below are statements that will evaluate classroom teaching performance in OBTL. Please encircle the number which indicates your evaluation for each of the criteria using the given scale below:

- 5 - Very well-demonstrated      3 - Fairly demonstrated  
4 - Well-demonstrated      2 - Less demonstrated      1 - Not demonstrated

Criteria	Rating				
	5	4	3	2	1
<b>Communication of Learning Outcomes</b>					
1. The teacher aligns the activities for the specific lesson observed with the outcomes specified in the syllabus.	5	4	3	2	1
2. The teacher follows the intended learning outcomes as stated in the course syllabus.	5	4	3	2	1
3. The teacher communicates the learning outcomes to students.	5	4	3	2	1
4. The teacher sets realistic expectations from students in the attainment of the learning outcomes.	5	4	3	2	1
<b>Implementation of Teaching-Learning Activities</b>					
5. The teacher allows students work collaboratively in group activities.	5	4	3	2	1
6. The teacher relates the lesson to real-world applications.	5	4	3	2	1
7. The teacher encourages students to relate to class about their own learning.	5	4	3	2	1
8. The teacher encourages students to interact to class activities (lectures, debates, reporting, etc.)	5	4	3	2	1
9. The teacher uses questioning techniques to gauge students' understanding of concepts.	5	4	3	2	1
10. The teacher connects the new lesson with the previous lessons.	5	4	3	2	1
11. The teacher asks students to make a synthesis of what they learned based from their own understanding.	5	4	3	2	1
12. The teacher engages students in activities involving real-life situations.	5	4	3	2	1
13. The teacher gives students different opportunities for deepening the understanding of concepts.	5	4	3	2	1
14. The teacher provides interesting activities to facilitate student understanding.	5	4	3	2	1
15. The teacher aligns the given assessment with the intended learning outcome(s) specified in the syllabus.	5	4	3	2	1
<b>Implementation of Assessment Tasks</b>					
16. The teacher uses a scoring tool, such as rubric in grading student performance.	5	4	3	2	1
17. The teacher communicates the evaluation standards to students.	5	4	3	2	1
18. The teacher gives students the opportunity to make reflections of what they have learned.	5	4	3	2	1
19. The teacher provides clear directions in doing a task.	5	4	3	2	1
20. The teacher provides constructive feedback to students' answers/task performance.	5	4	3	2	1
21. The teacher uses evaluation standards that are clear.	5	4	3	2	1
22. The teacher evaluates students' work objectively.	5	4	3	2	1

## **Administration of the Instrument**

The tool for evaluating faculty teaching performance in the implementation of OBTL is of two parts. The first part is the course syllabus evaluation which contains 26 items and the second part, evaluation of classroom teaching in the implementation of OBTL is composed of 22 items. It is a 2-page instrument printed in 8.5in by 13.0 bond paper size, which implies that it was economical during its reproduction. Economy consideration suggests that some mutual benefit is required between the ideal research project and that which the budget can afford.

Using the first instrument, evaluating the constructive alignment in planning through the course syllabus in OBTL can be done at the convenience of the evaluators at any time since it only requires documentary evaluation. This is done by providing a copy of the teachers' course syllabus to the evaluators. In the context of this study, it took at most one hour for each of the evaluators to judge the quality of the syllabus based on the criteria. Convenience suggests that the evaluation instrument should be easily manageable. Hence, evaluators were given clear instructions on the procedure of evaluating the course syllabus with the evaluation instrument.

As to the second instrument on the evaluation of constructive alignment of classroom implementation of OBTL, the items of the instrument are used to verify the implementation of OBTL through classroom observation of at least one session of actual teaching. Prior to classroom observations, evaluators were given clear directions in the administration of the instrument. In the conduct of this study, the evaluators gave their judgment on the behavior to be observed as stated in the instrument after the one class meeting.



## Scoring and Interpretation of Results

The instrument called *Evaluation of Constructive Alignment in Planning (Syllabus) for OBTL* consists of 26 items on a 5-point Likert scale. The scale used the following numerical equivalence of responses: Strongly Agree (5), Agree (4), Neutral (3), Disagree (2), and Strongly Disagree (1). Scoring is done by subscales with the following range of scores and interpretation.

For the subscales *Articulation of Learning Outcomes* and *Design of Teaching-Learning Activities*, since there are 10 items in each of these subscales, the ratings range from 10 to 50 based on the level of evidence provided in the course syllabus. The following score range and interpretation is used for these two subscales:

42-50 (Highly Evident)

34-41 (Evident)

26-33 (Fairly Evident)

18-25 (Less Evident)

10-17 (Not Evident).

For the subscale *Design of the Assessment Tasks* which consists of 6 items, the ratings range from 6 to 30 based on the extent of evidence provided in the course syllabus and will be interpreted using the following guide:

26-30 (Highly Evident)

21-25 (Evident)

16-20 (Fairly Evident)

11-15 (Less Evident)

6-10 (Not Evident).

The overall performance rating will be interpreted based on the sum or total of the three components or subscales. The overall level of evidence of *Constructive Alignment in Planning (Syllabus for OBTL)* is interpreted as follows:

Highly Evident (110-130 points),

Evident (89-109 points)

Fairly Evident (68-88 points)

Less Evident (47-67 points)

Not Evident (26-46 points).

On the other hand, for the *Evaluation of Constructive Alignment in Classroom Implementation of OBTL* instrument, teacher performance is assessed on a 5-point Likert scale along the areas of Communication of Learning Outcomes (4 items), Implementation of Teaching-Learning Activities (11 items) and Implementation of Assessment Tasks (7 items). The scale uses the following numerical equivalence for the item responses: Very well-demonstrated (5), Well-demonstrated (4), Fairly Demonstrated (3), Less Demonstrated (2), and Not Demonstrated (1).

For the subscale on *Communication of Learning Outcomes* with 4 items, the total ratings range from 4 to 20 points will interpreted based on the following scale:

17-20 (Very Satisfactory)

14-16 (Satisfactory)

10-13 (Fair)

7-9 (Poor)

4-6 (Very Poor)

For the subscale on Implementation of *Teaching-Learning Activities* with 11 items, the total ratings range from 11 to 55 points and will be interpreted as follows:

47-55 (Very Satisfactory)

38-46 (Satisfactory)

29-37 (Fair)

20-28 (Poor)

11-19 (Very Poor).

For the subscale on the *Implementation of Assessment Tasks*, with 7 items, the total score ranges from 7 to 55 and will be interpreted as follows:

31-35 (Very Satisfactory)

25-30 (Satisfactory)

19-24 (Fair)

13-18 (Poor)

7-12 (Very Poor).

The overall performance of the faculty in the *Evaluation of Constructive Alignment on Classroom Implementation of OBTL* is the sum of the total ratings per subscale which ranges from 22 to 110 points. Individual teacher performance based on the total ratings will be interpreted as follows:

Very Satisfactory (94-110 points)

Satisfactory (76-93points)

Fair (58-75 points)

Poor (40-57 points)

Very Poor (22-39 points).

**Presentation of the Evaluation Instruments to University Stakeholders.** The two instruments, namely: *Evaluation of Constructive Alignment in Planning (Syllabus for OBTL)* and *Evaluation of Constructive Alignment in Classroom Implementation of OBTL* were presented to school administrators, composed of the Vice President for Academic Affairs, Assistant Vice-President for Academic Affairs, Director of the Human Resource Department, and Academic Consultants for their feedback on their practicality in terms of the scales used for scoring and interpretation. The school administrators thought that using the sum of scores instead of the mean (as a measure of the average) in interpreting the performance of faculty was new to them because the university is currently using the decimal-point system. However, the administrators believed that using the sum of scores rather than the mean will provide a wider variability in describing the performance of faculty in OBTL. The administrators added that using the new instruments will provide the university a new means of evaluating the quality of instruction.

The faculty were also introduced with the instruments for use in peer evaluation. When explained with how scores will be interpreted using the scales or range of scores, the faculty responded that there is ease in using the instruments. After evaluating the performance of their peers, the faculty provided correct interpretation of their ratings. Hence, there is an evidence of the practicality of the instruments for evaluation faculty teaching performance in OBTL in terms of scoring and interpretation.

A sample of faculty evaluation performance results for individual teachers in OBTL using the two forms of the instruments is presented in Table 14 and Table 15.

Table 14

*Faculty Performance in Constructive Alignment in Planning (Syllabus for OBTL)*

No.	Name of Faculty	Areas of Evaluation			Overall Performance Rating
		<i>Articulation of Learning Outcomes</i>	<i>Design of Teaching-Learning Activities</i>	<i>Design of Assessment Tasks</i>	
1	Faculty A	36 (Evident)	33 (Fairly Evident)	21 (Evident)	90 (Evident)
2					

*Note.* Performance Scales:

*Articulation of Learning Outcomes:* 42-50 (Highly Evident); 34-41 (Evident); 26-33 (Fairly Evident); 18-25 (Less Evident); 10-17 (Not Evident)

*Design of Teaching-Learning Activities:* 42-50 (Highly Evident); 34-41 (Evident); 26-33 (Fairly Evident); 18-25 (Less Evident); 10-17 (Not Evident)

*Design of the Assessment Tasks:* 26-30 (Highly Evident); 21-25 (Evident); 16-20 (Fairly Evident); 11-15 (Less Evident); 6-10 (Not Evident)

*Overall Performance Rating:* 110-130 (Highly Evident); 89-109 (Evident); 68-88 (Fairly Evident); 47-67 (Less Evident); 26-46 (Not Evident)

Table 15

*Faculty Performance in Classroom Implementation of OBTL*

No.	Name of Faculty	Areas of Evaluation			Overall Performance Rating
		<i>Communication of Learning Outcomes</i>	<i>Implementation of Teaching-Learning Activities</i>	<i>Implementation of Assessment Tasks</i>	
1	Faculty A	15 (Satisfactory)	43 (Satisfactory)	27 (Satisfactory)	85 (Satisfactory)
2					

*Note.* Performance Scales:

*Communication of Learning Outcomes:* 17-20 (Very Satisfactory); 14-16 (Satisfactory); 10-13 (Fair), 7-9 (Poor); and 4-6 (Very Poor)

*Implementation of Teaching-Learning Activities:* 47-55 (Very Satisfactory); 38-46 (Satisfactory); 29-37 (Fair); 20-28 (Poor); 11-19 (Very Poor)

*Implementation of Assessment Tasks:* 31-35 (Very Satisfactory); 25-30 (Satisfactory); 19-24 (Fair); 13-18 (Poor); and 7-12 (Very Poor)

*Overall Performance Rating:* 22-39 (Very Poor); 40-57 (Poor); 58-75 (Fair); 76-93 (Satisfactory); 94-110 (Very Satisfactory)

Summing up, this chapter presented the practicality features of the two forms of the instruments for evaluating faculty performance in planning and implementing OBTL at the

course level. The first form of the instrument, the *Evaluation of Constructive Alignment in Planning (Syllabus) for OBTL*, is a 5-point Likert scale instrument which will be used to assess constructive alignment in planning following the Outcomes-based Teaching and Learning (OBTL) framework. In this instrument, faculty evaluation covers three areas; namely: Articulation of Learning Outcomes, Design of Teaching-Learning Activities, and Design of Assessment Tasks. The results of the evaluation using the instrument will be useful in modifying the structure of the course plan to ensure that teaching-learning activities and assessment tasks are aligned to the intended learning outcomes of the course.

The second form of the instrument, *Evaluation of Constructive Alignment in Classroom Implementation of OBTL*, is an instrument on a five-point Likert scale which is designed to assess teachers' constructive alignment in the classroom implementation of OBTL through actual classroom teaching observations. Basically, the implementation is guided by the course syllabus. The evaluation covers three areas; namely: Communication of Learning Outcome, Implementation of Teaching-Learning Activities, and Implementation of Assessment Tasks. The instrument will be used to monitor the extent of OBTL implementation at the level of classroom practice and will provide the basis for making decisions on areas for improvement through professional development programs and on making decisions on faculty tenure, ranking and promotions.

## Chapter 5

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter provides a summary of the purpose, methodology, and results of this study, followed by conclusions based on the findings, and recommendations for professional practice in the field and further research.

#### Summary

The purpose of this study was to develop and validate an instrument in evaluating faculty teaching performance in the implementation of outcomes-based teaching and learning (OBTL) at the level of classroom practice in higher education courses. Using the mixed methods sequential exploratory design, this study was conducted at a large private university in Ozamiz City during the Academic Year 2019-2020. A total of 94 university professionals (11 College deans, 20 program chair, 61 tertiary faculty members and two VPAA representatives) served as key informants in the conceptualization of the instrument for item development and in the pretesting and pilot testing of the instruments for validation. .

Item development was based on a qualitative approach using interview of key informants on the distinct features of OBTL in addition to review of literature on OBTL and Constructive Alignment Model. From the results of the interview, two instruments were drafted, namely: *Evaluation of Constructive Alignment in Planning (Syllabus) for OBTL* with 26 items and *Evaluation of Constructive Alignment in Classroom Implementation of OBTL* with 22 items. Three content experts validated the items in the draft instruments. After revising the items, the instrument was used for three classroom observations to establish inter-rater agreement using Cohen's Kappa statistic. Then the

instrument was pilot tested for classroom observations in 94 cases of tertiary teachers. A series of Exploratory factor analysis (EFA) was performed on the pilot test data to establish construct validity of the instruments. Reliability analysis using Cronbach *alpha* as a measure of internal consistency was also run for the entire scale and subscales of the two instruments.

For the first instrument on *Evaluation of Constructive Alignment in Planning (Syllabus) for OBTL*, the final factor solution yielded three factors which were named based on the nature of the items which significantly loaded on these factors. The identified factors which became the subscales of the instrument are named as follows: Articulation of Learning Outcomes (10 items); Design of Teaching-Learning Activities (10 items); and Design of Assessment Tasks (6 items). Its overall scale reliability is high ( $\alpha = 0.92$ ). The Cronbach *alpha* coefficients for reliability of the subscales were assessed were good to high, with Articulation of Learning Outcomes ( $\alpha = 0.89$ ); Design of Teaching-Learning Activities ( $\alpha = 0.90$ ); and Design of Assessment Tasks ( $\alpha = 0.92$ ).

For the second instrument on *Evaluation of Constructive Alignment in Classroom Implementation of OBTL* with 22 items, EFA also yielded three factors which were named as Communication of Learning Outcomes Learning Outcomes (11 items), Implementation of Teaching-Learning Activities (7 items) and Implementation of Assessment Tasks (4 items). The overall reliability of the instrument is high ( $\alpha = 0.95$ ) with the following reliability coefficients for the subscales as acceptable, good and high, respectively: Communication of Learning Outcomes ( $\alpha = 0.77$ ), Implementation of Teaching-Learning Activities ( $\alpha = 0.86$ ), and Implementation of Assessment Tasks ( $\alpha = 0.91$ ).

The practicality of the instrument was established considering its administration, scoring and interpretation. In administering the instrument, economic measures were



undertaken such as making it economical for reproduction, convenient and time-bound for use in classroom evaluation. Scoring for syllabus evaluation is based on a five-point Likert scale (from “strongly disagree” to “strongly agree”) with interpretations ranging from “not evident” to “highly evident.” The classroom implementation of OBTL is also evaluated on a five-point scale, from “not demonstrated” to “very-well demonstrated” and interpreted as “very poor” to “very satisfactory,” respectively.

## Conclusions

This study developed and validated two sets of instruments for evaluating faculty performance in the planning and implementation of Outcomes-based Teaching and Learning (OBTL) at the level of classroom practice in higher education courses. These instruments were anchored on Constructive Alignment Theory in OBTL. The first instrument called *Evaluation of Constructive Alignment in Planning (Syllabus) for OBTL* aimed to evaluate teachers’ capacity for planning the intended curriculum for OBTL as evidenced by the course syllabus. The final form comprises 26 items in three components, namely: Articulation of Learning Outcomes, Design of Teaching-Learning Activities, and Design of Assessment Tasks. The second instrument called *Evaluation of Constructive Alignment in Classroom Implementation of OBTL* is designed to evaluate tertiary faculty on their actual teaching performance as implementation of OBTL at course level. It consists of 22 items in three components: Communication of Learning Outcomes, Implementation of Teaching-Learning Activities, and Implementation of Assessment Tasks.

The results of the instrument development and validation process provided evidences of content and construct validity of these two instruments for evaluating teacher

performance in the planning and implementation of Outcomes-based Education at the level of assessing the course syllabus and classroom teaching practice, respectively. Reliability analysis of the instruments using Cronbach alpha as a measure of internal consistency indicated high reliability indices for the entire scale and its subscales. Practicality features in terms of instrument administration, scoring and interpretation of results also indicate that the instruments are highly utility value for their intended purposes. Hence, these two instruments for evaluating teachers' capacity in the planning and implementing OBTL at the course levels may be used in higher education institutions for quality assurance of faculty performance in teaching and learning as part of institutional implementation of OBE.

### **Recommendations**

Based on the findings of this study, the researcher recommends the following:

Misamis University through the deans, program chair, academic supervisors, and faculty may use this instrument for evaluating the alignment of the teaching-learning activities and assessment to the learning outcomes of the course as defined in the syllabus and as demonstrated in classroom teaching by its faculty. Other tertiary institutions may also adopt the instrument for the purpose of evaluating their faculty performance in designing course syllabi and and actual classroom teaching within the framework of OBTL.

A seminar-workshop be organized on how to use the instrument in evaluating the course syllabus and classroom teaching performance. The data generated from the instrument may be also used to inform the university administrators on the strengths and areas for improvement in the course syllabi and actual teaching performance of the tertiary

faculty. The results may also serve as basis for continuing professional development of the faculty toward OBTL implementation.

Further studies may be done to improve the psychometric properties of the instruments developed or these instruments may be used to improve the implementation of OBTL by assessing course syllabi and classroom practice using the OBTL framework. As a limitation, this study did not include establishing criterion-related validity as limited OBE instruments were available for use as reference. Hence, further studies may be conducted using the developed instruments to establish their criterion-related validity with respect to other validated instruments to measure the planning and implementation of OBTL based on Constructive Alignment principles.

IEEESEM

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## Appendix A TRANSMITTAL LETTER

July 8, 2019

**CYNTHIA A. SUPERABLE, Ed. D.**

OIC, Office of the Vice President for Academic Affairs  
Misamis University  
Ozamiz City

Dear Dr. Superable:

I am pursuing my dissertation “Development and Validation of an Instrument for Faculty Evaluation Using Outcomes-Based Teaching and Learning (OBTL) Framework.” This undertaking is in partial fulfillment of the requirements for the degree, Doctor of Philosophy in Education, major in Research and Evaluation at the University of San Carlos, Cebu City.

In this regard, I would like to seek permission that I will be allowed to conduct a focus group discussion to all deans, subject chair and select faculty on the first academic meeting in April 2019. This is to help me explore their conceptions regarding outcomes-based teaching and learning, which will provide me basis in developing my instrument that will evaluate our faculty in OBTL. Be assured that the data to be gathered will be treated with utmost confidentiality and be used solely for the purpose of this research.

I shall hope for a favorable response to this request.

Respectfully yours,

**ARIEL R. CLARIN**  
Researcher

Noted:

**ENRIQUETA D. RESTON, PhD**  
Adviser

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Appendix B  
**RESEARCH INSTRUMENTS**

Appendix B-1. MATRIX FOR CONTENT VALIDATION BY INTERNAL  
AND EXTERNAL EXPERTS

Items	Accept	Revise	Reject	Remarks
1.				
2.				
3.				
4.				
5.				
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19.				
20.				

Evaluated by: \_\_\_\_\_

*Signature over printed name*

## Appendix B-2. INTERVIEW GUIDE FOR FOCUS GROUP DISCUSSION

Before the interview begins, the researcher will:

1. Provide a brief introduction on the purpose of the interview.
2. Ask the key informants' informed consent that the interview will be recorded using a voice recorder.
3. Assure the key informants that their identity will remain confidential during the whole course of the study and in writing the report of the study.
4. Inform the key informants that they have the right to discontinue their participation any time.

### Opening Question

With reference to CHED Memo No. 46 on the implementation of policies and standards following Outcomes-Based Education curriculum, what is your view about OBE?

### Core Question

In OBE, what are the important aspects to consider when planning instruction/teaching-learning activities and assessment in terms of learning outcomes?

### Closing Questions

What are the characteristics/distinguishing features of an OBE syllabus? OBE-compliant classroom? OBE-compliant teacher?

What are some evidences that the teaching –learning activities and assessment are aligned with your intended learning outcomes of the course?

### Appendix B-3. TRANSCRIPTS FROM THE KEY INFORMANTS' INTERVIEW

#### Key Informant 1

*“The CHED CMO 46 was implemented in higher education institution to address the demands and challenges of the international community. The OBE was implemented in HEI to shift from input based to outcomes-based education (OBE) and thus focusing on students as the center of all educational planning. This sudden shift to OBE created so many issues among the administration, faculty and the students. Even the aesthetic of classrooms is to be considered. This poses so many confusions and misunderstanding on how to implement the OBE. Though the intention of CHED is to compete globally, the preparation and the equipping of the workforce were not fully facilitated. But in general, the OBE opens all the higher institutions to the realities of having borderless arena in education. The game plan is to produce quality graduates who can engage and compete globally. Graduates who are lifelong learners.”*

*“In the OBE, the first and foremost to consider is to understand the program outcomes. What is it that we want to achieve at the end. What kind of products/graduates are we going to produce? What are their unique qualities that must be developed and learnt for life. How are they going to apply their learning in their day to day living. With this, understanding the main ideal picture of the outcome, faculty should be able to translate these in their teaching learning methods. All activities should be geared toward the attainment of outcome and the assessment should also be aligned to outcomes identified. In short, OBE is be specific and direct to the point. Cover only the principles needed to attain the target outcome and measure if the student was able to attain it. The main focus here is it must be learner centered.”*

*“The alignment of outcomes must be clearly illustrated. OBE syllabus shows a clear picture on how to achieve the outcomes. Classroom activities must be aligned to learning outcomes and the understanding that all outcomes has a means to measure. Students can be evaluated objectively on what he/she learned and deliver and not on how he/she memorize the lessons. The outcomes will pave way for students to utilize his/her learning in whatever circumstance that they may have. Considering this requirement, classroom and teachers should be able to understand this OBE concept as applied. Realization of teachers' understanding and implementation should come first. A teacher who knows to adjust the diversity of students in the class and be able to achieve the learning outcome at the end of the term is a good indicator that OBE was fully embued and learnt by heart. The classroom should also be designed not in the same way as traditional classrooms are build. There should also be change in the physical aesthetic in order to successfully deliver the OBE.”*

*“There are so many evidences that can be presented. Practical exams and even the written exams are evidences to measure the learning outcomes. It just*



*depends on how the faculty formulate the assessment. Others can be in the form of student portfolio.”*

### **Key Informant 2**

*“Outcomes-Based Education is a learner-centered approach in teaching which starts from the conceptualization of intended learning outcomes, designing of teaching methods and strategies to achieve the outcomes, and end up with designing assessment tasks to the achievement of outcomes.”*

*“When planning instruction/ teaching –learning activities and assessment in terms of learning outcomes, I need to consider the aspects like vision, mission of the school , including its goals and philosophy; the institutional outcomes , which includes the ideal attribute of students,; the program learning outcomes, the course outcomes ; and the learning outcomes.”*

*“An OBE syllabus follows constructive alignment. This means that all the components in the teaching system like the teaching learning activities, the methods used and the assessment tasks are aligned to the learning activities assumed in the intended outcomes. An OBE compliant classroom is a facilitative classroom where all students feel that they are participants in classroom decisions; and that they are capable of learning and achieving high levels of competency in different ways. In an OBE classroom, students will no longer ask to memorize and take down notes but they are taught how to construct their own knowledge for them to prepare their future life roles. An OBE compliant teacher is not the dispenser of knowledge anymore, but a facilitator of learning. He helps the students develop their knowledge, skills and personalities to achieve the intended outcomes. He sets high and challenging standards of performance in order to encourage students to engage deeply in what they are learning. He also provide appropriate activities that fit to the learners’ style and intelligences so that all students can learn.”*

*“The evidences that the teaching-learning activities and assessment are aligned with the intended learning outcomes of the course are syllabus that follows constructive alignment, the tangible outputs of students that resulted from the lesson.”*

### **Key Informant 3**

*“It is more on student-centered learning approach. The teaching strategy in OBE covers all sorts of learning aspects with a stress on the learning-by-doing in which students believed to learn mostly by performance. The teacher is not the source of all the information in the classroom but instead facilitators of a learning environment.”*

*“The teacher must be familiar with the student’s capacity before choosing a teaching-learning activity. The activities and assessments must enhance the students to achieve the intended learning outcome.”*

*“You need to come up first with a culminating outcome that will guide you on what students should learn after the course. Then you will build up this outcome with a series of sub-outcomes. The sub-outcomes will be necessary to develop a skill with the students to achieve the culminating outcome. The sub-outcomes must have objectives validated by classroom activities and assessment that will enable the learners to achieve the sub-outcomes. Teacher must also be considerate with the students and promote grading-by-pencil in which it will allow the students to improve its performance to achieve the culminating outcome of the course.”*

*“The teaching-learning activities and assessments must help build up the learner’s skill to achieve the intended learning outcome.”*

#### **Key Informant 4**

*“With reference to CHED Memo No. 46, Outcomes-based Education for me is the opposite of a traditional way of teaching, which is more of teacher activity. In OBE, students are given the chance to manipulate things, to do and discover knowledge on their own with the guidance of the teacher. In the implementation of the OBE, teachers are only facilitators of learning who will lead the students in the realization of the outcomes of a specific course or topic.”*

*“In OBE, the important aspect to consider in planning instruction or teaching-learning is alignment. We have to think of the outcomes of the course, from there, the teaching-learning activities as well as the assessment of the activities conducted should be geared towards the realization of the learning outcomes.”*

*“In an OBE syllabus, there be learning outcomes, teaching-learning activities, and assessment which are all aligned. A classroom should be designed in such a way that students can freely move to do cooperative or collaborative works, and be able to manipulate objects. A teacher should only serve as facilitators and guide in the learning process. Hence, the teacher should design activities that will enable the students to discover their own learning.”*

*“The evidences that the teaching-learning activities and assessment are aligned to the intended learning outcomes of the course are the student outputs, grades and even the results of their examinations and quizzes which reflect that the outcomes are realized.”*

### Key Informant 5

*“OBE measures outcomes. It means we are measuring the skills acquired by the students upon completion of the course or program. It is different from our classroom environment before, where the teacher is considered the most knowledgeable of the subject. Instruction does not focus on the content or on the teacher but rather it focuses on the skills acquired by the student after. The teacher does not merely teach but he designs. We always bear in mind that all students do not learn at the same time. So we need to design learning that will cater all types of students.”*

*“In planning class activities, we always consider the students, hence it is a student-centered activities. Assessments must be based on the skills acquired not how much concepts the students memorized. Teachers are designers of learning starts with the outcome and then develop activities that will lead to the outcomes.”*

*“An OBE syllabus must have a clear outcome at the end of the semesters. The skills that the student may acquire after taking the course must be measurable. In the OBE classroom setting, less discussion from the teacher and more students’ activity that will lead to the outcome. An OBE compliant teacher is a designer of learning; he guides his students towards the outcome. He does not merely impart knowledge but coach the students to acquire knowledge in order to acquire the skills and outcomes.”*

*“Learning outcome must be measurable. Skills acquired at the end of the course must also be measurable. Students do not merely learn concepts but develop skills that lead to the outcome of the course. When class activities are aligned with the outcomes, the students will develop the skills at the end or upon completion of the course or program.”*

### Key Informant 6

*“The OBE curriculum creates or makes the teaching and learning easier, in the sense that it clarifies the main skills and outputs that the student will learn at the end of a certain course or subject. It makes the learning process of a student more interesting since it emphasizes already the things that they should learn. In teaching, it is easier since it is not content-based, it directly points out the main learning, topics, activities to be conducted inside the class. It also lessens the face-to-face meetings which will also be convenient to both parties.”*

*“The important aspects to consider when planning instruction or teaching-learning activities and assessment in terms of learning outcomes are: 1) the alignment of the sub-outcomes and the unit outcomes to the culminating or intended learning outcome of a course, 2) the alignment of the teaching-learning activities and assessment tools on the sub-unit outcomes.”*

*“The characteristics of an OBE syllabus are: 1) not lengthy, 2) has a clear and concise culminating outcome, 3) sub-outcomes and unit outcomes are aligned with the course culminating outcome, 4) teaching-learning activities and*

*assessments used are aligned with the outcome, 5) the syllabus should not be content-based, 6) references must be plenty and should integrate technology in the TLA. The characteristics of an OBE-compliant classroom are: 1) no reporting on the topic content should be done which most of the instructors do nowadays, 2) everyday meetings are not that necessary but there must be an independent study or online activities that the students must be doing. The characteristics of an OBE-compliant teacher are: 1) integrates technology in the class, not just the use of projectors and laptops, 2) less papers to be checked since activities are given scores and feedbacks directly upon conducting the activities.”*

*“Some of the evidences that the TLA and assessment are aligned with the intended learning outcomes of the course are the verbs used in the syllabus, but check if the verbs used in the syllabus are connected with the intended learning outcome, sub-outcomes and unit outcomes, as well as the activities to be done and how it is being assessed. “*

### **Key Informant 7**

*“When the concept of OBE was introduced in our institution, I had a positive views about it. I believed that the goal of the policy was helpful and necessary especially with the changing learning styles of our students. However, I was also a bit confused as to how it was supposed to be implemented and what specific learning designs should be followed. I felt like it was abruptly introduced without really providing teachers the actual sample of what an OBE classroom should be like. Through there were in-house trainings, there wasn’t enough exposure for teachers in terms of how OBE should be implemented.”*

*“When planning teaching-learning activities and assessment in terms of learning outcomes, it is important to make sure that all of these are vertically and horizontally aligned. Learning outcomes must be aligned to the general learning outcome which is the goal of the course. All activities and assessments designed must be aligned towards the achievement of the end outcome.”*

*“An OBE syllabus must contain outcomes that are observable and measurable. An OBE classroom allows the teacher to become a coach in order to help students achieve the intended outcomes. The OBE classroom provides learning activities that link to achieving the intended outcomes.”*

*“You have to make sure that the verbs you used in the teaching-learning activities match those that you used in the intended outcomes. This allows your TLAs to be horizontally aligned to your ILOs.”*

### Key Informant 8

*“For me, when OBE was first introduced, I thought that it will provide us with a clearer framework for what we can best do to improve the quality of teaching and learning in this school. There might be added work, but I believed there will be a clearer direction of what students shall be able to do well professionally.”*

*“When a teacher makes a plan for teaching, he or she has to consider first the different abilities of students for them to perform their best in relation to the outcome. Since not all students can learn at the same time, the plan also reflects different opportunities so that all students are geared toward the demonstration of the culminating course outcomes.”*

*“OBE compliance requires that a teacher has to implement an OBE syllabus in classrooms. As such, teaching and learning activities should consider instructional materials that promote the use of performance tasks that are applicable to real life so that students can easily relate to and accomplish doing them.”*

*“I can say that it is what the student can demonstrate at the end of the course which will verify that there is alignment from learning outcomes, TLAs and assessments.”*

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## Appendix C

### CURRENT FACULTY EVALUATION FORM

EVALUATION FOR TEACHER'S CLASSROOM PERFORMANCE (For Deans/ Department Chair)					
Name of Teacher: _____			Time: _____		
Subject: _____		Class Hour: _____		Date: _____	
Directions: Please check in the appropriate column after each statement which indicates your evaluation of your instructor using the rating scale below:					
5	-	All the Time	-	Significantly Above Expectations	
4	-	Most of the Time	-	Somewhat Above Expectations	
3	-	Regularly	-	Meets Expectations	
2	-	Rarely	-	Somewhat Below Expectations	
1	-	Never	-	Significantly Below Expectations	

Areas	Rating				
	5	4	3	2	1
<b>A. Teaching Skills (40%)</b>					
1. Communicates the learning outcomes (LO) to students.					
2. Aligns class activities/ strategies and assessment tasks with learning outcomes.					
3. Considers individual differences in selecting outcomes, content, activities and assessments tasks.					
4. Ensures that materials and resources support learning goals.					
5. Implements teaching-learning activities effectively for the achievement of outcomes.					
6. Provides clear and interesting examples to facilitate student's understanding.					
7. Provides varied activities for the development of student's cognitive skills.					
8. Presents problems in context to allow students to practice higher order thinking skills.					
9. Demonstrates subject matter mastery through clear and organized lesson presentations.					
10. Has a good command of the medium of instruction.					
<b>B. Learner-Centeredness (40%)</b>					
1. Provides permissive and stimulating atmosphere that encourages learners to interact.					
2. Elicits active participation from the students.					
3. Gets students' feedback about the content of the lesson.					
4. Is fair, impartial and objective in the treatment of students.					
5. Provides students tasks/ requirement which are workable and relevant.					
6. Relates the topic to real-life situations.					
7. Invites students to share their ideas.					
8. Respects student's ideas during class interaction.					
9. Begins instruction at the level of learners' understanding and moves to more challenging tasks.					
10. Helps students develop their interactive and cooperative learning skills through varied activities.					
<b>C. Classroom Environment (20%)</b>					
1. Has the ability to catch and maintain the attention of the students (gestures, sense of humor).					
2. Starts learning activities on time.					
3. Observes classroom rules and routines to allow smooth flow of the lesson.					
4. Provides feedback of students' performance.					
5. Creates a classroom atmosphere that is conducive to learning.					
6. Asks questions that are of different levels of difficulty.					
7. Gives assessment activities that are aligned to the leaning outcomes.					

COMMENTS/ SUGGESTIONS:

**Summary:**

Teaching Skills \_\_\_\_\_

Learning-centeredness \_\_\_\_\_

Classroom Environment/ \_\_\_\_\_

**Rating Scale:**

Quantitative Value/ Range	Interpretation
4.51 – 5.00 -	Excellent
3.51 – 4.50 -	Very Satisfactory
2.51 – 3.50 -	Satisfactory
1.51 – 2.50 -	Fair
1.00 – 1.50 -	Poor

Performance Rating: \_\_\_\_\_

Signature of Instructor: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX D-1. PROPOSED NEW FACULTY PERFORMANCE EVALUATION INSTRUMENT FOR CONSTRUCTIVE ALIGNMENT IN PLANNING (SYLLABUS) FOR OBTL

**Instructions:** Below are statements that will evaluate the course syllabus as an evidence of planning for Outcomes-based Teaching and Learning (OBTL). Please encircle the number which indicates your evaluation for each of the criteria using the given scale below:

5 - Strongly Agree      3 - Neutral      1 - Strongly Disagree  
4 - Agree                2 - Disagree

Criteria	Rating				
	5	4	3	2	1
<b>Articulation of Learning Outcomes</b>					
1. Learning outcomes are aligned with the program outcomes as well as the university vision and mission.	5	4	3	2	1
2. Culminating outcomes are clearly stated for the course.	5	4	3	2	1
3. Outcome verbs are measurable.	5	4	3	2	1
4. The outcomes are relevant to students' career needs.	5	4	3	2	1
5. Outcomes reflect the application of various forms of knowledge.	5	4	3	2	1
6. Realistic opportunities for student success are implied in the outcomes.	5	4	3	2	1
7. Learning outcomes are expressed from the students' perspective.	5	4	3	2	1
8. Outcomes focus on demonstrating application of skills for life-long learning	5	4	3	2	1
9. Outcomes reflect the highest possible levels of student performance.	5	4	3	2	1
10. Outcome verbs are observable.	5	4	3	2	1
<b>Design of Teaching-Learning Activities</b>					
11. The TLAs are relevant to real-world applications.	5	4	3	2	1
12. The TLAs promote collaboration among students.	5	4	3	2	1
13. The TLAs are well-structured to meet students' career needs.	5	4	3	2	1
14. The TLAs include reading materials/texts that support the development of knowledge.	5	4	3	2	1
15. The TLAs provide transition from one learning experience to the next.	5	4	3	2	1
16. The TLAs are aligned to the intended learning outcomes of the course.	5	4	3	2	1
17. The TLAs use instructional materials that reflect real-life scenarios.	5	4	3	2	1
18. The TLAs provide students with expanded opportunities for quality learning.	5	4	3	2	1
19. The TLAs engage students in class activities where they construct meaning related to their lesson.	5	4	3	2	1
20. The TLAs provide students with challenges for lifelong learning.	5	4	3	2	1
<b>Design of Assessment Tasks</b>					
21. Assessment tasks promote new learning through reflections.	5	4	3	2	1
22. Assessment tasks match with the intended learning outcomes of the course.	5	4	3	2	1
23. Assessment tools, like rubrics, are indicated to minimize subjectivity in scoring student performance.	5	4	3	2	1
24. Assessment tasks allow students to demonstrate their own learning.	5	4	3	2	1
25. Assessment tasks include objective tests to measure knowledge and understanding.	5	4	3	2	1

## APPENDIX D-2. PROPOSED NEW FACULTY PERFORMANCE EVALUATION INSTRUMENT FOR CONSTRUCTIVE ALIGNMENT IN CLASSROOM IMPLEMENTATION OF OBTL

**Instructions:** Below are statements that will evaluate classroom teaching performance in OBTL. Please encircle the number which indicates your evaluation for each of the criteria using the given scale below:

- 5 - Very well-demonstrated      3 - Fairly demonstrated  
4 - Well-demonstrated      2 - Less demonstrated      1 - Not demonstrated

Criteria	Rating				
	5	4	3	2	1
<b>Communication of Learning Outcomes</b>					
1. The teacher aligns the activities for the specific lesson observed with the outcomes specified in the syllabus.	5	4	3	2	1
2. The teacher follows the intended learning outcomes as stated in the course syllabus.	5	4	3	2	1
3. The teacher communicates the learning outcomes to students.	5	4	3	2	1
4. The teacher sets realistic expectations from students in the attainment of the learning outcomes.	5	4	3	2	1
<b>Implementation of Teaching-Learning Activities</b>					
5. The teacher allows students work collaboratively in group activities.	5	4	3	2	1
6. The teacher relates the lesson to real-world applications.	5	4	3	2	1
7. The teacher encourages students to relate to class about their own learning.	5	4	3	2	1
8. The teacher encourages students to interact to class activities (lectures, debates, reporting, etc.)	5	4	3	2	1
9. The teacher uses questioning techniques to gauge students' understanding of concepts.	5	4	3	2	1
10. The teacher connects the new lesson with the previous lessons.	5	4	3	2	1
11. The teacher asks students to make a synthesis of what they learned based from their own understanding.	5	4	3	2	1
12. The teacher engages students in activities involving real-life situations.	5	4	3	2	1
13. The teacher gives students different opportunities for deepening the understanding of concepts.	5	4	3	2	1
14. The teacher provides interesting activities to facilitate student understanding.	5	4	3	2	1
15. The teacher aligns the given assessment with the intended learning outcome(s) specified in the syllabus.	5	4	3	2	1
<b>Implementation of Assessment Tasks</b>					
16. The teacher uses a scoring tool, such as rubric in grading student performance.	5	4	3	2	1
17. The teacher communicates the evaluation standards to students.	5	4	3	2	1
18. The teacher gives students the opportunity to make reflections of what they have learned.	5	4	3	2	1
19. The teacher provides clear directions in doing a task.	5	4	3	2	1
20. The teacher provides constructive feedback to students' answers/task performance.	5	4	3	2	1
21. The teacher uses evaluation standards that are clear.	5	4	3	2	1
22. The teacher evaluates students' work objectively.	5	4	3	2	1



## APPENDIX E. RESULTS OF THE EXPLORATORY FACTOR ANALYSIS

### A. Rotated Component Matrix for Second EFA

Item No.	Item	Component		
		Factor 1	Factor 2	Factor 3
4.	Culminating outcomes are clearly stated for the course.	.829		
8.	Learning outcomes are aligned with the program outcomes as well as the university vision and mission.	.826		
1.	The outcomes are relevant to students' career needs.	.787		
7.	Outcome verbs are measurable.	.770		
9.	Outcomes reflect the application of various forms of knowledge.	.762		
2.	Realistic opportunities for student success are implied in the outcomes.	.734		
10.	Outcomes focus on demonstrating application of skills for life-long learning	.717		
5.	Learning outcomes are expressed from the students' perspective.	.707		
3.	Outcomes reflect the highest possible levels of student performance.	.689		
29.	Assessment tasks encourage students to work collaboratively in groups.	.673	.505	
6.	Outcome verbs are observable.	.594		
18.	The TLAs are relevant to real-world applications.		.822	
17.	The TLAs promote collaboration among students.		.791	
15.	The TLAs include reading materials/texts that support the development of knowledge.		.784	
13.	The TLAs are well-structured to meet students' career needs.		.784	
20.	The TLAs provide transition from one learning experience to the next.		.750	
12.	The TLAs are aligned to the intended learning outcomes of the course.		.697	
16.	The TLAs use instructional materials that reflect real-life scenarios.		.689	
11.	The TLAs provide students with expanded opportunities for quality learning.		.683	
14.	The TLAs engage students in class activities where they construct meaning related to their lesson.		.646	
27.	Assessment tasks include real-world application of learning.	.544	.641	
19.	The TLAs provide students with challenges for lifelong learning.		.639	
30.	30. Assessment tasks develop students' higher order thinking skills.		.618	
24.	24. Assessment tasks promote new learning through reflections.			.849
25.	25. Assessment tools, like rubrics, are indicated to minimize subjectivity in scoring student performance.			.816
22.	22. Assessment tasks match with the intended learning outcomes of the course.			.812
23.	23. Assessment tasks allow students to demonstrate their own learning.			.783
26.	26. Assessment tasks include objective tests to measure knowledge and understanding.			.659
21.	21. Assessment tasks match with the given teaching-learning activities.			.588

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

## B. Rotated Component Matrix for Third EFA

Item	Component		
	Factor 1	Factor 2	Factor 3
18. The TLAs are relevant to real-world applications.	.824		
17. The TLAs promote collaboration among students.	.792		
15. The TLAs include reading materials/texts that support the development of knowledge.	.787		
13. The TLAs are well-structured to meet students' career needs.	.786		
20. The TLAs provide transition from one learning experience to the next.	.752		
12. The TLAs are aligned to the intended learning outcomes of the course.	.700		
16. The TLAs use instructional materials that reflect real-life scenarios.	.691		
11. The TLAs provide students with expanded opportunities for quality learning.	.685		
14. The TLAs engage students in class activities where they construct meaning related to their lesson.	.649		
27. Assessment tasks include real-world application of learning.	.645	.540	
19. The TLAs provide students with challenges for lifelong learning.	.641		
30. Assessment tasks develop students' higher order thinking skills.	.621	.503	
8. Learning outcomes are aligned with the program outcomes as well as the university vision and mission.		.833	
4. Culminating outcomes are clearly stated for the course.		.824	
7. Outcome verbs are measurable.		.781	
1. The outcomes are relevant to students' career needs.		.767	
9. Outcomes reflect the application of various forms of knowledge.		.761	
2. Realistic opportunities for student success are implied in the outcomes.		.740	
5. Learning outcomes are expressed from the students' perspective.		.704	
10. Outcomes focus on demonstrating application of skills for life-long learning		.699	
3. Outcomes reflect the highest possible levels of student performance.		.680	
6. Outcome verbs are observable.		.606	
24. Assessment tasks promote new learning through reflections.			.847
22. Assessment tasks match with the intended learning outcomes of the course.			.817
25. Assessment tools, like rubrics, are indicated to minimize subjectivity in scoring student performance.			.813
23. Assessment tasks allow students to demonstrate their own learning.			.784
26. Assessment tasks include objective tests to measure knowledge and understanding.			.662
21. Assessment tasks match with the given teaching-learning activities.			.587

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 8 iterations.

## C. Rotated Component Matrix for Fourth EFA

Item	Component		
	Factor 1	Factor 2	Factor 3
18. The TLAs are relevant to real-world applications.	.819		
15. The TLAs include reading materials/texts that support the development of knowledge.	.798		
17. The TLAs promote collaboration among students.	.791		
13. The TLAs are well-structured to meet students' career needs.	.782		
20. The TLAs provide transition from one learning experience to the next.	.743		
12. The TLAs are aligned to the intended learning outcomes of the course.	.696		
11. The TLAS provide students with expanded opportunities for quality learning.	.692		
16. The TLAs use instructional materials that reflect real-life scenarios.	.688		
19. The TLAs provide students with challenges for lifelong learning.	.668		
30. Assessment tasks develop students' higher order thinking skills.	.652	.513	
14. The TLAs engage students in class activities where they construct meaning related to their lesson.	.650		
8. Learning outcomes are aligned with the program outcomes as well as the university vision and mission.		.835	
4. Culminating outcomes are clearly stated for the course.		.827	
7. Outcome verbs are measurable.		.785	
1. The outcomes are relevant to students' career needs.		.771	
9. Outcomes reflect the application of various forms of knowledge.		.763	
2. Realistic opportunities for student success are implied in the outcomes.		.738	
5. Learning outcomes are expressed from the students' perspective.		.709	
10. Outcomes focus on demonstrating application of skills for life-long learning		.704	
3. Outcomes reflect the highest possible levels of student performance.		.678	
6. Outcome verbs are observable.		.610	
24. Assessment tasks promote new learning through reflections.			.839
22. Assessment tasks match with the intended learning outcomes of the course.			.828
25. Assessment tools, like rubrics, are indicated to minimize subjectivity in scoring student performance.			.809
23. Assessment tasks allow students to demonstrate their own learning.			.782
26. Assessment tasks include objective tests to measure knowledge and understanding.			.664
21. Assessment tasks match with the given teaching-learning activities.			.570

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

## CURRICULUM VITAE



### Personal Data

Name : Ariel Racaza Clarin  
Date of Birth : March 7, 1981  
Place of Birth : Maningcol, Ozamiz City  
Civil Status : Married  
Spouse : Analyn S. Clarin  
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