

# Four Cs of Outcomes-Based Teaching and Learning: A Literature Review

Cristobal A. Rabuya, Jr.

carabuya@lnu.edu.ph

Leyte Normal University, P. Paterno St., Tacloban City, 6500, Philippines

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## Abstract

Outcomes-based Education (OBE) is not a new approach to 21st-century education, but some teachers as implementers need to understand the OBE system and its different forms fully. This study is a literature review focusing on Outcomes-Based Teaching and Learning (OBTL), which is a course-level version of OBE. The purpose of the study is to understand the context of OBTL and to synthesize its salient features. Twenty-one journal articles from the Google Scholar database were utilized and subjected to analysis. The findings suggested four Cs features of OBTL, including course-level learning outcomes, connected learning, continuous improvement, and constructive alignment. However, limitations were recognized in the recommendation section to understand OBTL comprehensively.

Keywords: Outcomes-Based Education, Outcomes-Based Teaching and Learning, Textual Narrative, Learning outcomes

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## 1. Introduction

Outcomes-Based Education (OBE) is no longer a novel approach to education in the 21st century. However, it has been adopted by Higher Education Institutions (HEIs) worldwide since it supports quality teaching and learning system in education (Hejazi, 2021). This transformational and humanistic viewpoint presents strategic educational planning to generate results that address quality assurance and improve teaching and learning in higher education. As defined by Spady (1994), OBE is the process of deliberately concentrating and organizing all parts of an educational system on what all students must achieve effectively at the end of their learning experiences. Higher education institutions in the Philippines are required under the reform to implement OBE to examine their schools' vision, mission, and objectives (VMO) and achieve specific program and course outcomes. This mandate is based on the Commission on Higher Education's (CHED) Memorandum Order No. 46, series of 2012, on the implementation of policies and standards to enhance the quality assurance (QA) system in Philippine higher education through the use of outcomes-based education curriculum (CHED, 2012). According to Biggs and Tang (2007), outcomes-based education comes in three forms. These are the OBE at the program level, the OBE at the institutional level, and the OBE at the course level. They stated that OBE at the individual level is meant to provide students with the necessary information, skills, and capacities as results after completing their selected curriculum. The second form, OBE at the institutional level, refers to institutional results that enable responsibility in meeting external stakeholders' requirements like policymakers, employers, and others. The third form, also known as Outcomes-based Teaching and Learning, concerns OBE

at the course level, in which learning outcomes are primarily used to improve teaching and learning. For this paper, it focuses on Outcomes-based Teaching and Learning (OBTL) to understand its context because some teachers as implementers do not understand the Outcome-Based Education system (Erdem, 2019; Evardo, 2020; Guzman et al., 2017; Jennifer & Cheung, 2015; Rahate et al., 2020; Ross, 2012). More so, it aims to present the salient features of OBTL.

## 2. Methodology

This study is a literature review employing textual narrative synthesis to describe and synthesize the literature to fully understand the salient features of Outcomes-Based Teaching and Learning (OBTL). Typically, a textual narrative method organizes research into more homogeneous groups. This method has effectively synthesized many sorts of research findings (Lucas et al., 2007). The journal articles used in this study were identified in the Google Scholar database, which indexes scholarly literature and academic resources metadata. Outcomes-Based Teaching and Learning (OBTL) was found using the search phrases "outcome-based education," "outcome-based model," "outcome-based assessment in higher education," and "outcomes-based teaching and learning." The filters used were English language and journal articles published between 2007 and 2022. All articles used in the study were published in peer-reviewed journals.

**Table 1.**

Distribution of Journal Articles based on design

Research Designs	Frequency
Qualitative	9
Quantitative	5
Mixed Methods	5
Systematic review	2
Total	21

Twenty-one (21) journal articles were systematically analyzed to collect meaningful data. As indicated in Table 1, studies have varied study designs. The qualitative studies (9) primarily investigated the conceptualization and implementation of Outcome-based education on course-level learning outcomes. Some studies also investigated challenges in formulating learning outcomes and teachers' preparation processes. Quantitative research (5) examined outcome-based education's status, effect, and utility in the course and program. For mixed methods (5), they investigated types of learning outcomes, teaching and learning practices, and implementation of OBTL. Finally, the systematic review (2) concentrated on characterizing the many possible sources of learning outcomes and the transition from a teacher-centered approach to an outcome-based education system.

## 3. Results and Discussion

Course-level learning outcomes, connected learning, continuous improvement, and constructive alignment are the four Cs of outcomes-based teaching and learning.

### 3.1. Course-Level Learning Outcomes

Outcomes-based Teaching and Learning (OBTL) focuses on the learning outcomes at the course level.

The learning outcomes must be clearly stated, measurable, and realistically attainable (Castillo, 2014; Clarin & Reston, 2020; Haque, 2017; Kaliannan & Chandran, 2012). Furthermore, learning outcomes should incorporate the students' measured success at the end of the course or program (Clarin & Reston, 2020; Kaliannan & Chandran, 2012). Also, these learning outcomes allow learners to learn effectively in their learning styles and capabilities (Asim et al., 2021; Cahapay, 2021). Outcomes-based Teaching and Learning clearly outlines the learning outcomes and identifies the actions or abilities students must exhibit upon course completion (Loreto, 2018). In addition, the learning outcome for a specific degree achievement should be aligned with individual learning activities (Donald et al., 2015).

### 3.2. Connected Learning

Connected learning is another characteristic of outcomes-based teaching and learning. Connected learning is a learner-centered approach in which the learner can pursue a personal interest with the help of peers, adults, teachers, and expert communities and then link this learning to academic achievement, career opportunities, or civic engagement (Ito et al., 2013). Similarly, outcome-based teaching and learning (OBTL) is a student-centered learning approach, with the significant feature of OBE being a change in emphasis from teaching to learning (Hoidn & Reusser, 2020). According to Wang and Ning (2018), the Outcomes-based Teaching and Learning model focuses on student learning outcomes in classroom practice. Its teaching objectives and approaches are no longer centered on how to teach but instead on what and how students should learn. Teaching and learning in an OBE classroom require transitioning from traditional to student-centered education delivery (Guigui, 2020). Furthermore, in OBTL, classroom activities are substantially student-centered to allow students to develop the abilities required to demonstrate learning outcomes (Kaliannan & Chandran, 2012). Also, teachers facilitating teaching and learning should cater to different types of learners in various situations. (Borsoto et al., 2014; Iloanya, 2019). In addition, OBE is humanistic because educators prioritize student improvement (Bustamante, 2015).

### 3.3. Continuous improvement

Continuous improvement is another characteristic of outcomes-based teaching and learning (OBTL). Incorporating quality improvement into the everyday work of individuals in the educational system is called continuous improvement (Park et al., 2013). Similarly, the OBTL model focuses on the assessment and feedback of learning results, necessitating the development of numerous evaluation systems to evaluate whether or not the desired learning outcomes have been met (Wang & Ning, 2018). Outcomes-based Teaching and Learning in Higher Education requires a series of learning outcome evaluations, each reflecting and assessing the student learning progress rate. (Wang & Ning, 2018; Felicen, 2021). These student learning outcomes are assessed based on their observed behavior and performance in cognitive, behavioral, and affective domains, proving that learning has happened in them (Cruz, 2022). Furthermore, they highlighted that the OBTL teaching paradigm necessitates teachers investing significant time and effort in reconstructing the instructional framework, which is known as a course syllabus in higher education. In addition, outcomes-based assessment emphasizes the intended learning outcome rather than the assessment activities (Biggs & Tang, 2007). Likewise, the curriculum, including curriculum review, training systems, and evaluation techniques, must be established in line with global development needs, particularly the industrial revolution, and technology (Astuti et al., 2020; Tungpalan & Antalan, 2021). A research-based education policy would also emphasize changing classroom practice, assisting in validating curriculum and teaching models through extensive staff development, recognizing the significance of local context, developing strong relationships with families and communities, and increasing school capacity to improve (Schmidt, 2017). However, some teachers emphasize assessment

activities rather than intended learning outcomes, awarding learners scores primarily on how well they execute the assigned tasks (Biggs & Tang, 2007). Furthermore, because teachers are key implementers at the course level, their understanding of OBE should be reflected in how they construct course syllabi, produce instructional materials, and implement actual classroom practices (Clarín & Reston, 2020).

### 3.4. Constructive Alignment

Constructive alignment is used in outcomes-based teaching and learning. Constructive Alignment (CA), an outcomes-based approach to teaching, defines the learning outcomes prior to instruction. Then instruction and assessments are planned to help students achieve the outcomes and demonstrate how far they have achieved the outcomes using clear assessment criteria (Biggs, 2014). Teaching and learning activities (TLAs) and assessment techniques for a topic or course should match the intended learning outcomes (Genelza, 2022). Furthermore, alignment may be achieved by utilizing an appropriate learning taxonomy (Morris, 2008). She noted further that a thorough analysis of all teaching, learning, and evaluation areas might be misleading in measuring the degree of alignment. As a result, outcomes-based teaching and learning is concerned with curriculum design to ensure that the content, teaching, and learning activities and assessments are correctly matched to aid students in reaching the desired learning objectives (Biggs & Tang, 2010; Biggs & Tang, 2011; Dela Cruz, 2022; Pang, Ho, & Man, 2009)

## 4. Conclusions

Indeed, Outcomes-based Teaching and Learning (OBTL) is a connected learning and continuous improvement strategy based on constructive alignment among course-level learning outcomes, teaching and learning activities, and assessment tasks. It is a simple concept, but implementing it is difficult for educators, who must invest time and effort in developing a comprehensive course syllabus in which the intended outcomes of a course level are associated with their activities and evaluation procedures. Students must actively participate in the learning process to attain the intended learning outcomes of the course rather than the tasks they have performed. Furthermore, there is no perfect educational system. A system will operate if teachers devote themselves to its conception, implementation, and assessment process. Therefore, teachers must equip themselves with a deeper understanding of OBTL as one form of OBE through more reading, participation in seminars, and continued professional development.

## 5. Recommendations

The review can help understand the critical components of Outcomes-Based Teaching and Learning. Moreover, this study may guide educators in applying OBE in the classroom. Despite the significance of the identified findings, there are limitations to this study that should be addressed. This study only employed a handful of search phrases from the Google Scholar electronic database. As a result, using more journal articles from subscription-based resources such as ScienceDirect, EBSCO Host, and JSTOR will provide a deeper understanding of Outcomes-Based Teaching and Learning (OBTL).

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