

RESEARCH ARTICLE

Effectiveness of outcome-based teaching approaches among Sulu State College faculty: An assessment

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ABSTRACT. This study aimed to assess the effectiveness of the outcome-based teaching approach among faculty members at Sulu State College during the Academic Year 2023-2024. The research followed a descriptive-correlational design to gather relevant data and determine the level of effectiveness. By examining the outcomes of this teaching approach, the study sought to provide valuable insights into its impact on the faculty and their teaching methods. Based on the analysis of 100 samples collected using a non-probability sampling method called purposive sampling, this study utilized various statistical tools such as weighted mean, standard deviation, t-test for independent samples, One-way ANOVA, and Pearson's r. The results of this research are as follows: The majority of teachers at Sulu State College are female, married, and between the ages of 26-40. They mostly hold master's degrees and have less than 5 years of teaching experience. On average, the faculty is effective in implementing an outcome-based teaching approach. Interestingly, factors such as age, gender, and civil status do not significantly influence how teachers assess the effectiveness of this approach. It is likely that the teachers who perceive the students' outcomes as effective also view the teaching practice and methods as effective. This study provides support for the Hexa-C Metamodel, which incorporates concepts from modern theory into a framework that assists in the design and evaluation of e-learning systems, including educational software and web-based learning. Cognitive learning in e-learning encompasses various factors including mental models, human information processing, critical thinking, metacognition, self-regulation, and integration of knowledge with prior learning. Education should foster genuine comprehension and the development of internal frameworks of knowledge.

KEYWORDS: *Outcome-based, teaching approaches, Appraisal, faculty*

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Introduction

The school's primary objective is to deliver exceptional learning experiences to students through the implementation of highly effective teaching methodologies. The influence of teachers on students' cognitive development is a crucial factor in enhancing academic achievement. The K-12 education system has increasingly adopted outcome-based approaches. The outcome-based approach (OBA) is widely recognized as a highly effective method for fostering student motivation and delivering education of exceptional quality. Spady (1988) emphasizes the importance of a

target-oriented curriculum design. The utilization of an evidence-based management system is employed in this approach to assess the curriculum and teaching practices. Enhancing teaching effectiveness involves ensuring that teachers are held responsible for their outcomes. The conventional approach has historically served as the primary method employed by educators for instruction. Conventional education assumes that students require additional knowledge.

According to traditional educational perspectives, the primary objective of educators is to facilitate and promote the process of learning. Education takes place within the confines of a classroom setting, where competition is a common occurrence. The efficacy of the traditional versus outcome-based teaching approach in enhancing student performance has been a subject of ongoing debate. This study examines the effectiveness of two different approaches, namely traditional and outcome-based, in enhancing student performance (Morales, 2018).

The concept of outcome-based education (OBE) challenges the conventional emphasis on school education. Instead, it highlights students' expertise and abilities to demonstrate their competence in achieving objectives. The implementation of OBE reforms establishes explicit criteria for outcomes that can be observed and measured. Outcome-Based Education (OBE) does not have a specific outcome in mind. The OBE requirements in numerous countries primarily emphasize arithmetic, language, science, and history, while neglecting attitudes, social skills, and morality. According to Lee and Cheung (2015), the assessment of outcomes-based education implementation can be conducted using various significant features. This project aims to establish a comprehensive educational framework with measurable results. Standards within frameworks are typically determined through the influence of regional politics. The commitment encompasses the provision of educational opportunities and learning outcomes as an essential component for achieving success. Those who meet the requirements are awarded a diploma, advancement to the next grade, or other incentives. Individuals who fail may be required to complete additional coursework or repeat the year. Standards-based examinations are designed to assess students' performance in relation to predetermined standards.

Assessments can manifest in various formats, provided they evaluate students' comprehension of the subject matter or their ability to successfully complete the task. A dedication to guaranteeing that every student achieves the minimum standards. According to a study by Robert (2023), schools should not drop failing children. The research gap pertains to the subpar academic performance of Sulu residents, potentially impeding their learning process. The present study aims to investigate the most effective performance-enhancing techniques for addressing the aforementioned issue. The present study aims to assess the effectiveness of an outcome-based teaching approach in enhancing students' academic performance, as perceived by instructors at Sulu State College.

Research Questions

1. What is the extent of the effectiveness of outcome-based teaching approach among Sulu State College Faculty: an appraisal in terms of:
 - a. Teaching Practices
 - b. Method of Teaching; and
 - c. Students' Outcome?
2. Is there a significant difference in the extent of the level of effectiveness of outcome-based teaching approach among Sulu State College Faculty: an appraisal when data are grouped according to their demographic profile:

- a. Age;
- b. Gender;
- c. Civil Status;
- d. Educational Attainment; and
- e. Length of Service?

3. Is there a significant correlation among the sub-categories subsumed under the extent of effectiveness of outcome-based teaching approach among Sulu State College Faculty: an appraisal in context of teaching practices, methods of teaching, and students' outcome?

Literature

Under outcome-based education (OBE), every aspect of education is driven by its aims. Before graduation, all students should meet their goals. Instead of using a single method, Outcome-Based Education (OBE) classes, activities, and assessments should help students achieve predetermined goals. Based on their goals, faculty can teach, train, facilitate, or mentor (Spady, 2019). Other than traditional education, outcome-based education requires students to demonstrate their knowledge and skills to achieve the desired results. For performance evaluation, the OBE uses stated and quantitative benchmarks. A precise OBE result is not needed. In some countries, Outcome-Based Education (OBE) standards only include math, language, science, and history, not attitudes, social skills, or morality. In an outcomes-based education system, a curricular framework with explicit, quantifiable goals is created. Local politics set framework standards. Education and growth via dedication. In honor of satisfying standards, students receive certificates, promotions, or other incentives. Students must take more classes, repeat the year, or face other punishments to fix their troubles. Evaluations of student performance against standards. If they assess a student's knowledge or skill, assessments can differ. Guarantee basic standards for all children. K12 Academics (2017) advises against dropping underachieving students. Results, not class hours or texts, are the goal of OBE education. Skills and knowledge may be gained. Topic outcomes, like "Student loves physical education class," should be quantifiable, like "Student can run 50 meters in under a minute." Comprehensive subject outcomes cover an array of skills, from basic knowledge recall to advanced analysis and interpretation. Quantifying and agreeing on goals can be challenging, and choosing specific outcomes might cause local conflict. Institutions determine results. In the OBE paradigm, schools can choose any output but not the inputs. Results models include the National Science Education Standards and NCTM Principles and Standards for School Mathematics (K12 Academics, 2017).

Letter grades are one of numerous objective grading systems that educators might utilize in Outcome-Based Education (OBE). These schools employ OBE and traditional grading. A comprehensive OBE system tracks a student's grade and multiple topic achievements, including graduation, progression, and retention. The student's math performance may vary. If students pass the subject, they may be examined at level 4 for numerical awareness, level 5 for algebraic ideas, level 3 for measurement skills, etc. Teachers and parents can assess students' strengths and weaknesses using this method.

Grades are replaced by "levels" for students. Grades K-12 will be allocated Foundational (pre-institutional) levels 1-8. Attaining a "level" usually means the teacher thinks the student can succeed in the next level. Revision-needy students will progress slower than their counterparts. It detects growth stages and focuses instruction on student needs (K12 Academics, 2017). Consistent criteria throughout the school help students and parents track their development. It is

usual for some students to stay at the same academic level for over a year, but parents and students are used to seeing consistent improvement in school. Hence, parents and students view normality as inadequate.

Celebrating and comparing pupils' successes to their own has been called "dumbing down" education since it recognizes success at all levels. Despite not meeting age-based assessment standards, considerable personal advances can be identified. OBE teachers cater to individual needs and provide personal growth possibilities. This means that pupils with lower talents are given projects within their capacities, while those with higher abilities are given harder ones. Management of over 30 individual study programs is difficult. Teachers who adapt to their pupils' abilities are effective. Outcome-Based Education (OBE) integrates this procedure into grading and reporting (K12 Academics, 2017).

Research on teaching efficacy and outcome-based approaches resembles Lee and Cheung (2015)'s. Sub-degree instructors in Hong Kong are surveyed. Interviews showed professors follow the institution's outcome-based strategy. Attitudes on education, learning outcomes, teaching efficacy, and outcome-based approach implementation have varied due to sub-degree students' unique educational needs.

In 2013, Karim and Yin studied outcome-based education, which improves instruction. In this conceptual paper, outcome-based education (OBE) improves teaching and learning. Learning, teaching, and institutional structures are part of OBE. Students' learning determines OBE outcomes. Long-term benefits of OBE include measuring students' talents and skills and testing them with harder tasks than "structured tasks". The results of OBE can improve instructional design. MQA implements OBE. Knowledge, skills, and attitude are the Agency's focus to boost human capital.

This study was influenced by Adams (2016) education research supporting traditional teaching procedures. He says some schools and teachers have ineffective methods that hurt students. Anecdotal evidence supports trendy methods like discovery learning, where students independently discover fundamental concepts, and learning styles, which classify children by sensory modalities. Classic methods that recognize hard work, maximize classroom time, and enforce student conduct are more likely to succeed.

Coetzee and Imenda (2016) compared outcome-based education and lecture methodology for alternative physics perspectives. Similar but English-focused, the following study. A teacher-centered lecture where students passively listened and took notes was compared to a learner-centered OBE technique. Initial study found nine misunderstandings. We used a pre-test/post-test comparison group to evaluate the intervention. Between pre-test and post-test, scores significantly improved for both OBE and standard lecture groups ($p < 0.05$). Both interventions reduced but did not eliminate most alternative conceptions, according to qualitative assessments. Lectures and OBEs did not differ statistically. We analyze these data and make recommendations for teaching, learning, and research.

To compare lecture-based and activity-based statistics instruction, Loveland (2017). Though focused and emphasized differently, this work is relevant to modern research. Testing whether activity-based teaching improved statistical comprehension, grasp, and application was done on student exams. Students were surveyed to determine if lecture or activity-based statistics improvements occurred. Activity-based teaching did not improve comprehension or procedure. Neither teaching method improved student attitudes. Many students liked the new activity-based learning methods. The activity-based course's student evaluations suggested more teacher intervention. Each class, students requested that the teacher introduce the topic before group work.

Karim and Yin (2016)'s outcome-based education research develops teaching and learning. Your project is relevant. Learn how outcome-based education (OBE) improves teaching and learning. OBE assumes learning, teaching, and institutional structures. Students' learning determines OBE outcomes. One of OBE's long-term benefits is measuring students' abilities precisely and forcing them to solve harder problems. The results of OBE can improve instructional design. MQA implements OBE. The Agency improves national human capital through knowledge, skills, and attitude.

In the current project, Gutema (2013) examined outcomes-based teaching and learning at Misak Technical-Vocational Education and Training College. This research examined Misrak Technical-Vocational Education and Training College's outcomes-based teaching and learning. Surveying addressed the study's objectives. From 142 teachers and 698 students in levels I-V of the second and third years of the 2004 E.C entry, stratified sampling selected 85 teachers (60%) and 220 students (60%) for this study. Occupational titles determined six department heads, four division heads, and the college vice dean. Surveys and interviews collect data. With a 0.892 Cronbach's Alpha, survey reliability was tested. Studying more documents improved data. Data was analyzed using frequency, percentages, mean, SD, and t-tests. Effectiveness analysis is clarified by Cohen's d. Through open-ended questions and interviews, quantitative data was analyzed qualitatively. The research showed teachers and students misunderstand OBTL. Teacher application of Outcome-Based Teaching and Learning (OBTL) principles is unclear. Students fail certification and Occupational competency assessment graduation outcomes due to multiple issues. The study advises students/trainees, trainers/teachers, materials, management, industry, and assessors. Outcome-Based Teaching and Learning (OBTL) implementation is hindered by a lack of understanding of OBTL, ineffective teaching and learning activities, inadequate delivery systems, ineffective teaching practices, rapidly changing curriculum that does not align with students' desired outcomes, poorly designed assessment tasks, poor college leadership, and insufficient training. Trainers should prioritize intended learning outcomes (ILO), effective teaching and learning activities (TLA) to stimulate and facilitate the ILO, well-designed assessment tasks (AT), and curriculum alignment with the desired outcomes to ensure that students acquire the necessary knowledge, skills, and attitudes and demonstrate the desired outcomes during occupational competency assessments and working life.

The current study addresses educators' views on outcome-based second language acquisition by Ortega and Cruz (2016). No curriculum paradigm shift is complete without assessing English language educators' views on OBE. This descriptive-correlational study examined whether State University English language educators approved of the proposed pedagogy. Investigator used SPSS to analyze survey quantitative data. Spearman's rho linked variables for. Responses to Outcomes-Based Education were positively correlated with age, teaching experience, and educational success. Institutions must support academic staff through professional development, according to this study. To achieve their goals, ESL students need a good learning environment.

Lau (2017) examined how outcome-based education affects Hong Kong management accounting students. Research is impacted by this study. The US has succeeded in outcome-based education, especially medicine, while other nations have struggled. In Hong Kong Managerial Accounting, the author used OBE. Learners followed Bloom's Cognitive Domain. ILO-focused teaching and learning activities. Evaluated tasks. According to the instructor, OBE worked because the criteria were met.

OBE and typology-based QA is examined by Pastrana and Manabat (2017). Philippine higher education research suggests a framework and transition strategy. Research for the project. This study supports the Philippine Government's MSTP to improve education. Philippines Higher Education Institutions (HEIs) may adopt an Outcomes-Based Education (OBE) strategy and typology-based Quality Assurance (QA) System that meets international standards. 1) Propose a 10-year transition strategy (AY 2012-2022) for Philippine HEIs to meet international standards. 2) Create a typology-based HEI QA system and an OBE framework. Using OBE and typology-based QA, create a business-related BS Accountancy Program Model Course Syllabus. We'd use La Consolacion College Manila's case study. For Academic Year 2012–2022, this study helped 100-year-old LCCM develop a transition strategy. The study aimed for national good. Philippine WEF Global Competitiveness Index rankings have consistently been 65th, third least competitive in Southeast Asia. Kaplan's Balanced Scorecard (BSC) Methodology, Deming's PDCA Cycle from ISO 9001:2008 QMS, and the Baldrige Framework's Education Criteria for Performance Excellence (MBNQA, 2010) formed the conceptual framework. Descriptive-case and secondary data analysis were used. Analysts examined government and private publications, memos, and studies. The sample case study used LCCM's internal records. Research shows that the Outcomes-based framework bases quality and goals on HEIs' Vision-Mission-Goals and Objectives. By assessing their local conditions and strengths and weaknesses, higher education institutions (HEIs) create their VMGO. There are different HEI quality goals and achievements. National goals may be shared by Philippine HEIs. Concentrate on target clients, resource needs, and graduation skills. By typology-based quality assurance, HEIs are Professional Institutes, Colleges, or Universities. Since the transition gap is economically damaging, the paper recommends K-12 to comply with Washington and Bologna. The 10-year transition from Academic Year 2012 to 2022 may apply LCCM-specific strategies to Philippine HEIs. Outcome-Based Education (OBE) and typology-based Quality Assurance (QA) should be implemented by HEIs to produce graduates with global-standard skills. Private accrediting and certifying bodies must embrace the new methodology and typology to meet the needs of HEIs that align with national goals and their Vision, Mission, Goals, and Objectives. It proposes a BSA course syllabus for all higher education institutions. These new typologies should be adopted by CHED, PRC, PAAASCU/PACU-COA, SGS for ISO, and MBNQA for Baldrige. The study offers HEIs an 8-step Action Plan. K-12 in Basic Education and Outcome-Based Education (OBE) and revised HEI typology align the HEI's Vision, Mission, Goals, and Objectives (VMGOs) with Program Course objectives in this plan. At an Asian university's engineering department, Borsolo et al. (2017) evaluated outcome-based education. The Asian university's engineering department's OBE adoption was examined. This study examined OBE's practices, atmosphere, and effects on academic outcomes, attitude, and instruction. It also examined OBE implementation and usefulness. Quantitative survey data was collected in this descriptive study. We have evidence of OBE in activities and the environment. Faculty, students, and authorities must together assess student needs and improve the new learning system. For ASEAN 2015, delegates will hold seminars and training for engineering students.

Methodology

This chapter provides an overview of the study, including the research design used for presentation, analysis, and interpretation. It also discusses the philosophical assumptions, the role of the researcher, the research participants, the data collection process, data analysis, and the trustworthiness of the study. Additionally, it addresses the ethical considerations involved in the research process.

1. Population and Sampling Design

This study is developed as a descriptive-exploratory study to describe and analyze the elements that impact the efficiency of employees at Sulu State College. The study validates certain hypotheses.

Descriptive research design, as accurately stated by Siedlecki (2020), aims to interpret and uncover the existing or non-existing conditions. It also provides the necessary knowledge and experiences that help in conducting a more extensive investigation. The study participants consisted of professors who were specifically chosen from the five main departments of Sulu State College, namely: School of Business Administration, School of Computer Science Information Technology and Engineering, School of Nursing, School of Education, and School of Arts and Sciences. A total of one hundred (100) faculty-respondents were selected as representative samples.

2. Research Instruments

The survey questionnaire utilized in this study was derived from Umali's (2010) research. It consists of two components, specifically: Part A: This section of the instrument assesses the demographic attributes of the participants, including age, gender, marital status, educational achievement, and length of employment. Part B: This section assesses the efficacy of the outcome-based teaching approach among teachers at Sulu State College in terms of teaching practice, teaching technique, and student outcomes.

3. Data Gathering Procedure

The Office of the Dean of the Graduate Studies sent an official letter to the Office of the President, seeking approval to initiate the study. After obtaining approval, letters requesting assistance were sent to the Deans of each Department.

The researcher personally administered and collected the questionnaire checklist from the participants in the aforementioned college. The survey was conducted by the researcher personally. The data and responses were coded and then sent to a statistician with expertise in order to undergo suitable statistical treatment and analysis.

4. Data Analysis Process

This study employed statistical techniques such as calculating means, standard deviation, and doing one-way analysis of variance to examine the data. The profile of pupils was evaluated according to their gender, age, civil status, educational attainment, and length of service. The efficacy of the outcome-based teaching technique was evaluated using the weighted mean and standard deviation. The study employed t-tests and ANOVA to identify significant disparities in effectiveness according to gender, age, year level, and parental educational achievement. The Pearson product-moment correlation was employed to ascertain the association between sub-categories.

Results

Question 1. What is the level of the effectiveness of outcome-based teaching approach among Sulu State College faculty: an appraisal in terms of: 1.1 Teaching Practice; 1.2 Method of Teaching; and 1.3 Student's Outcome?

Table 1.1 Level of effectiveness of outcome-based teaching approach among Sulu State College faculty in terms of Teaching Practice

	Teaching Practice	Mean	S.D.	Rating
1	I prepare information sheet, job sheet for each of my students	4.5800	.51601	Very Effective
2	I have arranged consultations hours for my students	4.4300	.62369	Effective
3	I used examples, illustrations and demonstration to explain and clarify the lesson or content I teach	4.4800	.57700	Effective

4	I inform my students the intended learning outcomes	4.3800	.63214	Effective
5	I use attention gain activities, ideas, concepts and devises while teaching	4.3100	.72048	Effective
Total Weighted Mean		4.4360	.49676	Effective

Legend: (5) 4.50-5.0=Very Effective (VE); (4) 3.50 – 4.49=Effective (E); (3) 2.50 – 3.49=Moderately Effective (ME); (2) 1.50 – 2.49=Less Effective (LE); (1) 1.00 – 1.49=Not Effective (NE)

Table 1.1 displays the degree of efficacy of the outcome-based teaching strategy among the faculty of Sulu State College in relation to their teaching practice. The table shows that this sub-category achieved a weighted mean score of 4.4360 with a standard deviation of 0.49676, indicating an Effective rating. The teacher-respondents concurred that the faculty members of Sulu State College are proficient in their teaching practice. Put simply, teachers possess the necessary information, methods, and tactics to effectively enhance pupils' academic achievement. More precisely, teachers who were surveyed evaluated the following items as Effective: "I have scheduled consultation hours for my students", "I communicate the intended learning outcomes to my students", and "I employ attention-grabbing activities, ideas, concepts, and devices during teaching".

Table 1.2 Level of effectiveness of outcome-based teaching approach among Sulu State College faculty in terms of Methods of Teaching

	Methods of Teaching	Mean	S.D.	Rating
1	My way of teaching creates learner's interest, enthusiasm and appreciation	4.4900	.61126	Effective
2	I encourage students' involvement and success in their learning	4.4000	.58603	Effective
3	My teaching enhances critical thinking and skills of scientific investigations	4.2700	.58353	Effective
4	I use information sheet, job sheet, operation sheet and other printed materials to teach my students	4.3000	.59459	Effective
5	I use audio tapes, video tapes, slide sequence, photographs, models, practical kits, tools and printed materials in my own classroom	4.2800	.69747	Effective
6	I give individual assignment and practical project to work to my students	4.2200	.64479	Effective
7	I encouraged my student to develop group learning skills such as discussion and interpersonal skills	4.0600	.70811	Effective
8	I considered learning outcomes to be achieved.	4.1500	.65713	Effective
9	I commonly use observation, written tests, port polio and actual demonstration of performance methods to assess my students' master of intended learning outcomes.	4.1400	.66697	Effective
Total Weighted Mean		4.2567	.37329	Effective

Legend: (5) 4.50-5.0=Very Effective (VE); (4) 3.50 – 4.49=Effective (E); (3) 2.50 – 3.49=Moderately Effective (ME); (2) 1.50 – 2.49=Less Effective (LE); (1) 1.00 – 1.49=Not Effective (NE)

Table 1.2 presents the degree of efficacy of the outcome-based teaching method among the faculty members of Sulu State College, specifically in relation to the teaching strategy. According to the table, this sub-category achieved a weighted mean score of 4.2567 with a standard deviation of 0.37329, indicating an Effective rating. Teacher-respondents concurred that faculty members of Sulu State College are proficient in their instructing methodologies. Teachers possess pedagogical expertise and abilities to assist pupils in attaining the intended educational objectives. Teachers possess the skill to accurately determine which instructional techniques will effectively facilitate a specific desired result.

The teacher-respondents rated the following items as Effective: "I encourage students' involvement and success in their learning", "My teaching enhances critical thinking and skills of

scientific investigations", "I use information sheet, job sheet, operation sheet and other printed materials to teach my students", "I use audio tapes, video tapes, slide sequence, photographs, models, practical kits, tools and printed materials in my own classroom", "I give individual assignment and practical project to work to my students", and "I encouraged my student to develop group learning skills such as discussion and interpersonal skills".

Table 1.3 Level of effectiveness of outcome-based teaching approach among Sulu State College faculty in terms of Students' Outcome

	Students' Outcome	Mean	S.D.	Rating
1	I encourage students to think independently, work out problems and self-managed learning	4.3100	.58075	Effective
2	My students debate, discuss, reflect in the class by their own judgments and interpretation	4.3500	.53889	Effective
3	I push my students to do practical work and highly adapted to it	4.2300	.48938	Effective
4	My students demonstrate their communication skills during team-work.	4.2100	.60794	Effective
5	My students show higher order intellectual capability, ability to work together and independently during assessment and succeed competent.	4.3200	.56640	Effective
6	My students achieve learning outcomes, skills, knowledge and attitude by intended learning activities	4.2830	.69399	Effective
7	The curriculum competence that I use aligned with desired outcomes	4.2500	.60927	Effective
8	I adjust the unit of competence to the industry needs during my students on company training and supervise them on company training	4.2600	.50493	Effective
9	The intended learning outcomes, teaching activities and outcomes based assessment are well understood by my students	4.1800	.67240	Effective
10	My students contribute create new technology, adaptation, accumulation and transient technology to micro and small enterprise as well as industry extension to maximize the productions	4.2000	.65134	Effective
Total Weighted Mean		4.2593	.32485	Effective

Legend: (5) 4.50-5.0=Very Effective (VE); (4) 3.50 – 4.49=Effective (E); (3) 2.50 – 3.49=Moderately Effective (ME); (2) 1.50 – 2.49=Less Effective (LE); (1) 1.00 – 1.49=Not Effective (NE)

Table 1.3 displays the degree of efficacy of the outcome-based teaching technique among the faculty of Sulu State College, specifically in relation to the outcomes achieved by students. According to the table, this sub-category achieved a weighted mean score of 4.2593 with a standard deviation of 0.32485, indicating an Effective rating. Teacher-respondents concurred that faculty members of Sulu State College are proficient in enhancing students' performance. Teachers possess pedagogical knowledge and abilities to assist students in attaining the intended learning goals. Teachers possess the expertise to discern which instructional approaches will effectively facilitate a specific desired result.

The teacher-respondents rated the following items as Effective: "I encourage students' involvement and success in their learning", "My teaching enhances critical thinking and skills of scientific investigations", "I use information sheet, job sheet, operation sheet, and other printed materials to teach my students", "I use audio tapes, video tapes, slide sequence, photographs, models, practical kits, tools, and printed materials in my own classroom", "I give individual assignments and practical projects for my students to work on", and "I encouraged my students to develop group learning skills such as discussion and interpersonal skills".

Question 2. Is there a significant difference in the level of effectiveness of outcome-based teaching approach among Sulu State College faculty: an appraisal when data are grouped according to their demographic profile in terms of: 3.1 Age; 3.2 Gender; 3.3 Civil Status; 3.4 Educational Attainment; and 3.5 Length of Service?

Table 2.1. Differences in the level of effectiveness of outcome-based teaching approach among Sulu State College faculty: an appraisal when data are grouped according to their demographic profile in terms of age

Sources of Variation		Sum of Squares	df	Mean Square	F	Sig.	Description
Teaching Practice	Between Groups	3.099	4	.775	3.450*	.011	Significant
	Within Groups	21.332	95	.225			
	Total	24.430	99				
Methods of Teaching	Between Groups	.809	4	.202	1.479	.215	Not Significant
	Within Groups	12.986	95	.137			
	Total	13.795	99				
Students' Outcome	Between Groups	.503	4	.126	1.202	.315	Not Significant
	Within Groups	9.944	95	.105			
	Total	10.447	99				

*Significant alpha .05

Table 2.1 displays the variations in the efficacy of the outcome-based teaching method among the faculty members of Sulu State College. The evaluation is based on the grouping of data according to the demographic profile of the faculty members in terms of age. The chart indicates that, with the exception of "Teaching Practice," the F-ratios and P-values for all other sub-categories within the effectiveness level of the outcome-based teaching strategy among Sulu State College instructors are not statistically significant at an alpha level of .05. Despite the age range of the employee-respondents, their judgments of the success of the outcome-based teaching technique among Sulu State College faculty are consistent. This result suggests that age does not necessarily give an advantage to a teacher in assessing the effectiveness of the outcome-based teaching approach among the faculty of Sulu State College. This applies to both older teachers (51 years old and above) and younger teachers (25 years old and below, 26-30 years old, 31-40 years old, and 41-50 years old). However, it can be confidently stated that the age of the employees does not play a significant role in how they evaluate the effectiveness of the outcome-based teaching technique among the instructors at Sulu State College.

Table 2.2 Differences in the level of effectiveness of outcome-based teaching approach among Sulu State College faculty: an appraisal when data are grouped according to their demographic profile in terms of gender

VARIABLES		Mean	S. D.	Mean Difference	t	Sig.	Description
Teaching Practice	Male	4.4824	.40036	.07023	.668	.506	Not Significant
	Female	4.4121	.54109				
Methods of Teaching	Male	4.3791	.34721	.18548*	2.410	.018	Significant
	Female	4.1936	.37303				
Students' Outcome	Male	4.2118	.36245	-.07202	1.051	.296	Not Significant
	Female	4.2838	.30371				

*Significant at alpha 0.05

Table 3.2 displays the variations in the efficacy of the outcome-based teaching method among the faculty members of Sulu State College. The data is organized based on their demographic characteristics, specifically their gender. The table indicates that, with the exception of "Methods of Teaching," the mean differences of all other sub-categories within the degree of effectiveness of the outcome-based teaching strategy among Sulu State College instructors are not statistically significant at an alpha level of .05. Male and female teachers have similar perceptions regarding the efficiency of the outcome-based education strategy among the faculty at Sulu State College.

This finding suggests that being a male teacher-respondent does not necessarily provide him an advantage in judging the success of the outcome-based teaching strategy among Sulu State College professors compared to his female counterpart, or vice versa. Therefore, it can be concluded that the variable of gender does not have a major impact on how employee-respondents evaluate the success of the outcome-based teaching technique among the professors of Sulu State College.

Table 2.3 Differences in the level of effectiveness of outcome-based teaching approach among Sulu State College faculty: an appraisal when data are grouped according to their demographic profile in terms of civil status

Sources of Variation		Sum of Squares	df	Mean Square	F	Sig.	Description
Teaching Practice	Between Groups	.170	2	.085	.340	.713	Not Significant
	Within Groups	24.260	97	.250			
	Total	24.430	99				
Methods of Teaching	Between Groups	.046	2	.023	.162	.851	Not Significant
	Within Groups	13.749	97	.142			
	Total	13.795	99				
Students' Outcome	Between Groups	.464	2	.232	2.254	.110	Not Significant
	Within Groups	9.983	97	.103			
	Total	10.447	99				

*Significant alpha .05

Table 2.3 displays the variations in the degree of efficiency of the outcome-based teaching method among the faculty members of Sulu State College. The data is categorized based on their demographic information, namely their civil status. From this table, it is evident that the F-ratios and P-values for all the sub-categories within the level of effectiveness of the outcome-based teaching technique among Sulu State College professors are not statistically significant at an alpha level of .05. Despite variations in the civil status of the teachers surveyed, their judgments of the effectiveness of the outcome-based teaching strategy among the faculty at Sulu State College are consistent. This result suggests that being married as a teacher-respondent does not necessarily give them an advantage in perceiving the effectiveness of the outcome-based teaching strategy among Sulu State College instructors compared to those who are single, separated, or widowed, and vice versa. However, it can be confidently stated that the variable of civil status does not have a substantial influence on how teacher-respondents evaluate the success of the outcome-based teaching technique among the teachers of Sulu State College.

Table 2.4 Differences in the level of effectiveness of outcome-based teaching approach among Sulu State College faculty: an appraisal when data are grouped according to their demographic profile in terms of educational attainment

Sources of Variation		Sum of Squares	df	Mean Square	F	Sig.	Description
Teaching Practice	Between Groups	2.110	4	.528	2.254	.069	Not Significant
	Within Groups	21.999	94	.234			
	Total	24.109	98				
Methods of Teaching	Between Groups	2.096	4	.524	4.210*	.004	Significant
	Within Groups	11.698	94	.124			
	Total	13.794	98				
Students' Outcome	Between Groups	1.031	4	.258	2.579*	.042	Significant
	Within Groups	9.396	94	.100			
	Total	10.427	98				

*Significant alpha .05

Table 2.4 displays the variations in the efficacy of the outcome-based teaching method among the faculty members of Sulu State College. The data is categorized based on their demographic profile, namely their educational achievements. The chart indicates that, with the exception of "Teaching Practice," the F-ratios and P-values for all other sub-categories within the effectiveness of the outcome-based teaching strategy among Sulu State College instructors are statistically significant at an alpha level of .05. Despite variations in educational attainment among teacher-respondents, their judgments of the efficiency of the outcome-based teaching style among Sulu State College instructors differ. This finding suggests that teachers who hold a doctorate degree are likely to have an advantage in evaluating the effectiveness of the outcome-based teaching approach among the faculty at Sulu State College compared to those with a bachelor's degree, master's units, master's degree, or doctoral units. However, it is accurate to state that the varying levels of education achieved by individuals have a substantial influence on how teacher-respondents evaluate the success of the outcome-based teaching technique among faculty members at Sulu State College.

Table 2.4.1 Post Hoc Analysis: Differences in the level of effectiveness of outcome-based teaching approach among Sulu State College faculty when data are grouped according to their demographic profile in terms of educational attainment

Dependent Variables	(I) Grouping by Civil Status	(J) Grouping by Civil Status	Mean Difference (I-J)	Std. Error	Sig.
<i>Methods of Teaching</i>	Master's degree	Bachelor's degree	.05079	.16866	.998
		With master's units	-.06921	.09238	.944
		With doctoral units	.07937	.09737	.925
<i>Students' Outcome</i>	Master's degree	Bachelor's degree	.08371	.15115	.981
		With master's units	-.07629	.08279	.888
		With doctoral units	-.00105	.08727	1.000
		Doctorate degree	-.29629*	.10269	.038

* The mean difference is significant at the 0.05 level.

A post hoc analysis was conducted using the Tukey Test to determine if there were significant differences in the mean levels of effectiveness of the outcome-based teaching approach among faculty members at Sulu State College, based on their educational attainment. The groups were classified according to their educational attainment and data were also grouped based on their demographic profile. The analysis shown in Table 3.4.1 reveals that the difference in the means of Methods of Teaching and Students' Outcome is calculated by subtracting the mean of the higher group from the mean of the lower group. The study indicates that the group of teachers who had a Doctorate Degree had a mean difference of $-.40049^*$ compared to the group of teachers with a Master's Degree. This difference was statistically significant at $\alpha=.05$, with a standard error of .11458 and a p-value of .006. Within this specific sub-category, teacher-respondents with a Doctorate Degree are expected to have superior methods of assessing the success of the outcome-based teaching approach among Sulu State College faculty in terms of Methods of Teaching compared to any other group of teacher-respondents. Regarding students' outcome, the group of teachers who have a Doctorate Degree achieved a mean difference of $-.29629^*$ compared to the group of teachers with a Master's Degree. This difference is statistically significant at $\alpha=.05$, as indicated by a p-value of .038 and a standard error of .10269. Within this sub-category, teacher-respondents with a Doctorate Degree are expected to have the most effective methods of measuring the level of efficacy of the outcome-based teaching strategy among Sulu State College teachers in terms of Students' Outcome, compared to any other group of teacher-respondents.

Table 2.5 Differences in the level of effectiveness of outcome-based teaching approach among Sulu State College faculty when data are grouped according to their demographic profile in terms of length of service

Sources of Variation		Sum of Squares	df	Mean Square	F	Sig.	Description
Teaching Practice	Between Groups	1.934	3	.645	2.751*	.047	Significant
	Within Groups	22.496	96	.234			
	Total	24.430	99				
Methods of Teaching	Between Groups	2.880	3	.960	8.444*	.000	Significant
	Within Groups	10.915	96	.114			
	Total	13.795	99				
Students' Outcome	Between Groups	1.070	3	.357	3.651*	.015	Significant
	Within Groups	9.377	96	.098			
	Total	10.447	99				

*Significant alpha .05

Table 2.5 displays the variations in the efficacy of the outcome-based teaching method among the faculty members of Sulu State College. The data is categorized based on their demographic profile, namely their length of service. The table indicates that the F-ratios and P-values for all the sub-categories within the degree of effectiveness of the outcome-based teaching technique among Sulu State College instructors are statistically significant at an alpha level of .05. Despite variations in the period of service among teacher-respondents, their opinion of the efficiency of the outcome-based teaching strategy among Sulu State College faculty differs. This finding suggests that teachers who have 26 years or more of experience may have an advantage in evaluating the effectiveness of the outcome-based teaching approach among the faculty at Sulu State College compared to those with 5 years or less, 6-10 years, 11-20 years, or 21-25 years of experience.

However, it is accurate to state that the varying duration of service has a significant role in how teacher-respondents evaluate the effectiveness of the outcome-based teaching style among the teachers of Sulu State College. The efficiency of the outcome-based teaching technique varies significantly across the faculty members of Sulu State College when data is categorized based on their demographic profile, specifically their length of service. Teacher-respondents who have been teaching for 21-25 years possess more effective methods for evaluating the level of efficacy of the outcome-based teaching strategy among the faculty at Sulu State College, specifically in terms of Teaching Practice, Methods of Teaching, and Students' Outcome.

The most crucial determinant of a student's academic achievement is their demographic characteristics, personality traits, socio-economic status, and other contextual influences. Understanding these elements and their influence on student performance can aid in effectively regulating their impacts (Al Husaini, & Ahmad Shukor, 2023). The outcome corroborates the OBE Theory, which prioritizes a well-defined concept of the information and abilities children are anticipated to possess upon completing their education inside the educational system.

Table 2.5.1 Post Hoc Analysis: Differences in the level of effectiveness of outcome-based teaching approach among Sulu State College faculty when data are grouped according to their demographic profile in terms of length of service

Dependent Variables	(I) Grouping by Civil Status	(J) Grouping by Civil Status	Mean Difference (I-J)	Std. Error	Sig.
Teaching Practice	5 years & below	6-10 years	-.16240	.11939	.527
		11-20 years	-.11643	.12829	.801
		21-25 years	-.49143*	.17358	.028
		6-10 years	-.19846	.08316	.087
	5 years & below				

<i>Methods of Teaching</i>		11-20 years	.02884	.08936	.988
		21-25 years	-.52857*	.12091	.000
<i>Students' Outcome</i>	5 years & below	6-10 years	-.11553	.07708	.442
		11-20 years	-.09964	.08283	.626
		21-25 years	-.36714*	.11207	.008

* The mean difference is significant at the 0.05 level

A post hoc analysis was performed using the Tukey Test to identify any significant differences in the mean levels of effectiveness of the outcome-based teaching approach among Sulu State College faculty. The analysis focused on groups classified based on their length of service and their demographic profiles. The analysis results presented in Table 3.5.1 demonstrate that the difference in the means of Teaching Practice, Methods of Teaching, and Students' Outcome is calculated by subtracting the mean of the higher group from the mean of the lower group. The results of the study indicate that there is a significant difference between the group of teachers who have 21-25 years of teaching experience and the group of teachers who have 5 years or less of teaching experience. The mean difference between the two groups is -.49143, with a standard error of .17358 and a p-value of .028, which is considered statistically significant at an alpha level of .05. Within this sub-category, teacher-respondents with 21-25 years of service are expected to have the most effective methods of assessing the effectiveness of the outcome-based teaching approach among the faculty of Sulu State College in terms of Teaching Practice, compared to any other group of teacher-respondents. The study demonstrates that the group of teachers who have been in service for 21-25 years had a mean difference of -.52857* compared to the group of teachers who have been in service for 5 years or less. This difference is statistically significant at alpha=.05, as indicated by a p-value of .000 and a standard error of .12091. Within this sub-category, teacher-respondents with 21-25 years of service are expected to possess the most effective methods for assessing the effectiveness of outcome-based teaching at Sulu State College, specifically in terms of teaching methods. No other group of teacher-respondents should surpass them in this regard. Regarding students' outcome, the group of teachers who have been serving for 21-25 years achieved a mean difference of -.36714* compared to the group of teachers who have been serving for 5 years or less. This difference is statistically significant at alpha=.05, as indicated by a p-value of .008 and a standard error of .11207. Within this sub-category, teacher-respondents with 21-25 years of length of service are expected to have the most effective methods of assessing the level of effectiveness of outcome-based teaching approach among Sulu State College faculty in terms of Students' Outcome, compared to any other group of teacher-respondents.

Question 3. Is there a significant correlation among the sub-categories subsumed under the extent of effectiveness of outcome-based teaching approach among Sulu State College faculty in context of teaching practice, method of teaching, and student's outcome?

Table 3.0 Correlation among the sub-categories subsumed under the extent of effectiveness of outcome-based teaching approach among Sulu State College faculty in context of teaching practice, method of teaching, and student's outcome

Variables		Pearson <i>r</i>	Sig.	N	Description
Dependent	Independent				
Students' Outcome	Teaching Practice	.276**	.005	100	Low
	Methods of Teaching	.358**	.000	100	Moderate

*Correlation Coefficient is significant at alpha .05

Correlation Coefficient Scales Adopted from Hopkins, Will (2002):

0.0-0.1=Nearly Zero; 0.1-0.30=Low; .3-0.5 0=Moderate; .5-0.7-0=High; .7-0.9= Very High; 0.9-1=Nearly Perfect

Table 3 shows a moderately positive correlation between students' outcomes and teaching practice among Sulu State College faculty. The Pearson Correlation Coefficients (Pearson r) are significant at alpha.05. The results suggest that the teacher-respondents who assessed the effectiveness of outcome-based teaching approach in terms of students' outcomes likely also assessed teaching practice and methods of teaching as effective. Overall, the sub-categories are moderately correlated.

There is a clear and moderate positive link between the sub-categories of Teaching Practice, Methods of Teaching, and Students' Outcome within the level of effectiveness of the outcome-based teaching strategy among faculty members at Sulu State College. Efficient instruction greatly improves the process of acquiring knowledge. The reciprocal influence between teaching and learning is crucial for creating an educational setting that promotes the growth and success of both educators and students, allowing them to reach their maximum capabilities (Hawthorne, 2024).

Conclusion

The study demonstrates that the faculty of Sulu State College is adequately diversified in terms of age, gender, civil status, educational achievement, and duration of service. They are typically successful in implementing outcome-based teaching methods. Nevertheless, factors such as age, gender, and civil status do not play a substantial role in influencing teachers' evaluation of the effectiveness of this strategy. The study provides evidence for the effectiveness of the Hexa-C Metamodel, which incorporates current theories into e-learning systems. It focuses on cognitive learning and facilitates genuine comprehension and the development of internal knowledge structures.

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