Courseware Curriculum Development Project Aligning Outcome-Based Education Across Different Curricular Programs in Universidad de Zamboanga

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Abstract: To effectively address the K-12 transition, higher education institutions are challenged to improve its systems, processes instructional content and pedagogies to meet higher quality standards toward excellence. Universidad de Zamboanga aside from upholding its high quality education employs ways and means to safeguard, monitor and enhance its competitiveness through the use of different alternative delivery modes. Its present curriculum was designed to equip the students with knowledge, skills and attitude towards making them productive job creators and to be at the forefront of competency based learning. Preparing and making them productive members of the society is truly the most important task of any 21st century educational institution. The descriptive method was used. Both quantitative and qualitative methods of data analyses were utilized. Research findings revealed that the courseware curriculum development project aligned with outcome-based education promotes an expanded, challenging and flexible curriculum related to learner's interests and capabilities that offers a range of accreditation opportunities in response to the K-12 program. Thus, it greatly contribute to the alignment of Universidad de Zamboanga to nationally and internationally accepted performance and assessment indicators while enhancing its capacity to improve its own programs and systems in a sustainable manner.

Key words: Courseware curriculum development project, outcomes-based education, descriptive method, Universidad de Zamboanga, Philippines, accreditation

INTRODUCTION

Outcome-Based Education (OBE) and courseware development integration has proven to be effective based on various researches conducted both on education and employment. It revealed that updated curriculum and technology-enriched teaching motivates, spurs greater creativity and deepens understanding of content among students. Maximization of this OBE curriculum through courseware development is vital for student's learning and for the teachers responsible in preparing them for the future. The application of the paradigm in the curriculum assures the students with strong foundation in both the academe and outside world. The courseware development aligned with OBE is to promote an expanded, challenging and flexible curriculum related to learner's interests and capabilities that offers a range of accreditation opportunities in response to the K-12 program.

The Outcome-Based Education (OBE) courseware development was designed to aid school management to improve the quality and excellence of education through the use of alternative delivery modes that are flexible, efficient, effective and customizable to the individual need. The OBE courseware development aimed to:

- Provide students the opportunity to experience quality and excellent education that would lead to employability
- Encourage students to explore their knowledge in various fields of disciplines
- Recognize and showcase student's knowledge, skills and creativity in various disciplines and their applications (including academic and social qualities)
- Inspire students to achieve excellence at par with global standards
- Promote among students an awareness on the value of education
- Cultivate an atmosphere of academic competitiveness within and among schools
- Motivate students towards full development of their potentials in enhancing their knowledge while having fun in learning

With the implementation of this courseware development project, the Universidad de Zamboanga students developed competencies in accessing, analyzing and applying information and cultivate independent learning. OBE courseware strategies helped to develop the student's ability to think creatively to cooperate with one another and to make sound value judgments. The

integration of OBE courseware teaching and learning approaches engendered innovations and encouraged new curricula and new assessment methods to meet the objectives of education. In addition, OBE courseware blended teaching styles provided schools with autonomy to use Information Communication Technology (ICT) resources flexibly to meet the needs of students. OBE courseware also enhanced learning and school administration.

The project addressed the quality of Universidad de Zamboanga program directly and impacts on the quality of education that Universidad de Zamboanga delivers. It greatly contributed to the alignment of Universidad de Zamboanga to nationally and internationally accepted performance and assessment indicators while enhancing its capacity to improve its own programs and systems in a sustainable manner.

Framework of the study: The study was anchored on the Outcome-Based Education (OBE) paradigm of (Spady and Francis, 2014) known as the "Father of OBE". The OBE model comprises of 5 key elements that are essential towards acquisition of learning which are the paradigm of operating; two key purposes; three key premises; four operating principles and five generic domains. The paradigm of operating represents a way to do things specifically in making concrete and probable actions to ensure What and Whether the students learn which is important. Moreover, this model entails how the school or the organization functions as a whole by providing evident outcomes or results. Second, the 2 purposes of OBE according to Spady and Francis (2014), underlies on "Success for all students and staff" philosophy which are ensuring that all students are equipped with the knowledge, competence and qualities needed to be successfully after they exit the educational system; structuring and operating schools so that those outcomes can be achieved and maximized for all students. The third presents the 3 premises which are all students can learn and succeed but not on the same day in the same way; successful learning promotes even more successful learning and schools control the conditions that directly affect successful school learning. The two purposes and three premises provides a clear picture in creating actions following the four operating principles which are considered as the heart of OBE (Spady and Francis, 2014). Among the four principles is clarity of focus on culminating exit outcomes of significance; expanded opportunity and support for learning success; high expectations for all to succeed and design down from your ultimate culminating outcomes.

The clarity of focus is the most important among the four principles. It confine on the essence and meaning which guides the teachers in the mode of instruction they want to incorporate to the students. Moreover, teachers are also encouraged to explore variety of ways in designing specific instruction in the classroom considering that students have different learning styles adopted. The expanded opportunity and support for learning success must not be limited in a certain point. Teachers and staff should give students more than one chance to learn important things (Spady and Francis, 2014).

High expectations means increasing the level of challenge to which students are exposed and raising the standard of acceptable performance as they reach to be called "finished" or "successful" (Spady and Francis, 2014). The OBE systems have applied the three principles which are raising standards of acceptable performance, eliminating success quotas and increasing access to high-level curriculum. The OBE design down principle work when staff start design and plan their respective curriculum as to where they want to lead the students. The culminating outcome entails the teacher on what students can do upon the completion of a course, thus culminating outcomes can also be referred to as exit outcomes or exit assessments. The five generic domains include defining outcomes, designing curriculum, deliver instruction, document results and determine advancement (Spady and Francis, 2014).

Objective of the study: The study aimed to determine courseware curriculum development project aligning outcome-based education across different curricular programs in Universidad de Zamboanga.

Universidad de Zamboanga focused its educational efforts in the realization of the long-term objectives. Specifically, the researcher sought to answer the following questions:

- What are the in-depth students learning in utilizing technology to the fullest in classroom teaching?
- What is the level of effectiveness of incorporating and integrating hands-on use of OBE courseware (such as internet, web page design, application software and multimedia software into unit plans)?
- What is the extent of use of OBE curriculum materials that technology-enriched with authentic assessment to meet national and international standards?
- What is the implementation unit of instructional plan accessible to learners?

MATERIALS AND METHODS

Research design: The research employed a descriptive type of research method. The method was a quantitative method of research generally employed for status trend

studies that is describing specifically what are prevailing in the situation and the respondent in the environment of the study. Qualitative methods of data analyses were also utilized.

Research site: The Zamboanga Arturo Eustaquio Colleges (ZAEC) was established with the main objective of providing affordable education to the underprivileged. This aim was driven by the founder's dream and inspired by his own life story for he himself was once a struggling scholar at the University of the Philippines. Engr. Eustaquio wanted a school that would embody the ideals and aspirations of the youth, live up to the expectations of the people of a school for everybody, regardless of social standing, religion, political affiliations and one that imparts a higher level of understanding that enable students to be successful in their professional and personal endeavor.

Zamboanga A.E. Colleges was given ISO accreditation last December 2, 2002. It is the first ISO 9000: 2001 Certified Higher Education Institution in Western Mindanao. In 2010, the ISO accreditation was elevated to ISO 9001 : 2008 certification by Certification International (CI).

April 11, 2005 marks the glorious event of this institution as the Commission on Higher Education (CHED) central office granted its university status. The university was given a new name Universidad de Zamboanga.

Today, Universidad de Zamboanga boasts 7 campuses ISO 9001: 2008 certification, various Philippine Association of Colleges and Universities Commission on Accreditation (PACUCOA) recognitions and a medical center which serves not just as a hospital but an academic backbone for research in the field of medical sciences.

Participants: The respondents of the study were the 100 faculty members from the different curricular programs of the university who are currently employed with distinct position in the educational institution both for regular and part-time faculty members.

Instrumentation: The questionnaire was constructed based on different reading of books, from the review of related literature from materials taken from the different university libraries from the mandate memorandum no. 33 of the Commission on Higher Education (CHED) and through internet. The researcher also asked the suggestions and opinions of some experts and other education and business profession through interview and helped in the improvement of this study.

The sample questionnaire was submitted to the vice-president for external affairs and institutional development for initial comment and the final draft was submitted for approval and validation. The researcher presented the study for approval to the research council of the Commission on Higher Education Region IX and the study was commended. The distribution of questionnaires was personally distributed to the respondents. A cover letter and informed consent were also presented to the respondents to inform them that their participation is voluntary and responses were treated with confidentiality. The researcher briefly explained the purpose of the study and the content of the questionnaires in order for the respondents to answer it accurately.

The respondents were given sufficient time in answering the questionnaire. Their answers were retrieved and data were organized, analyzed and tabulated in accordance with the statistical device used in the study. Before the questionnaire was given to the respondents of the study, they underwent editing for language and grammar.

For interpretation of the answer to the questionnaire, the evaluation was used. For information on the utilization of technology in classroom for in-depth students learning, a continuum of 4 was used. The options were: strongly agree (4); agree (3); disagree (2) and strongly disagree (1).

For the levels of effectiveness of incorporating and integrating hands-on use of OBE courseware, a continuum of 4 was used as in a Likert scale. These were: very effective (4); effective (3); less effective (2) and not effective (1).

For the extent of use of curriculum materials that technology-enriched with authentic assessment to meet national and international standards, a continuum of 4 was used as in a Likert scale. These were: high extent (4); moderately extent (3); less extent (2) and no extent (1).

For the implementation unit of instructional plan accessible to learners, a continuum of 4 was used as in a Likert scale for collaborative arrangement institutional agreement, appropriate mechanism. These were: much favorable (4); favorable (3); less favorable (2) and unfavorable (1).

The researcher utilized both descriptive and inferential statistics to describe or tell stories about data. The statistical method was the weighted mean which was used to interpret verbally scores of the different items which was observed the following intervals in their interpretation within the text of the research report. To strengthen the data, a focus group discussion was utilized.

RESULTS AND DISCUSSION

The first research question that this study sought to answer is "What are the in-depth students learning in utilizing technology to the fullest in classroom teaching" as in Table 1.

Supplement to lectures or a resource necessary to complete assigned homework was considered to be the highest mean response of 3.35 which was interpreted as strongly agree while statement on as a platform for student report creation got the lowest mean response of 3.20 and interpreted as agree. This implies that through the use of the OBE courseware it prepares students to become well-versed in all endeavors and provides them the opportunity to experience quality and excellent education that would lead to employability. In connection with the findings, a Focus Group Discussion (FGD) was utilized by the researcher wherein it showed that majority of the responses from the participants indicate a strong importance on the utilization of technology which was incorporated in every subject taught by the teachers. Moreover, teachers also observed among the students that the integration of technology-based instruction in the learning process specifically by providing them with various learning materials which was also congruence on the results of the survey; thus creates a worthwhile, effective and of great help to facilitate the acquisition of the learning process.

The emergence of technology has made the world into a global village and has transformed teaching and learning processes. Technology integration into classroom instruction has gained much ground in both developed and developing countries. The concept of technology integration is now viewed as a fundamental part of successful teaching and has gained the interest of many researchers who investigated and explored effective ways of integrating technology into the school curriculum (Anderson and Maninger, 2007). Almekhlafi and Almeqdadi (2010) identified one overarching goal of technology integration: a school's ability to have a global learning environment with effective and appropriate use of technology in the classroom. Levin and Wadmany (2008) noted that educators are yet to effectively integrate educational technologies into K-12 classrooms that may assist in providing holistic technology interventions that would be highly effective in the learning environment.

The second research question that this study sought to answer is "What is the level of effectiveness of incorporating and integrating hands-on use of OBE courseware (such as internet, web page design, application software and multimedia software into unit plans)"?

Table 1: Utilization of technology in classroom teaching for in-depth students learning

Statements	Mean response	Verbal interpretation
Case studies, illustrate the design, development and/or failure of engineered devices/structures/systems	3.22	Agree
Tutorials to develop specific skills	3.30	Strongly agree
Laboratory "mentors" where the multimedia courseware serves as guide, stepping students through the various aspects	3.27	Strongly agree
Supplement to lectures or a resource necessary to complete assigned homework	3.35	Strongly agree
A major vehicle for dissemination of lectures, course materials and/or homework	3.32	Strongly agree
As a platform for student report creation	3.20	Strongly agree
Grand mean	3.28	Strongly agree

Table 2: Levels of effectiveness of incorporating and integrating hands-on use of OBE courseware

Statements	Mean response	Verbal interpretation
It improves learning	3.65	Very effective
It is interactive	3.54	Very effective
It is flexible	3.42	Very effective
It is practical	3.50	Very effective
It is consistent	3.32	Very effective
It is timely	3.47	Very effective
It is cost-effective	3.48	Very effective
Grand mean	3.48	Very effective

Academic programs incorporate and integrate hands-on use of OBE courseware such as internet, web page design, application software and multimedia software into unit plans really improved the learning of the students with the highest mean response of 3.65 and interpreted as very effective. The lowest mean response of 3.32 which was also interpreted as very effective was on its consistency. This means that upgrading and adding special facilities and technology to handle growing demand for multimedia and technology multimedia applications in all aspects of school planning and administration improves the learning of the students and it assesses the technological skills and competencies of both all Universidad de Zamboanga teachers and students. The results of the survey were also similar on the Focus Group Discussion (FGD) employed by the researcher wherein the results illustrated that those teachers in particular have assessed the student's learning at the end of the semester revealed that the incorporation of the courseware in the learning situation provides an avenue of increasing and improving knowledge of the students. It is important that the enhancement of such idea will contribute a lot and must continue to develop with more exposure on technology-based activities in Table 2.

The courseware was in no way meant to replace the hands-on experience, the instructor, the teaching assistants/coaches or student interaction. Nor was it meant to replace individual student thought, rational

deduction and creativity. Rather, it was meant to complement all of these components. The major consideration in the design of the courseware was to ensure its usability and effectiveness by people with different learning styles (Felder and Silverman, 1996). The courseware played a positive role in assisting learning, often providing a central focus for discussion and a "point-of-departure" to the other resources. It also provided the group with vocabulary and a systematic and organized framework for exploration of the various subsystems. Students seem to prefer a combination of multimedia-based and hardware-based learning.

The third research question that this study sought to answer is "What is the extent of use of OBE curriculum materials that technology-enriched with authentic assessment to meet national and international standards?"

Outcome-based education curriculum courseware indicated the continuing enrichment of curriculum materials that are technology-enriched with authentic assessment to meet national and international standards through media/web materials which include the links, e-Books, online materials that make use of large data bases, multi-media experiences or google classroom initiates has the highest mean response of 3.54 and interpreted as high extent as in Table 3. The traditional resources which include the textbooks and workbooks or manuals got the lowest mean response of 3.27 and interpreted also as high extent. This implies that maximizing and expanding the use of whatever existing technologies and resources in the school for effective planning, administration and meeting instructional needs are essential and extensive.

To support the results, a focus group discussion was also done among faculty members specifically on the instructional materials that they are utilizing in the classroom. Based from the results of the FGD, the number one resources that the teachers integrate in teaching the students are the use of web resources. In the 21st century of learning, teachers are equipped on the proper utilization of media resources and they know that adapting to this kind of resources helps them a lot specially in preparing daily lesson planning also to the student's learning as well. On the other hand, another theme was also demonstrated in the FGD where some teachers still go for the traditional use of teaching and using curricular materials.

Transformational OBE provides a relevant theoretical basis for designing curricula with learning goals that focus on what is "essential for all students to be able to do". Well defined educational visions, curriculum design

Table 3: Extent use of OBE curriculum materials that are technology-enriched with authentic assessment

Indicators	Mean response	Verbal interpretation
Traditional resources (textbooks and workbooks/manuals)	3.27	High extent
Teacher-made resources (lesson planning, hand-outs, worksheets, tests, quizzes, projects)	3.30	High extent
Still projected display material (three-dimensional materials)	3.50	High extent
Curriculum guides (course syllabus, prospectus of the programs)	3.48	High extent
Media/web materials (links, e-Books, online materials)	3.54	High extent
Grand mean	3.42	High extent

Table 4: Implementation unit of instructional plan accessible to learners

Indicators	Mean response	Verbal interpretation
Collaborative arrangements	3.57	Much favorable
Institutional agreements	3.54	Much favorable
Appropriate mechanism	3.68	Much favorable
Grand mean	3.60	Much favorable

and teacher preparation and support have been identified as key factors for successfully integrating technology in the classroom.

Global reform efforts that optimize technology use in all levels of teaching and the role of technology in teaching have dominated the discussions in many professional conferences and in education research literature (Reston, 2013).

The fourth research question that this study sought to answer is, "What is the implementation unit of instructional plan accessible to learners?"

The implementation of unit instructional plan accessible to learners through collaborative arrangements institutional agreements and appropriate mechanism were rated with grand mean of 3.60 and interpreted as much favorable. This means that OBE curriculum courseware development cultivate an atmosphere of academic competitiveness within and among schools and motivate students towards full development of their potentials in enhancing their knowledge while having fun in learning. The results were also supported on the Focus Group Discussion (FGD) used by the researcher to triangulate the results of the quantitative survey. Based on the results of the FGD, teachers in particular believe that with the strong support of the institution along with the other stakeholders, experts in the field of OBE and other trained professionals of the university can boost the effectiveness of OBE in the academic aspect of the institution to be able to meet the desired outcomes and produce well-versed and equipped professionals (Table 4).

Team planning allows teachers to collaboratively examine important issues and to develop a collective

approach to instruction (OP, 2012). Both the organization of time and the preparation of materials are components of the broader practice of planning carefully for instruction. Once the plans are developed, evidence suggests that effective teachers follow the instructional or lesson plan while continuously adjusting it to fit the needs of different students.

Translational research: Outcome-Based Education (OBE) and courseware development integration has a great impact to the students, teachers and the institutions. Students are able to do more challenging tasks other than memorize and reproduce what was taught. They are able to work in a team as a community or in entrepreneurial service teams to propose solutions to problems and market their solutions. While the teachers, they are able to execute their teaching strategies in a more creative, well planned and organized manner. They are able to adapt and update easily to the educational landscape. Instructional materials are more accessible to the teachers and less stress in teaching preparation. The institution is able to improve the academic programs, delivery system assessment methods and the graduates are of high quality. With OBE curriculum courseware, administrations and faculty members can work closely with students. Thus, it serves a note on curriculum alignment at all levels in Outcomes-Based Education (OBE) for seamless assessment and accountability of the outcomes of learning. And prepare students to be well rounded individuals capable of coping with the demands of the 21st century learning environment and entrepreneurial opportunities through the different school programs and continuous trainings with the support of its teachers, staff and stakeholders.

CONCLUSION

In light of the above findings of the study, the researcher concluded that there was sustainability indicators of this project and these were teachers and students strongly agree on utilize technology to the fullest in classroom teaching for in-depth students learning; academic programs incorporate and integrate hands-on use of internet, web page design, application

software and multimedia software into unit plans was very effective; continuing enrichment of curriculum materials that are technology-enriched with authentic assessment to meet national and international standards with high extent and the implementation of unit instructional plan was accessible to learners through collaborative arrangements institutional agreements and appropriate mechanism which was much favorable.

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