Outcome-Based Education Standards and Practices in Augustinian Schools in Negros

Melona Q. Guitche
La Consolacion College, Bacolod City Philippines
melonaqg.mg@gmail.com
https://orcid.org/0000-0003-2931-9683

Araceli C. Doromal
University of Negros Occidental-Recoletos, Bacolod City, Philippines
araceli.doromal@jbifmu.edu.ph

ABSTRACT

This study assessed the extent of implementation of OBE Standards and Practices in the Association of Schools of the Augustinian Sisters (ASAS) in Negros as assessed by students, teachers, and academic administrators using the survey questionnaire. The descriptive-comparative and correlational design were employed. Mean, ANOVA with Scheffe as Post-Hoc Test, and Pearson r were used to analyze the data collected. As a whole, the findings indicated a generally high extent of implementation of the standards. Students and teachers gauged it as high, while academic administrators as very high. The OBE Practices were very high. A significant difference in the implementation of OBE Standards and Practices and significant relationship were noted. A conceptual model of quality assurance framework for continuous improvement programs on curriculum development was designed. The results signify that outcomes have been established, and the curriculum was designed to address the knowledge, skills, and attitude they need to demonstrate the established outcomes.

Keywords: Outcome-Based Education, Outcomes, Standards, Practices, Descriptive-Comparative, Correlational Design, Philippines

1.0. Introduction

Higher Education Institutions (HEIs) in the Philippines are implementing OBE as one of the innovations in the educational system. The curricular offerings are
updated to international standards to prepare the graduates to face the challenges of the 21st century and to address the demands of the workplace in terms of knowledge, skills, and attitudes. In the Outcome-based education curriculum, the students should manifest upon completion of their program the established exit learning outcomes. As a process, teaching and learning are driven by the outcomes (Davis, 2003 & Caguimbal, et al., 2013). Like what Javier (2012) emphasized that the educational institution has to carry out the services necessary to attain the outcomes identified. It means that educators should design a curriculum to give students the knowledge, skills, and attitude they need to demonstrate them. In other words, the curriculum prepares the graduates to demonstrate the core competencies expected of them in the field of work (Valdez, 2010).

Thus, OBE is rejecting teacher-centered delivery and is promoting a learner-centered model that emphasizes learning as an active process (Chabeli, 2006). The profound change is reverberating with the theory of constructive alignment.

The studies of Llanes 2014; De Guzman et al., 2017 in the Philippines discussed the experiences of entire higher education institutions (HEI) on OBE, while some studies focused on the application of OBE to specific subjects such as engineering conducted by Borsoto et al., 2014; Laguador and Dotong 2014 and industrial psychology by Espiritu and Budhrani 2015. A common finding in these studies reveals a positive initial experience with OBE, though problems, such as the lack of knowledge of the nuances of its operations, remain.

The Association of Schools of the Augustinian Sisters of Our Lady of Consolation in Negros (ASAS), as one of the Higher Education Institutions in the country, must adhere to and comply with the regulatory body, specifically on CHED Memorandum Order (CMO) No. 46, Series of 2012. Since there was no specific study conducted to measure the implementation of OBE among ASAS schools, the present study explored on the OBE standards and practices to determine whether these are practiced and executed by the members of the academic community. The students’ direct experience on how OBE standards and practices were implemented creates a better assessment of the implementation. Through their feedback and perception, the school may gain information on the effectiveness of the OBE system. While the teachers and administrators’ assessment on the implementation of OBE provides picture of how the outcomes of the curricular programs are implemented and demonstrated by the graduates when they will be in the real world of work or employment. Through this survey, the sentiments and perceptions of its main implementers (i.e., the faculty members and administrators) are determined so as to address any problem and ensure the success of its implementation.

Furthermore, this study determines whether there is a significant difference existed between the extent of implementation of OBE Standards and Practices as assessed by the respondents. Finally, it examined if there is a relationship between OBE standards and practices.
2.0. Framework of the Study

The present study postulated that if the extent of implementation in all OBE standards and the practices are very high and consistently high in all areas, that means the school’s OBE system adhered to the constructive alignment theory which states that the intended learning outcomes (ILOs) specified in three levels such as institutional level, degree program level, and course level; the teaching and learning activities (TLAs), and the assessment tasks (ATs) are aligned with one another (Biggs, 2003; Biggs & Tang 2007, 2011). Therefore, determining the extent of implementation of OBE standards and practices would ascertain the extent of alignment of the ILOs, OBTLAs, and ATs. Biggs and Tang (2007) conceptualized the ‘constructive alignment’ as a learning environment that supports the learning activities towards achieving the intended outcomes.

This study is anchored on the premises of the principles and characteristics of a fully operational outcome-based school advocated by William Spady through the Network of Outcome-Based Schools (1992). According to him, OBE is a way of designing, developing, delivering, and documenting instruction in terms of its intended goals and outcomes. OBE focuses on the educational practices that ensure students’ mastery of those outcomes, and it asserts that all students can succeed.

These principles include mission statement that reflects staff commitment to achieving learning success for all students on exit outcomes by implementing conditions and strategies in classrooms that maximize all students’ opportunities with a special focus on a transformational mastery learning organizational framework; a clearly defined, publicly derived exit outcomes that directly reflect the knowledge and competencies, and orientations that all students must successfully demonstrate before they leave school. Also, a tightly articulated curriculum development that includes the Program, Course, and Unit Outcomes in the curriculum framework; integrates knowledge, competencies, and values across domains of learning; and directly facilitates the Exit Outcomes must be looked into.

The best OBE schools focus on life-role competencies as their intended outcomes. Killen (2000), emphasized that some outcomes are expected to be demonstrated at a course level or subject-related academic outcomes, and some are at the program and institutional levels, which are cross-discipline outcomes.

Furthermore, a system of instructional decision-making and delivery that consistently assures successful demonstration of all Unit, Course, and Program Outcomes for all students; employs a rich diversity of methods and strategies generally organized in a transformational mastery learning framework that encourages all students to be successful; and deliberately provides more than one uniform, routine chance for students, even after regular reporting periods and semesters have ended.

According to Custodio et al., (2017) faculty and students declared that OBE had facilitated the acquisition of relevant subject knowledge, the enhancement of critical thinking and problem-solving skills and the development of moral and professional ethics.

Moreover, a criterion-based consistently applied system of assessments, performance standards, and student credentialing, tightly aligned with Exit, Program, Course, and Learning Outcomes. Assessment that generates an intrinsic motivation in students to attain high-performance levels on everything they pursue enables students...
to demonstrate and receive full credit for improved learning on a timely basis before graduation and prevents and avoids undesirable comparison among students.

Bresciani et al., (2012) emphasized that the kind of assessment used in OBE schools when implemented appropriately may provide educators with the feedback about the progress of students and the results would inform the teachers of the effectiveness of their teaching methodologies and approaches. Furthermore, the assessment results are used as bases to improve educational services and systems on an institutional level.

A system of instructional organization and delivery that enables students to advance through the curriculum whenever they can demonstrate successful performance on the learning prerequisites for new units or courses; and meet those eligibility criteria promptly through a mastery learning framework. Seventh, there is a system that recognizes the power of organizational culture on student and staff development and establishes a climate that enables all students and staff to perform at high-quality levels.

Killen (2000) suggests that for successful learning to happen teachers must use a variety of instructional methods, both direct and student-centered; provide a variety of opportunities for students to practice new knowledge, and help students bring each learning episode to personal closure to show them where this new knowledge will lead.

An on-going system of program improvement that expands staff vision of potential goals and modes of operation; staff accountability for the results of their decision and practices; staff capacities for effective leadership, performance, renewal, and change; and structures that both encourage staff collaboration as well as support effective and responsive program implementation must be taken into consideration. Lastly, an effective database of course and unit outcomes for all students and other key indicators of school effectiveness that is used and updated regularly to improve the conditions and practices that affect student and staff success must be fully emphasized.

The present study looked into the diverse perspectives of the members of the academic community on the implementation of OBE standards and practices. Thus, a proposed OBE QAFCIP for ASAS Negros may be advanced which may necessitate that components in the OBE system are supported by a continuous quality improvement program wherein the quality assurance processes must be integrated.

3.0. Methods

This study utilized descriptive-comparative and correlational research design. The descriptive design is used to provide relevant information about the observations, perceptions, and attitudes of the members of the academic community on the extent of implementation of OBE standards and practices as they naturally occur in school.

The respondents of the study were the 629 students selected using a proportionate stratified random sampling technique and the population of 130 teachers, and 33 academic administrators of the college department among ASAS Negros. The modified survey questionnaire form developed and validated by the Board of Directors of the Network for Outcome-based Schools (1992) was used to gather the data. The researcher deemed the survey relevant to the present study due to the fact
that the Network’s Board of Directors includes many of the individuals who have been responsible for the development of OBE, including: William Spady who is consider the father of OBE. The Network has continually refined and published standards of OBE (Network for Outcome-Based Schools). This set of nine standards provided the framework for the survey instrument.

To measure the quality of instruments, the questionnaire was subjected to a pilot-test to thirty (30) teachers/administrators and thirty (30) students from two HEIs in the locality which implemented the OBE approach. The students’ questionnaire assesses the teachers’ and administrators’ OBE standards and practices implementation, while for teachers’ and administrators measure their self-assessment on the extent of their implementation of OBE standards and practices. The investigation relied on self-reporting of attitudes and practices and was based primarily on the perceptions of students, teachers, and administrators in the extent of OBE implementation. No attempt was made to confirm whether responses were consistent with the actual teacher’s behavior or student’s achievement data.

To confirm the reliability of the students’ questionnaire, Cronbach’s alpha was used to establish the reliability index. All items in the questionnaire are highly reliable. The researcher personally administered and collected the questionnaire from the students, teachers, and academic administrators in each school. The gathering of the data was approved by the regional general through the school presidents and deans of three schools. After which, the data were collated, tabulated, transcribed (for the narrative part), analyzed using the appropriate statistical tools.

The descriptive research question which was to determine the extent of implementation of the OBE Standards and Practices, the Mean was used. For comparative inferential problems, a one-way analysis of variance (ANOVA) test with, Scheffe as Post-Hoc test was used to determine the significant difference in the extent of implementation of OBE Standards and OBE Practices. For correlational inferential problem, Pearson Product Moment Correlation (Pearson r) was used to determine the significant relationship between the assessment of the respondents on the extent of implementation of OBE Standards and Practices.

4.0. Results and Discussion

The Extent of Implementation of OBE Standards

Table 1 introduces the weighted mean scores and the verbal interpretation in the extent of implementation of nine OBE standards as assessed by the members of the academic community. The extent of implementation of OBE standards in Schools A and B as assessed by the members of the academic community as a whole was high, while the school C as a whole reveals a very high extent. The result signifies that the teachers and administrators have executed and practiced the standards often with complete and substantial pieces of evidence. The schools made sure that the program and course outcomes are aligned with its vision-mission and educational objectives. This affirmed by Tucker (2004) who emphasized the need to accordingly align all aspects of educational processes and systems to the expected outcomes that all students should be able to exhibit at the end of the curriculum proficiently, and the outcomes should
not be viewed synonymously with grades or simply curricular completion, but rather authentic demonstrations of expected competencies as a result of significant learning experiences.

### Table 1. The Extent of Implementation of OBE Standards

| Variables                  | WM  | Description       | Interpretation |
|----------------------------|-----|-------------------|----------------|
| School A (n=424)           |     |                   |                |
| Students                   | 3.87| High Extent       | Oftentimes     |
| Teachers                   | 4.14| High Extent       | Oftentimes     |
| Academic Administrators    | 4.66| Very High Extent  | At all times   |
| As a Whole                 | 3.96| High Extent       | Oftentimes     |
| School B (n=214)           |     |                   |                |
| Students                   | 4.15| High Extent       | Oftentimes     |
| Teachers                   | 4.17| High Extent       | Oftentimes     |
| Academic Administrators    | 4.30| Very High Extent  | At all times   |
| As a Whole                 | 4.16| High Extent       | Oftentimes     |
| School C (n=154)           |     |                   |                |
| Students                   | 4.23| Very High Extent  | At all times   |
| Teachers                   | 4.48| Very High Extent  | At all times   |
| Academic Administrators    | 4.40| Very High Extent  | At all times   |
| As a Whole                 | 4.26| Very High Extent  | At all times   |

The Extent of Implementation of OBE Practices

The extent of implementation of OBE Practices in School A as a whole (M=4.04) was high, while in School B (M=4.23) and School C (M=4.42) revealed a very high extent of implementation. The findings of the study suggest that when grouped according to their classification, respondents did not differ in terms of their expectations, experiences, and observations as to the implementation of OBE standards. Furthermore, this can be attributed to the geographical location of the school. The school in the rural area has no competitors, and there are no other institutions or industries with which they can benchmark.

With OBE, administration and faculty members can work closely with students. This implies the wide and strong implementation of OBE in terms of standards by faculty members and the environment by administrators can be achieved by working hand-in-hand to deliver to the students the ultimate usefulness of OBE in academic performance, attitudinal change, and providing instruction (Caguimbal et al., 2013).

Also, students’ experiences in the courses are the actual reflection of the changes that have been implemented (Yusof et al., 2014). Thus, collaborative efforts from administrators, educators, parent, teachers, and students should be sought to assure a successful planning and efficacious implementation of the OBE program as well as to guarantee commitment and decrease resistance (Chan, 2009).

When all the members of the academic community were taken as a whole, the results show that the students (M= 4.12; n=629) perceive the implementation of OBE practices as carried out to a high extent, while the teachers (M=4.29; n=130) and academic administrators (M=4.50; n=33) think that the practices were done to a very high extent. When all the respondents were taken collectively, the overall mean (M= 4.17; n=792) is interpreted as high extent of implementation.
The Extent of Implementa
tion and decrease resistance (Chan, 2009).

Effective implementation of the OBE program as well as to guarantee commitment and

differences in the respondents' assessment on the extent of implementation. This shows that OBE practices have been executed and practiced by the members of the academic community to accomplish the program, course, mission, and educational goals and objectives so that graduates can master and demonstrate an acceptable level of knowledge, skills, and attitude demanded by their different fields of practice. The shift towards the implementation of OBE requires consistency across desired outcomes. It should consider the aspects which will make OBE very relevant to the teaching and learning reform. First, the focus on the desired outcomes to which the educational system such as curriculum, resources, facilities, curricular and co-curricular activities are aligned to it; second, the curriculum design process, which starts with the exit level outcomes; and the third, the responsibility of the institution and the teacher to supply appropriate learning experiences for the success of all students (Macayan, 2017). Thus, the focus of OBE is more on the results or products of education, rather than on the content and curricular processes (Morcke et al., 2012).

**Difference in the Extent of Implementation of OBE Standards**

Table 3 shows the ANOVA test in School A reveals that there was a significant difference in the respondents' assessment on the extent of implementation. This can be attributed to the functions of the academic members. The administrators perceived that they have a very high extent of implementation as compared to teachers and students. According to Borsoto et al. (2014) due to training, seminars and conferences, administrators are exposed to the principles and premises of OBE implementation, and most of the administrators are aware of the program and practices of Outcome-based Education.

Furthermore, the faculty and students should attend seminars and training that will gain knowledge for the implementation of OBE to easily develop action for its effective implementation. Thus, collaborative efforts from administrators, educators, parent, teachers, and students should be sought to assure a successful planning and efficacious implementation of the OBE program as well as to guarantee commitment and decrease resistance (Chan, 2009).

| Schools    | Administrators Mean | Teachers Mean | Students Mean | Total Mean |
|------------|---------------------|---------------|---------------|------------|
| School A   | 4.66                | 4.27          | 3.94          | 4.04       |
| School B   | 4.33                | 4.31          | 4.21          | 4.23       |
| School C   | 4.28                | 4.40          | 4.42          | 4.42       |
| As a Whole | 4.50                | 4.29          | 4.12          | 4.17       |

This means that OBE practices have been executed and practiced by the members of the academic community to accomplish the program, course, mission, and educational goals and objectives so that graduates can master and demonstrate an acceptable level of knowledge, skills, and attitude demanded by their different fields of practice. The shift towards the implementation of OBE requires consistency across desired outcomes. It should consider the aspects which will make OBE very relevant to the teaching and learning reform. First, the focus on the desired outcomes to which the educational system such as curriculum, resources, facilities, curricular and co-curricular activities are aligned to it; second, the curriculum design process, which starts with the exit level outcomes; and the third, the responsibility of the institution and the teacher to supply appropriate learning experiences for the success of all students (Macayan, 2017). Thus, the focus of OBE is more on the results or products of education, rather than on the content and curricular processes (Morcke et al., 2012).
Table 3. Difference in the Extent of Implementation of OBE Standards

| Schools  | n  | Mean | df | $F$  | p-value |
|----------|----|------|----|------|---------|
| School A |    |      |    |      |         |
| Administrators | 18 | 4.66 |    |      |         |
| Teachers   | 92 | 4.14 | 423| 13.342| .000    |
| Students   | 314| 3.87 |    |      |         |
| School B  |    |      |    |      |         |
| Teachers   | 24 | 4.17 | 213| 0.352| 0.704   |
| Students   | 179| 4.30 |    |      |         |
| School C  |    |      |    |      |         |
| Teachers   | 14 | 4.48 | 153| 1.478| 0.231   |
| Students   | 136| 4.23 |    |      |         |

However, Schools B and C results of ANOVA test revealed no significant difference in the mean scores across respondents’ classification. This means that regardless of the respondents’ classification, all members of the academic community in these schools have implemented OBE standards in the same way. The findings of the study suggest that the respondents did not differ in terms of their expectations, experiences, and observations as to the implementation of OBE standards. Kaliannan and Chandran (2012) state that all parties concerned - students, lecturers, administrators, and the school-university decision-makers should cooperate and work as a team in realizing the OBE objectives.

**Difference in the Classifications and Assessment of the Extent of Implementation of OBE Practices**

The ANOVA results in Table 4 revealed that there was a significant difference in all pairs, except teachers’ and administrators’ groups in School A. Scheffe post hoc test shows that significant difference existed between administrators and students and students and teachers. This implied that teachers and academic administrators observed that they have a higher level of OBE practices implementation opposite to students’ perception.

For Schools B and C, ANOVA results showed that there was no significant difference in the assessment of the respondents. This implied that there is homogeneity in the assessment in the extent of implementation of practices among the members of the academic community and their perceptions do not differ. This present study attempted to use the perceptions and observations of students, teachers, and administrators as a measure of the paradigm shift from the traditional approach to the OBE system.
Table 4. Difference in the Extent of Implementation of OBE Practices

| Schools  | n  | Mean | df  | F    | p-value |
|----------|----|------|-----|------|---------|
| School A |    |      |     |      |         |
| Administrators | 18 | 4.66 |     |      |         |
| Teachers   | 92 | 4.27 | 423 | 15.67| .000    |
| Students   | 314| 3.94 |     |      |         |
| School B  |    |      |     |      |         |
| Teachers   | 24 | 4.31 | 213 | .516 | .598    |
| Students   | 179| 4.33 |     |      |         |
| School C  |    |      |     |      |         |
| Teachers   | 14 | 4.40 | 153 | .229 | .796    |
| Students   | 136| 4.42 |     |      |         |

** Note: Scheffe Post Hoc test show that significant differences lie between administrators (M=4.66) and students (M=3.94) and students and teachers (M=4.27)

Relationship between Respondents’ Assessment and Implementation of OBE Standards and OBE Practices

The results of the Pearson Product Moment Correlation test for the relationship in Table 5 reveal that there was a significant relationship in the respondents’ assessment in the extent of implementation of OBE standards and practices, which means to say that the standards are implemented and are practiced. There is an alignment of practices along with the standards. Those practices indicate the course of actions the schools have established to make sure students have mastery of the competencies and can demonstration of the outcomes.

Table 5. Relationship between Implementation of OBE Standards and Practices

| Schools  | n  | Mean | r    | p-value |
|----------|----|------|------|---------|
| School A |    |      |      |         |
| Standards| 424| 3.96 | .879 | .000    |
| Practices| 424| 4.04 |      |         |
| School B |    |      |      |         |
| Standards| 214| 4.16 | .821 | .000    |
| Practices| 214| 4.23 |      |         |
| School C |    |      |      |         |
| Standards| 154| 4.26 | .620 | .000    |
| Practices| 154| 4.42 |      |         |

Note: Significant @ 0.05 alpha

Responding to the changing landscape of education in the Philippines, ASAS Negros assumes an approach to delivering and assessing learning that advocates the pedagogical principle of student-centered instruction – placing the student at the center of the process. In OBE paradigm, the teachers are not just...
experts in giving theoretical inputs, but they are adept facilitators of learning. In playing their role as facilitators, they help students construct knowledge through experience, discussions, reflections, field studies, immersions and other learning processes that promote higher-order thinking skills and sound attitudes and dispositions. Thus, the OBE curriculum reverberates the truth in constructive alignment principle.

| Problems and Challenges’ | f  | %  |
|--------------------------|----|----|
| 1 Too much workload expected from the students and the number of units in a semester affects the performances of the students resulting to cramming, too much workload brought home, sleep deprived and poor performance in school | 23 | 30.67 |
| 2 Giving of irrelevant outputs to students | 19 | 25.33 |
| 3 Interruption of classes due to holidays and school activities that hinder the achievement of the outcomes | 13 | 17.33 |
| 4 Lack of instructional materials and references (latest editions) | 10 | 13.33 |
| 5 Lack of time and resources to implement performance assessment and to ensure mastery and attainment of outcomes | 10 | 13.33 |
| **Total** | **75** | **100** |

However, it cannot be denied that the respondents encountered challenges in the implementation. Bresciani et al., (2004), Bresciani (2006), and Suskie (2004) indicated that the reasons that outcome-based assessment is not pervasively practiced due to factors such as time; resources, like the cost of providing professional development to faculty and administrators for them to learn how to engage in quality outcomes-based assessment; and understanding of assessment. Table 6 reveals the problems and challenges experienced by the respondents.

5.0. Conclusion

The findings of the study proved the incessant quest of this ASAS Negros for novel approaches and more meaningful practices in education that got them to welcome OBE and appreciate what it can do to equip and to prepare the students to actualize their potentials, overcome their limitations, maximize opportunities, and deal with threats. Because education is life, it is about time that modern-day students are trained not only to memorize facts and capitalize on knowledge, but also to focus on acquiring skills, competencies, and values required by industries, also imbibing values and letting grow attitudes that could make them become better persons for others and engage in initiatives to transform society.

In general, the members of the academic community have the consciousness of the institutions’ direction towards the attainment of the outcomes. It can be deduced that students have perceived that OBE standards and practices that reflect the exit
outcomes were often experienced by them. Furthermore, the extent of implementation of OBE practices is directly related to the extent of implementation of OBE standards. Although the implementation was high, challenges and problems such as too much workload expected from the students and the number of units in a semester affects the performances of the students resulting in cramming, too much workload brought home, sleep deprived and poor performance in school, teachers are giving of irrelevant outputs to students, interruption of classes due to holidays and school activities that hinder the achievement of the outcomes, lack of instructional materials and references (latest editions), lack of time and resources to implement performance assessment and to ensure mastery and attainment of outcomes, remain. These problems and challenges imply that there is a need for continuous improvement program to monitor and sustain the efforts to ensure success and sustainability of its implementation.

The findings of the study implied that OBE standards and practices had been implemented to accomplish the schools’ vision-mission, educational philosophy, goals, and objectives, degree program outcomes and course outcomes and so that graduates can master and demonstrate an acceptable level of knowledge, skills, and attitude demanded by their different fields of practice. Also, the outcomes have been established, and the curriculum was designed to give students the knowledge, skills, and attitude they need to demonstrate the established outcomes.

REFERENCES

Bresciani, M. J. (2006). Outcomes-based academic and co-curricular program review: A compilation of institutional good practices. Sterling, VA: Stylus Publications.

Bresciani, M.J, Gardner, M & Hickmott (2009). Outcomes Assessment in Student Affairs -UC San Diego Student Affairs. Retrieved from https://vcsa.ucsd.edu/_files/assessment/2010

Biggs J. & Tang C., (2007). Teaching for quality learning at university. (3rd ed.) Berkshire, England: McGraw-Hill, Date retrieved: August 5, 2014.

Biggs, J. & Tang, C. (2011). Teaching for Quality Learning at University (4th ed.). Berkshire McGraw Hill, Open University Press.

Biggs J. &Tang C., (2010). Teaching for Quality Learning at University. 4th edition. Berkshire, England: McGraw-Hill, Date retrieved: August 5, 2014

Borsoto, L, Lescano, J, Santorce, MJ, Simbulan, A, & Pagcaliwagan, A. (2014). Status of implementation and usefulness of outcomes-based education in the engineering department of an Asian university

Caguimbal, D. A., Delacion, D. C., Medina, A.O., Mendoza, M. S., Mendoza, R. J.M., Sanchez, M. M. (2013). Level of Awareness of the Maritime Students onthe Outcomes Based Education, Educational Research International, 2(1):7-12

Chan, A. (2009). A new outcome-based curriculum: its impact on student core competence, Journal of Applied Research in Higher Education, 1(2), 24 – 32.
Davis, M. H. (2003). Outcome-Based Education, Educational Strategies, International Journal of Educational Development. (2009). Retrieved from http://www.utpjournals.com

DuFour, R., DuFour, R., & Eaker, R. (2008). Revisiting professional learning communities at work: New insights for improving schools. Bloomington, IN: Solution Tree.

Hoffman, T.G, (1996). An examination of outcome-based education practices, standards, and factors that enhance implementation of OBE, available online: http://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=12112&context

Kaliannan, M., & Chandran, S. D. (2012). Empowering students through outcome-based education (OBE). Research in Education, 87(1), 50-63.

Killen, R. (2000). Outcomes-based education: Principles and possibilities. University of Newcastle, Faculty of Education, 1-24. Retrieved from http://drjj.uitm.edu.my/DRJJ/OBEFSG Dec07/2-Killen_paper_good- kena baca.pdf

Morke, A.M., & Erika, B. (2009). Medical faculty and curriculum design? No, no, it’s like this: You give your lectures...” Medical Teacher, 31(7), 642-648

Spady, W.G. (1994). Outcomes-based education: critical issues and answers. Arlington, VA: American Association of School Administrators.

Spady, W. (1998). Paradigm lost: Reclaiming America’s educational future, American Association of School Administrators, Arlington, VA

Suskie, L. (2004). Assessing student learning: A common sense guide (2nd edition). San Francisco: Jossey - Bass.

Tam, M. (2014). Outcomes-based approach to quality assessment and curriculum improvement in higher education. Quality Assurance in Education, 22(2). Retrieved from http://wwwemeraldinsight.com.mylibrary.qu.edu.qa/journals.htm

Tucker, B. (2004). Literature Review: Outcomes-focused Education in Universities. Learning Support Network, Curtin University of Technology.

Valdez, A.P. (2010). Competencies of Career-Entry Medical Technology Graduates of Lyceum of Batangas: Basis for Enhancement of the Internship Training Program, International Journal of Multi disciplinary Research, 4(1): 16-33.