



Faculty Attitudes on Outcomes-Based Education Implementation in Lao Higher Education Institutions: A Case Study of Social Science Programs

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Abstract

The development of a higher education curriculum integrated with the regional and international curriculum development framework to facilitate student mobility, credit transfer, and the requirements of the local labor market for academics with knowledge, ability, and skills in their specific field had become a necessary issue to transform from traditional education to outcomes-based education at the higher education in Laos. Thus, the objective of this study is to investigate the attitude of faculty toward OBE implementation at higher education institutions in Laos. The authors employed a quantitative approach to collect data, and the questionnaire was responded by 283 faculty members. The findings showed that 73% of the instructor strongly agree and agree with the OBE approach and results revealed that faculty members' attitude toward OBE approach with the mean score of 3.90 to the test value of 4, it also found that instructors' acceptance of OBE is the highest ($Ac = 4.05$) and their knowledge is the lowest ($Kn = 3.63$). The teaching experiences and OBE training were significant impact on faculty members' attitude toward OBE implementation. However, the findings of this study also revealed that a number of instructors still have a less-than-ideal attitude toward OBE implementation.

Keywords: Outcomes-based education (OBE), faculty members' attitude, implementation, Social Sciences, Lao higher education institutions

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1. Introduction

Higher education is increasingly expected to produce graduates who have the competent skills and capabilities that are compatible with labor market and social requirements, in addition to academics and theory. The conventional curricula that focused on theoretical concepts and pedagogical techniques through formal content-based delivery have been criticized for their students who graduate and lack these crucial skills in the early stages of their professional careers (Inthasone & Sounthone, 2020; MOES, 2011). Outcomes-Based Education (OBE), which is a reformed idea to renew universities through student-centric learning emphasizing specific learning outcomes, has become one of the attractive reform measures. A common definition of OBE is that it is an education system that places emphasis on curriculum design, teaching, and assessment based on the abilities that students are to acquire when their course ends (Spady, 1994). OBE is centered on learning results that are quantifiable and reveal students' mastery of the skills and knowledge and the essential capabilities they are acquiring. A related supportive principle is constructive alignment, which was conceptualized by Biggs (1996). It is about the idea that one should keep consistency between what students are expected to accomplish, teaching activities,

and assessment strategies. Furthermore, OBE was conceptualized by Harden et al., in a different way that can be related. According to Harden et al., (1999), backward design is an education system which commences with graduate attributes and learning outcomes before designing what to teach and how to assess. The two approaches indicate that OBE requires educational institutions to make a holistic transformation of their systems which include how they teach. Studies show that OBE implementation faces various challenges because its adoption in policy documents did not result in the same success rate when it came to implementation. The success will depend on teachers and faculty members who understand new teaching approaches because they will implement them in their classroom activities (Cheung & Man Wong, 2012). These implementers are crucial because they are responsible for translating policy at an official level into educational decisions which influence classroom teaching and evaluation strategies. The success of OBE implementation, therefore, will rest on how teachers feel about this new method since their perception and emotions, preparedness, and willingness to support the change will determine if it will continue to be implemented (Baguio, 2019; Ortega-Dela Cruz & Ann Ortega, 2016). The evidence from previous studies shows that teachers have a positive attitude towards OBE. But, the system still

experiences challenges since students may not understand it well and teachers experience more work, and there is a lack of clarity about how to evaluate OBE learning outcomes (Katawazai, 2021). OBE is implemented in education institutions difficultly since teachers have inadequate training that makes them have a superficial view of the OBE principles which results in them not fully supporting its implementation (Jansen, 1998; Mogashoa, 2013).

The use of the top-down approach in policy implementation experiences its biggest challenge when universities wish to expand their activities and change their educational curricula. One suitable context for the study of these issues is Lao People's Democratic Republic (Lao PDR). New national curriculum standards were enacted by the Ministry of Education and Sports (MOES) in 2020 for higher education programs to meet labor market needs and to promote economic integration among ASEAN members. The institutions are operating under an OBE-oriented paradigm that requires the definition of learning results and clearly articulate them in a scope that spans four domains which consist of knowledge and abilities and psychomotor or practical skills and social or socio-behavioral skills (MOES, 2020). OBE was supported by Lao National Qualification Framework (LNQF), which has led to outcome-based curriculum alignment reforms across higher education programs in the Lao PDR (PMO, 2021). Implementation of OBE is still at the early stages because social science programs like other disciplines have not yet finished their curricula re-design processes. Further, the majority of OBE empirical investigations have been done in engineering and other technical disciplines, with the social science programs, which are characterized by a variety of epistemological norms and assessment processes, receiving less attention (Katawazai, 2021).

The present study is focused on discovering faculty perceptions of OBE in social science disciplines across different Lao PDR higher education institutions. The research examines five components that represent faculty attitudes through their understanding and knowledge and their beliefs, feelings, readiness and their willingness to adopt OBE. It also tries to establish if teaching experience and participation in OBE related trainings are related to any differences in these areas. The research will provide essential information which will be useful for policy development and faculty development across Lao universities. The study will also contribute new evidence on OBE implementation to the existing body of literature. Thus, the aims of this study are to find out what are the faculty members' attitudes toward OBE implementation in social science education? which attitude component do faculty members agree the most and the least toward OBE approach? And How teaching experience and OBE training affect faculty members' attitude of OBE implementation?

2. Research Methodology

The research employs a quantitative, cross-sectional survey design to capture faculty members' opinions about the OBE implementation in higher education institution (HEI)-based social science programs in Laos. The research design using a quantitative method is most appropriate to assess attitudinal aspects in an organized way and to analyze how they differ across faculty characteristics. In this design, the research team examines survey data of participants who answered their standardized questionnaire at one point in time. The data collected through the research method can help researchers establish if there are shared attitudes and perceptions among the respondents as they are also able to analyze how related factors such as involvement in OBE-related trainings and teaching experience influence faculty members' attitudes.

2.1 Research instrument

The research employs a standardized questionnaire to solicit data from research participants. The instrument has 26 items, which captures faculty members' opinions regarding the use of OBE in HEIs. These items are categorized into five attitudinal dimensions: knowledge, beliefs, sentiments, preparedness, and acceptance of the OBE approach. The five dimensions used in the study were pre-validated by researchers in their works (Baguio, 2019; Loreto, 2018; Ortega-Dela Cruz & Ann Ortega, 2016; Katawazai, 2021; Chowdhury & Das, 2022).

The survey also uses a five-point Likert scale where the respondents can choose their answers between 1 "strongly disagree" and 5 "strongly agree" for each item. The higher the ratings are, the more positive the attitudes are. The questionnaire's items were reviewed before the survey period to ensure they are clear and relevant in the context and consistent with the OBE policy setting in higher education in Laos.

2.2 Sample and study site

Nine higher education institutions such as National University of Laos, Souphanouvong University, Savannakhet University, Champasack University, Institute of Finance- Accounting, Banking Institute, National Institute of Justice, Rattana Institute of Business Administration, Soutsaka Institute of Technology, were selected based on specific criteria such they adapted to OBE, have had a social science programs in business management, finance, accounting, English and Law. The participants are faculty members who is teaching in the field of social science in these Higher Education Institutions. The research team sent out over 300 survey sets, and 283 valid responses are received for the final analysis.

2.3 Data collective procedures

The research team obtained formal authorization to commence their data gathering work. The official request was initially presented by the researchers to Laos'

Department of Higher Education (DHE), which falls under the Ministry of Education and Sports. The DHE, upon approval, forwarded the letters of permission to the HEIs that were involved in data collection.

Upon obtaining institutional authorizations, the research team visited each HEI and distributed the questionnaires to the faculty members in person. The researchers distributed questionnaires to the participants for two main reasons: to ensure a higher response rate and to enable the study participants to seek clarifications on the survey items. The research participants were informed about the academic nature of the study and were also given the opportunity to participate or not in the survey without any obligation.

2.4 Data analysis procedures

Data analysis and coding are done using a software package called IBM SPSS Statistics version 27. The process of analysis was multistage. The dataset underwent an initial evaluation to ensure its data quality. This was through checking for inconsistent entries, unusual values, and data missing points. The researchers carried out a descriptive statistical analysis of faculty member attitudes toward OBE implementation through calculating mean values and standard deviations, as well as computing frequency and percentages of the five dimensions.

The research evaluated the scale's internal consistency for the attitude measures through an assessment of its reliability. The research used Cronbach's alpha coefficients in the computation of the values for analysis. The research used inferential statistical procedures to address its study problems. The researchers ran one-sample t-tests to benchmark against the value of 4 the mean attitude scores, which were used to measure the agreement with claims about OBE. The differences in the five attitudinal components were assessed through the use of paired-sample t-tests. The researchers also conducted an analysis of variance (ANOVA) to find out if teaching experience and OBE training participation were associated with statistically significant differences in faculty attitudes about OBE implementation.

3. Study results

3.1 Respondents' demographic information

The demographic information of all participants in the survey is presented in Appendix A1. Compared to the number of male and female instructors accounts for 54% and 46%, respectively. Concerning the time instructors have spent teaching, it is evident that 40% of instructors have 11-25 years of teaching experience, 33% have 6-10 years of teaching experience, 14% have more than 26 years of teaching experience and 13% have 1-5 years of teaching experience. Regarding the number of times that instructors attended OBE training in the past, 46% of them attended OBE training once. In comparison, 33.2% faculties attended OBE training twice, 12.4% of them did not participate in OBE training, 7.1% attended OBE training 3-

5 times, and very few (1.1%) attended more than 6 times.

3.2 Reliability testing and descriptive statistics

The summary statistics of faculty members' attitude toward OBE approach are displayed in Appendix A2, the main analysis consists of five indicators, and a total of 26 items, including the mean, standard error, variance, range, number of observations, minimum value, and maximum value. These indicators will be used in the empirical analysis. The range of possible for the means is from 3.63 to 4.05. Both the calculated standard error and variance fall within reasonable bounds. Within this dataset of 283 observations, the scale ranges from 1 to 5. The Cronbach's alpha coefficient test is frequently carried out to ensure that the Likert-scale indicators that are utilized in the empirical analyses have the internal consistency (Chowdhury & Das, 2022). As a result of the Cronbach alpha coefficient testing, it is probable that all of the values of the Cronbach alpha coefficient testing are 0.90 on average. This is a number that is greater than 0.70, which is considered to be the critical value. These average values indicate that all of the variables that were utilized for the data analysis have internal consistency, the details in Table 1 Summary Descriptive Statistics and reliability testing.

3.3 Faculty members' attitudes toward OBE implementation in social education

In Appendix A3, the frequency of descriptive Statistic found that around 73% instructor strongly agree and agree with OBE approach. The findings of each cluster such as the first is the survey results of instructors' knowledge of OBE approach (Kn) showed that instructors who strongly agree is accounted for 11.3%, agree is 49.18%, moderately agree is 27.26% and disagree 6.7%. It indicated that faculty members' knowledge of OBE is not high, as the combined percentage of those who strongly agree and agree in this cluster such $Kn_{1-5} (SA+A) = 60.48\%$ is lower than 70%. The second is the survey results of faculty members' beliefs of OBE approach (Be) found that instructors who strongly agree is account for 23.82%, agree is 50.86%, moderate agree is 21.98%, and disagree is accounted 2.6%. The combination percentage of faculty members who strongly agree and agree in this cluster such $Be_{6-10} (SA+A)$ is 74.66%. It has demonstrated that instructors are confidence in OBE approach is at a high level. The third is the faculty members' feeling of OBE approach (Fe) showed that who strongly agree account for 20.64%, agree for 51.08%, moderately agree for 24.52%, and disagree for 3.02%. The combined average of those who strongly agree and agree of this cluster, $Fe_{11-15} (SA+A)$ is 71.72%, which is considered as high level. The fourth is the faculty members' readiness of OBE approach (Re) found that faculty members who strongly agree is account 27.08%, agree is 49.35%, moderately agree is 21.08% and disagree is 1.56%. The combined average of those who strongly agree and agree of this indicator, $Re_{16-21} (SA+A)$ is 76.43%, it indicates that instructors' readiness for OBE

approach is at a relatively high level. The last is the survey results of faculty members' acceptance of OBE approach (Ac) illustrated that the proportion of 27.56% of lecturers strongly agree the OBE implementation approach, 52.94% of them is agree, 17.26% of them is moderately agree and 1.5% of them is dis agree. The survey results indicate that instructors' acceptance of OBE approach is at a high level, with a combined total of $Ac_{22-26} (SA+A) = 80.5\%$. the details of the summarized of each cluster in Appendix A3.

3.4 The attitude component that faculty members agree the most and the least toward OBE approach

As presented in Appendix A4, it can be seen that the mean scores of faculty members' attitude components are $Kn = 3.63$, $Be = 3.94$, $Fe = 3.87$, $Re = 4.00$ and $Ac = 4.05$ toward OBE approach, they are approximate the value of 4. Thus, One Sample T-tests to compare the mean scores with the test value of 4, the results of One Sample T-tests Table 3, such Knowledge of OBE approach ($t = -9.22$, $df = 282$, $p < 0.001$), it's different between Mean; Beliefs of OBE approach ($t = -1.50$, $df = 282$, $p = 0.133$), it's not different between Mean; Feelings of OBE approach ($t = -3.25$, $df = 282$, $p = 0.001$), it's not different between Mean; Readiness of OBE approach ($t = 0.03$, $df = 282$, $p = 0.975$), it's not different between Mean; and Acceptance of OBE approach ($t = 1.308$, $df = 282$, $p = 0.192$), it's different between Mean. To verify the results of One Sample T-test in Tables 3, the Paired Samples T-test was run to check the difference between the components attitude of faculty members toward OBE approach. Four means scores of faculty members' attitude components were put into nine pairs for comparison. Results of robustness test reported in Tables 4. Therefore, acceptance ($Ac = 4.05$) and readiness ($Re = 4.00$) are statistically not different ($t = 1.99$, $df = 266$, $p = 0.47$). in other word, faculty members' attitude of acceptance of OBE approach ($Ac = 4.05$) was higher than that of faculty members' attitude of readiness of OBE approach ($Re = 4.00$). but they are different in the results of One Sample T-tests showed that both $Ac = 4.05$ and $Re = 4.00$ are statistically different to the test of value of 4, results of the Paired Sample T-tests prove the statistical not difference between the two mean scores. It can be concluded that the faculty members attitude toward OBE approach was faculty members' acceptance of OBE ($Ac = 4.05$). Moreover, Frequency of Descriptive Statistic in Table 2 also found that faculty members' acceptance of OBE is the highest cluster with a combined of strongly agree and agree, $Ac_{22-26} (SA+A)$ is 80.5%.

In contrary, the results of One Sample T-test in Appendix A5 also proved that the mean score of the other two faculty members' attitude components such knowledge of OBE approach ($t = -9.22$, $df = 282$, $p < 0.001$) is statistically different and feelings of OBE approach ($t = -3.25$, $df = 282$, $p = 0.001$) is statistically different to the test value of 4. However, the results of Paired Sample T-test, pair 2 in Table 4 to showed that the two mean scores are

statistically different ($t = -7.46$, $df = 282$, $p < 0.001$). Although results of Pair Sample T- test of pair 2 is not equal but the One Sample T-test, they are equal such as $Kn = Fe = 3.63$ are lightly below level in the five -Linker scale. Besides that, the combined average percentage of moderately agree, disagree, and strongly disagree of this cluster $Kn_{1-5} (MA+D+SD)$ are greater than 30%, the details of report in Table 2. Thus, the authors drew a conclusion that faculty members' knowledge of OBE approach is the lowest extents in social education at Lao HEIs.

3.5 The teaching experience and OBE training affect faculty members' attitude of OBE implementation

The impact of participants' demographic variables on their attitude toward OBE implementation was examined by using the One-way ANOVA on SPSS. Table 5 summary the results of the One-way ANOVA. The One-way ANOVAs were run to investigate the impact of participants' teaching experiences and obtained OBE training toward their attitude of OBE approach. Firstly, teaching experiences toward faculty members' attitude of OBE approach found that each component namely knowledge ($p < 0.001$), belief ($p = 0.102$), feelings ($p = 0.011$), readiness ($p = 0.010$), and acceptance ($p = 0.06$), found that 3 components such knowledge, feelings and readiness have the P value less than 0.05. it can be concluded that teaching experience is significant impact such knowledge, feelings and readiness of faculty member toward OBE implementation. Secondly, obtained OBE training toward faculty members' attitude of OBE approach found that each component namely knowledge ($p < 0.001$), belief ($p = 0.04$), feelings ($p < 0.001$), readiness ($p < 0.001$), and acceptance ($p = 0.003$), has the P value less than 0.05 (see Appendix A5). it can be concluded that obtained OBE training had significant impact on faculty member's attitude of OBE implementation (See Appendix A6).

4. Discussion

This section discusses the main results of the study and compare with previous research findings. Regarding the extents of faculty members' attitude toward OBE implementation, the results showed that the participants' attitude toward OBE are at a high level as the results of Descriptive Statistic test revealed that faculty members' attitude toward OBE approach with the mean score of 3.90, and the Frequency of descriptive Statistic found that 73% of instructor strongly agree and agree with OBE approach. Therefore, the first is faculty members' knowledge of OBE approach, the study demonstrated that 60.48% of instructors have a good knowledge of OBE approach. Thus, the findings of the study found that instructors at the public universities have a certain level of knowledge and understanding of the OBE approach, but it is not yet as high as it should be. As the finding revealed that nearly 30% of instructors still have a moderately agreed of knowledge of OBE approach. This study's findings are consistent with

the research of Baguio, (2019) and Alimyar, (2020) all of which found that faculty members were enthusiastic and had positive attitudes toward the OBE approach. However, the study of this component is contradicted the previous study by Katawazai (2021), which found that the proportion of disagreement and strong disagreement is around half of the participants. The second is faculty members beliefs of OBE approach, the results found that instructors expressed the high belief in the OBE approach. This study coincides with the previous research of Ortega and Cruz (2016) and Baguio (2019), who found that instructors believed the OBE approach offers a more flexible way of teaching and can produce graduates who meet the requirements of the labor market. It also consistent with the study of Katawazai (2021), who found that lecturers had a very high of belief in the OBE approach. Moreover, it is consistent with Katawazai's finding that lecturers believe the OBE approach must be more integrated with industry and provide equal opportunities for all students. However, the study results also demonstrated that some faculty members are moderately agreed and a few disagreed. This indicated that some instructors still didn't fully believe in the OBE approach. This is because the public universities are currently in a transition phase, with some departments implementing the new approach while others have not yet made the switch, resulting in a mixed system. Furthermore, since the new curriculum has not yet had a graduating intake, it has not been evaluated, making it impossible to say whether it is better than the previous one. The third is lecturers' feeling of OBE approach discovered that over 70% of the faculty members had a good feeling toward the OBE approach. This finding coincides with research of Katawazai (2021) and Ortega and Cruz (2016). In contrary, almost 30% of instructors expressed a moderately agreed and 6% disagree toward the OBE approach, particularly, in the items of OBE requires more responsibility from teachers than traditional teaching approach, OBE is a time-efficient teaching approach, and traditional pen-and-paper tests may not always be effective for assessing student abilities. The fourth is faculty members' readiness of OBE approach revealed that around 75% of instructors are readiness to implement the OBE approach. The findings from the study are consistent with the previous research of Ortega and Cruz (2016), who found that faculty members were very ready for the OBE approach. It also coincides with the study of Katawazai (2021), whose survey revealed a similar level of readiness among faculty members in Lao HEIs. However, some respondents expressed a moderate level of readiness. it includes a lack of budget for motivation and promotion, inadequate infrastructure for teaching and learning facilities, a lack of understanding from both lecturers and students, incomplete frameworks, and insufficient guidance and participation from relevant stakeholders. it highlights the importance of adequate

training for faculty members, as noted by Jansen (1998) and Mogashoa (2013). The last is faculty members' acceptance of OBE approach, found that is at a high level toward OBE implementation. The findings of this study consistent with previous studies of Katawazai (2021).

Regarding the research question about faculty members' attitude component with the highest and lowest or in other words, faculty members strongly agree and disagree toward OBE approach, participants of this study their acceptance, readiness and beliefs are at high levels such as acceptance ($Ac = 4.05$) and readiness ($Re = 4.00$) and beliefs ($Be = 3.94$). On the other hands, Frequency of Descriptive Statistic in Table 3 also found that faculty members' acceptance of OBE is the highest cluster with a combined of strongly agree and agree, $Ac_{22-26} (SA+A)$ is 80.5%. Thus, their acceptance of OBE approach is the highest, the results of the study consistent to findings of Katawazai's study in the aspect of faculty members' acceptance of OBE approach (Katawazai, 2021). In contrary, the participants of this present study seem to less attitude of knowledge and feelings of OBE approach such as $Kn = 3.63$ and $Fe = 3.87$ are low extent. In addition, Frequency of Descriptive Statistic in Table 3 also found that faculty members' knowledge of OBE is the lowest cluster with a combined of strongly agree and agree is 60.48%. Thus, the authors drew a conclusion that faculty members' knowledge of OBE approach is the lowest extents in social science education in Lao higher education institutions. This study's findings are consistent with the research of Baguio (2019) and Alimyar (2020) all of which found that faculty members were enthusiastic and had positive attitudes toward the OBE approach.

Regarding teaching experience and OBE training affect faculty members' attitude of OBE implementation, the results of the study showed that participants' teaching experiences and obtained OBE training toward their attitude of OBE approach. Firstly, teaching experience is significant impact toward faculty members' attitude of OBE implementation in the three components such knowledge, feelings and readiness, as they have the P value less than 0.05. Secondly, OBE training toward faculty members' attitude of OBE approach found that all components namely knowledge, belief, feelings, readiness, and acceptance, has the P value less than 0.05. it can be concluded that OBE training had significant impact on faculty member's attitude of OBE approach. The results of this study consistent to previous research (Akhmadeeva., et al, 2017; Yasmin & Yasmeen, 202; Akramy, 2021; Cheung & Man Wong, 2012).

5. Conclusion

According to the study showed that 73% instructor strongly agree or agree with OBE approach. The findings of each indicator such as firstly, knowledge of OBE approach, the study results found that the combined percentage of strongly agree and agree in this cluster is still

not high as it should be. As the results that some lecturers do not understand well about OBE. Secondly, other four clusters such beliefs, feelings, readiness and acceptance of OBE implementation are at the relatively high. They have believed that the OBE implementation can help in educating and training students to meet the demands of the labor market such preparing students better for the work place, developing students' knowledge and skills, meeting social needs and students with equal educational opportunities. Moreover, they have believed that OBE being the best learning approach, and providing an opportunity to ensure that all learners achieve success. So, they are willing to transform their teaching to the new approach by designing new programs, revising existing programs and revising course syllabi to align with the OBE approach. Furthermore, the study showed that teaching experience has an impact toward attitude such as knowledge, feelings and readiness. Meanwhile, obtained OBE training has an impact on faculty members' attitude toward OBE implementation by the analysis demonstrated that five components of faculty members' attitude with the demographic variables are significant.

6. Conflict of interest statement

I undersigned the scientific researcher, hereby pledge that all data used in this academic paper neither favor nor disadvantage any stakeholders. In case of a breach, I am delighted to accept full and sole responsibilities

7. References

- Akhmadeeva, L., Hindy, M., & Sparrey, C. (2017). Overcoming obstacles to implementing an outcome-based education model: Traditional versus transformation OBE. *Canadian Engineering Education Association*, 1–29.
- Akramy, S. A (2021). Implementation of outcome-based education (OBE) in Afghan universities: Lecturers' voices. *International Journal of Quality in Education*, 5(2), 27–47.
- Alimyar, Z. (2020). Outcome-based education training workshops: A study to explore their effectiveness on Afghan EFL instructors' teaching methods. *International Journal of Education and Culture*, 9(1–2).
- Baguio, J. B. (2019). Outcomes-Based Education: Teachers' Attitude and Implementation. *University of Bohol Multidisciplinary Research Journal*, 7(1), 110–127.
- Biggs J. (1996). Enhancing Teaching Through Constructive Alignment. *Higher Education*, 32(3), 347–364.
- Cheung, A. C. K., & Man Wong, P. (2012). Factors affecting the implementation of curriculum reform in Hong Kong. *International Journal of Educational Management*, 26(1), 39–54. Retrieved from <https://doi.org/10.1108/09513541211194374>
- Chowdhury, R., & Das, C. (2022). Disruptive Factors in Implementing Outcome-Based Education Curriculum at Tertiary Business Education: A Focus on Institutional Readiness. *Canadian Journal of Business and Information Studies*, 4(4), 72–85. Retrieved from <https://doi.org/10.34104/cjbis.022.072085>
- Harden, R. M., Crosby, J. R., & Davis, M. H. (1999). AMEE Guide No. 14: Outcome-based education: Part 1 - An introduction to outcome-based education. *Medical Teacher*, 21(1), 7–14. Retrieved from <https://doi.org/10.1080/01421599979969>
- Inthasone, & Sounthone. (2020). *Report on employers' survey related to higher education graduates' employment issues in Lao PDR*.
- Jansen, T. D. (1998). education Curriculum Reform in South Africa : a critical analysis of outcomes-based education. *Cambridge Journal of Education*, 28(3), 321–331.
- Katawazai, R. (2021). Implementing outcome-based education and student-centered learning in Afghan public universities: the current practices and challenges. *Heliyon*, 7(5), e07076. Retrieved from <https://doi.org/10.1016/j.heliyon.2021.e07076>
- Loreto, M. M. (2018). Outcomes Based Teaching and Learning Practices in the Hotel and Resort Management Program of Dusit Thani College. *APacCHRIE Conference 2016*, 12(May), 1–17.
- MOES. (2011). *National Curriculum Standard for Bachelor Degree*.
- MOES. (2020). *National Curriculum Standard for Bachelor Degree*.
- Mogashoa, T. I. (2013). The experiences of adult learning centre educators in implementing outcomes-based assessment. *Mediterranean Journal of Social Sciences*, 4(14), 455–462. Retrieved from <https://doi.org/10.5901/mjss.2013.v4n14p455>
- Ortega-Dela Cruz, R. A., & Ann Ortega, R. A. (2016). Educators' Attitude towards Outcomes-Based Educational Approach in English Second Language Learning. *American Journal of Educational Research*, 4(8), 597–601. Retrieved from <https://doi.org/10.12691/education-4-8-3>
- PMO. (2021). *Lao National Qualification Framework . Vientiane Capital. Laos: Prime Minister's Office*.
- Spady, W. G. (1994). *Outcome-based Education: Critical Issues and Answers*. Arlington: American Association of School Administrators.
- Yasmin, M., & Yasmeeen, A. (2021). Viability of outcome-based education in teaching English as second language to chemical engineering learners. *Education for Chemical Engineers*, 36, 100–106. Retrieved from <https://doi.org/10.1016/j.ece.2021.04.005>

Appendix A1. Demographic data of respondents

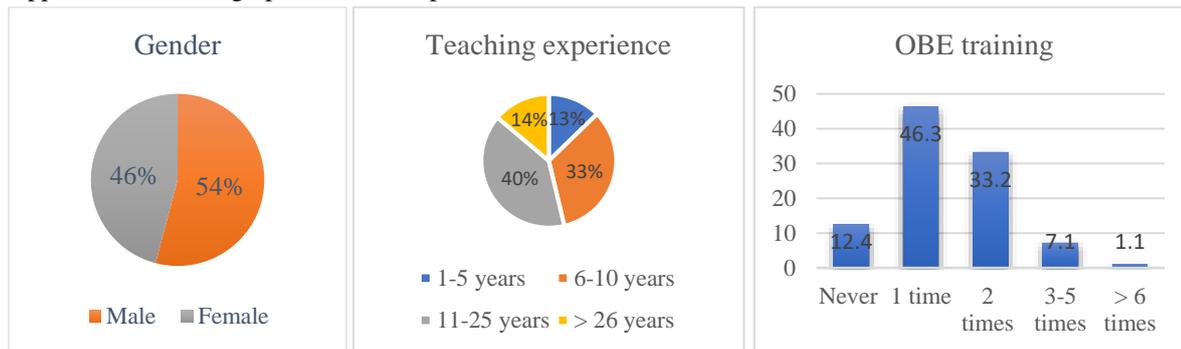


Figure.A1 Demographic data of respondents

Appendix A2. Descriptive Statistics an Reliability Testing

Table A2. Summary Descriptive Statistics and Reliability Testing

Variables	Min	Max	Means	SD	Cronbach Alpha	Items
Cluster 1: Knowledge (Kn)	1.00	5.00	3.63	0.67	0.907	5
Cluster 2: Belief (Be)	1.00	5.00	3.94	0.62	0.893	5
Cluster 3: Feelings (Fe)	1.00	5.00	3.87	0.63	0.907	5
Cluster 4: Readiness (Re)	1.00	5.00	4.00	0.64	0.891	6
Cluster 5: Acceptance (Ac)	1.00	5.00	4.05	0.66	0.905	5

N = 283

Appendix A3. Frequency of Descriptive Statistic on Attitude toward OBE Approach

Table A3. Results of Frequency of Descriptive Statistic on Attitude toward OBE Approach

Knowledge (Kn)	SA	A	MA	D	SD
Kn ₁	20 (7.1%)	133 (47%)	101 (35.7%)	17 (6%)	12 (4.2%)
Kn ₂	27 (9.5%)	148 (52.3%)	88 (31.1%)	14 (4.9%)	6 (2.1%)
Kn ₃	40 (14.1%)	144 (50.9%)	87 (30.7%)	7 (2.5%)	5 (1.8%)
Kn ₄	38 (13.4%)	152 (53.7%)	82 (29%)	6 (2.1%)	5 (1.8%)
Kn ₅	35 (12.4%)	119 (42%)	107 (37.8%)	19 (6.7%)	3(1.1%)
<i>Total =</i>	<i>11.3%</i>	<i>49.18%</i>	<i>27.26%</i>	<i>4.44%</i>	<i>2.2%</i>
Beliefs (Be)					
Be ₆	62 (21.9%)	156 (55.1%)	52 (18.4%)	10(3.5%)	3(1.1%)
Be ₇	76 (26.9%)	147 (51.9%)	55 (19.4%)	4 (1.4%)	1 (0.4%)
Be ₈	87 (30.7%)	137 (48.4%)	56 (19.8%)	2 (0.7%)	1 (0.4%)
Be ₉	45 (15.9%)	145 (51.2%)	84 (29.7%)	6 (2.1%)	3 (1.1%)
Be ₁₀	67 (23.7%)	135 (47.7%)	64 (22.6%)	15 (5.3%)	2 (0.7%)
<i>Total =</i>	<i>23.82%</i>	<i>50.86%</i>	<i>21.98%</i>	<i>2.6%</i>	<i>0.64%</i>
Feelings (Fe)					
Fe ₁₁	55 (19.4%)	154 (54.4%)	65 (23%)	6 (2.1%)	3 (1.1%)
Fe ₁₂	47 (16.6%)	132 (46.6%)	84 (29.7%)	17 (6%)	3 (1.1%)
Fe ₁₃	52 (18.4%)	143 (50.5%)	75 (26.5%)	12 (4.2%)	1 (0.4%)
Fe ₁₄	76 (26.9%)	145 (51.2%)	55 (19.4%)	6 (2.1%)	1 (0.4%)
Fe ₁₅	62 (21.9%)	149 (52.7%)	68 (24%)	2 (0.7%)	2 (0.7%)
<i>Total =</i>	<i>20.64%</i>	<i>51.08%</i>	<i>24.52%</i>	<i>3.02%</i>	<i>0.74%</i>
Readiness					
Re ₁₆	58 (20.5%)	146 (51.6%)	70 (24.7%)	7 (2.5%)	2 (0.7%)
Re ₁₇	68 (24%)	135 (47.7%)	74 (26.1%)	3 (1.1%)	3 (1.1%)
Re ₁₈	53 (18.7%)	148 (52.3%)	74 (26.1%)	5 (1.8%)	3 (1.1%)
Re ₁₉	64 (22.6%)	148 (52.3%)	61 (21.6%)	7 (2.5%)	3 (1.1%)

Re ₂₀	91 (32.2%)	143 (50.5%)	46 (16.3%)	1 (0.4%)	2 (0.7%)
Re ₂₁	126 (44.5%)	118 (41.7%)	33 (11.7%)	3 (1.1%)	3 (1.1%)
Total =	27.08%	49.35%	21.08%	1.56%	0.96%
Acceptance					
Ac ₂₂	49 (17.3%)	165 (58.3%)	61 (21.6%)	5 (1.8%)	3 (1.1%)
Ac ₂₃	78 (27.6%)	150 (53%)	50 (17.7%)	3 (1.1%)	2 (0.7%)
Ac ₂₄	72 (25.4%)	151 (53.4%)	53 (18.7%)	4 (1.4%)	3 (1.1%)
Ac ₂₅	78 (27.6%)	154 (54.4%)	45 (15.9%)	5 (1.8%)	1 (0.4%)
Ac ₂₆	113 (39.9%)	129 (45.6%)	35 (12.4%)	4 (1.4%)	2 (0.7%)
Total =	27.56%	52.94%	17.26%	1.5%	(0.8%)

Appendix A4. One Sample T-test Estimates

Table A4. Results of One Sample T-test (Test value =4)

Variables	Means	t	df	p	Conclusion
Cluster 1: Knowledge (Kn)	3.63	-9.22	282	<0.001	Different
Cluster 2: Beliefs (Be)	3.94	-1.50	282	0.133	Not different
Cluster 3: Feelings (Fe)	3.87	-3.25	282	0.001	Different
Cluster 4: Readiness (Re)	4.00	0.03	282	0.975	Not different
Cluster 5: Acceptance (Ac)	4.05	1.308	282	0.192	Not different
FM's attitude toward OBE	3.90	-2.99	282	0.003	Different

Appendix A5. Paired Sample T-test

Table A5. Results of paired sample T-test

Paired Samples	Means	t	df	p	Conclusion
Pair 1	(Kn=3.63) – (Be=3.94)	-10.59	282	<0.001	Different
Pair 2	(Kn=3.63) – (Fe= 3.87)	-7.46	282	<0.001	Different
Pair 3	(Kn=3.63) – (Re= 4.00)	-12.78	282	<0.001	Different
Pair 4	(Be=3.94) – (Fe= 3.96)	2.60	282	0.01	Different
Pair 5	(Re= 4.00)– (Be=3.94)	2.07	282	0.04	Different
Pair 6	(Re= 4.00)– (Fe= 3.96)	4.11	282	<0.001	Different
Pair 7	(Ac=4.05)– (Re= 4.00)	1.89	282	0.06	Not different
Pair 8	(Ac=4.05) – (Fe= 3.96)	5.14	282	<0.001	Different
Pair 9	(Ac=4.05) – (Kn=3.63)	12.64	282	<0.001	Different

Appendix A6. Participants' Demographic Variables on Their Attitude

Table A6. The Impact of Participants' Demographic Variables on Their Attitude

Dependent variables	Results of the One-way ANOVA	
	Teaching experience	Obtained OBE training
Cluster 1: Knowledge (Kn)	f(282) = 8.84, p <0.001	f(282) = 9.55, p <0.001
Cluster 2: Belief (Be)	f(282) = 2.08, p = 0.102	f(282) = 3.90, p =0.04
Cluster 3: Feelings (Fe)	f(282) = 3.76, p =0.011	f(282) = 7.19, p <0.001
Cluster 4: Readiness (Re)	f(282) = 3.85, p = 0.010	f(282) = 5.35, p <0.001
Cluster 5: Acceptance (Ac)	f(282) = 2.54, p = 0.06	f(282) = 4.02, p = 0.003