Experiential Learning Based Online Learning Development in the Jakarta Religion Affair Training Center

Asip, Basuki Wibawa,

Abstract— This article aims to develop experiential based online learning system using MOODLE platform in Jakarta Ministry of Religious Affairs Training Centre. The instructional system is a fully online instruction consisting of three categories (main activities) namely; Program Orientation, Learning Activity and Evaluation. The Learning Activity consists of nine sub-categories (sub-activities) weighted of 120 lesson hours with a completion time of 16 (sixteen) weeks. Each sub-category consists of four sessions following David Kolb's model experiential learning cycles. The learning activities were presented in both synchronous and asynchronous. The synchronous activities were among others; interaction through phone, and social media chat, while asynchronous activities were in the form of reading, exercising, observation, online discussion, quizzing, doing tasks, watching video on demand (VOD) and so forth. The results of the evaluation showed that the instructional system obtained a good predicate which was indicated by several indicators; the level of graduation reached 85%, the average score of all activities was 87.30; significant difference between pre-test and post-test with significant score 0.00 measured in α 0.05, score of LMS 4.44, and score of tutor services was 4.58. Some problems were noted from the study, such as; participant's delay in completing an activity and the program as a whole were still high, participant's scores on the first chance were still below passing grade, the speed of tutors' responses on participants' work were still low, and audio visual resources were still lacking. Therefore, the research proposed some main suggestions, namely; improve the speed and frequency of tutor services, add quizzes in every activity to improve retention, and include more audio-visual resources.

Index Terms— experiential learning, learning management system, online training, retention rate,

I. INTRODUCTION

The global demands of Industry 4.0 and the fast growth of information technology (IT) infrastructure have made online education very promising education solution for a big and continental country like Indonesia. Starting about a year of 2000, online learning in Indonesia has been carried out in various educational institutions includes universities, government institutions, private education or training institutions and K-12 Education. It is identified in 2013 that 10 biggest universities conducted e-learning courses [1] One of the biggest online learning courses is in Universitas Terbuka (Open University) [2], almost all ministries conduct online learning to deliver training course for its own employees. Private institutions have begun to offer training services using the online mode. Berlianto and Wibowo consider that IndonesiaX is the biggest training service [2].

In addition online learning is also used to improve students' engagement in various subject matters in K-12. One examples of using online learning in K-12 classroom is the use of flipped-blended for STEM Education [3]. There are also commercial online learning resources for children that are organized by private company such as Quipper Video and Ruang Guru (https://ruangguru.com/).

Online Distance Training (DJJ Online) is one of government online training program held by Jakarta Religious Ministry Affair Training Center. Begin with the very simple course design in 2012, the program has grown bigger after five years. About 700 employees from three provinces (DKI Jakarta, Banten and Kalimantan Barat) in a variety of jobs register every year. The program has many benefits, however the program still leaves some weaknesses. The two main weaknesses detected are the low retention and graduation rate. Other problem is the late of course fulfillment and scores which are still under passing grade in first try. The weaknesses become the institution issues that should be addressed seriously.

The low graduation rate is common in online learning. Study by Smith [4], Pedro and Scot [5], Park and Choi [6] noted that about 40% to 80% online students drop out of online classes. According to Meister 70% of adult learners enrolled in a corporate online program did not complete it [5], and Study by Brown, Keppell, Hughes, Hard, & Smith in 2013 [6] reported that dropout rates from e-learning courses were around 25%–40%. Resume by Rostaminezhad et.al. about dropout rate in many country noted that dropout rate in UK open university in 2006 was 35%, in Turkey in 2006 was 36%, in US Midwestern University in 2009 was 54%, and in Ludwig Maximilians-Universität (LMU) of Munich in 2010 was 23.9% Rostaminezed concluded that from the international reports, in average dropout rate were around 40% [7]. Furthermore, Bawa stressed that online classes continue to display serious retention issues. Study by Herbert found out that online courses have a 10% to 20% higher failed retention rate than traditional classroom environments [5]. Research by National Student Clearinghouse Research Center 2014 stated that online programs in traditional public and private universities have retention rates of 68.2% (public) and 72.9% (private) [8].

Most studies found that internal learners' factors are dominant that contribute to low retention and course completion. Study review by Rostaminezhad [7] revealed

Revised Manuscript Received on April 15, 2019.
   Asip, Jakarta State University, Indonesia. (E-mail: asip_tp08s3@mahasiswa.unj.ac.id)
   Basuki Wibawa, Jakarta State University, Indonesia. (E-mail: bwibawa@unj.ac.id)

that there are three factors which are the most important; students' satisfaction as a motivational factor, self-regulation and Interaction. Study in for-profit universities by Sorensen and Donovan concluded that lack of support and time commitment are the factors [8]. Park and Choi has reported that family and organization support, financial problem, time constrain, work load, and changing work are some factors that contribute to dropout in adult learners [6]. However, Park and Choi also found out that not only learner's factors but also internal factor, such as course design strategies, is an important factors that determines learners' motivation.

The studies give some implication on online course development that learner and course factors both should be considered to build a learner-friendly online learning environment. Park and Choi stressed that "…instructional designers should systematically analyze external factors surrounding learners and use the analysis results to initiate learning and motivate learners so that the high dropout rate can be decreased". They suggested that it should be prioritized at the course development stage in order to make the course participatory and interesting and to keep learners engaged [6]. In the some sound Bawa suggested that instead of feeling frustrated with learner characteristics, instructors and institutions had better think about strategies that would enforce better learners' learning orientation and motivation. For the purpose, instructors should also evaluate their own technological, communication, and facilitation skills and attempt to update them [5].

This suggestion guides Balai Diklat Keagamaan (BDK) Jakarta online development team to reconstruct methodological aspect of Learning Management System (LMS). The priority of reconstruction is focused in Classroom Action Research Online Training for teachers. The course should be reconstructed because the graduation rate in 2016 is only 56.24 while graduation rate average is 63.7%. The retention rate average is not bad (82.36), but more than 50% participant get under average score in the first chance.

Previously, the course uses Horton online learning model that consists of three main activities i.e. absorb, do and connect [9]. The model provides a simple guideline to design courses but does not provide enough deeper learning experience to master and implement a hard concept like action research. It needs a deeper and logical steps that engage learner to construct new knowledge from previous experiences and apply it to real problems.

Experiential Learning (EL) is considered to be appropriate to realize the goal. Experiential Learning Theory (ELT) is a view that learning best through reflection and experiencing. One of the most cited experientialists, David Kolb, describes the experiential learning is the process whereby knowledge is created through the transformation of experience [10]. The selection of the learning model has strong theoretical and practical arguments. Besides, much strong evidence that the model increases learner learning engagement that leads to better learning achievement. For example, study in adult online learning using experiential activity reported that experience adult embed learning in an authentic context (86%), practicing real world skills with

context (77%), and developing a better qualified workforce (75%) [11].

The research and development (R&D) has been conducted to reconstruct Classroom Action Research Online Training for teachers in Jakarta Ministry of Religious Affair Training Center in 2017. The focus of development is to redesign the course through a hybridization of Kolb Experiential Learning with MOODLE Learning Management System (LMS). The development uses Bates Online Learning Development Model. The research aims to answer the question: How to incorporate EL with MOODLE in constructing CAR Online Training to increase graduation and retention rate?

II. MODEL FRAMEWORK

The Online Experiential Learning Base Training is an online learning system that is constructed through a hybridization CAR as the training subject matter, Experiential Learning as the strategy and MOODLE as the online learning management system. The system is constructed to help teachers understand CAR concept and can write CAR proposal. In he learning system, teachers as the participants are facilitated to learn in four steps of learning activity following Kolb Experiential Learning Model. The model is formulated in the following Venn diagram.
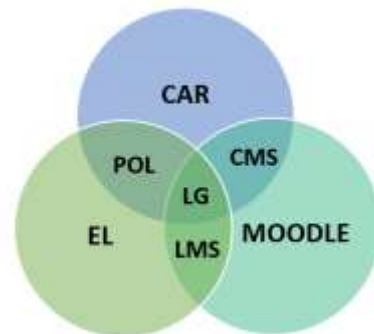

Figure 1 Model Framework

The Venn Diagram shows an online learning environment model that is constructed from three components. Every component has a relation to each other that is represented by intersections. The intersection between CAR and MOODLE is a Content Management System (CMS). MOODLE as a learning platform provides functions to manage learning resources in a variety of format that can perform interesting and firm resources. The intersection between MOODLE and EL is ee-learning base LMS. In the LMS the syntax of EL is used to manage activities, so that the activities in every unit is arranged sequent from concrete experience, reflective observation, abstract conceptualization and active experimentation. The intersection between CAR and EL is a product-oriented learning (POL) means that the end goal of every unit of learning is a product. It fits the concept of competency base training. Finally, the intersection of the three components is final learning goals (LG) namely participant's proficiency in writing CAR proposal.

Experiential Learning (EL) is one of the strategies recommended by Bates [14] for online course. Eskow uses ee-learning as a term of the EL use in online learning [15]. One of the advantages of the strategy is the robust learning cycle that can be used to be a syntax in a learning unit. Experiential learning means learning from experience or learning by doing to develop new knowledge, new skills, new attitudes, or new ways of thinking. In the current period EL is more likely to be identical to David Kolb. Kolb developed the Experiential Learning Theory (ELT) based on theories from 20th century scholars who stressed that experience is principles to knowledge development include William James, John Dewey, Kurt Lewin, Jean Piaget, Carl Jung, Paulo Freire, Carl Rogers and others [10]. Based on the views Kolb formulates a theory that "Learning is the process whereby knowledge is created through the transformation of experience.

Keeton and Tate define experiential learning as "… learning in which the learner is directly in touch with the realities being studied. It is contrasted with learning in which the learner only reads about, hears about, talks about, or writes about these realities but never comes into contact with them as part of the learning process" [12]. Beard and Wilson stress that in the learning process experiences act as the source of learning. Learners engage the whole person (including physical-bodily, intellectually, emotionally and spiritually) to reflect these contextual experiences (including belonging and doing – in places, spaces, within social, cultural, political context etc.) and reconstruct it to create new knowledge.

The definitions underlined that learning best when it relates to whole person (body, emotion, intellect and spiritual) experience in social, cultural and political context through a process of reflection and active exercises. The theory is formulated in a learning cycle. Kolb tends to argue that the process is not a cycle but a spiral [10]. One of the main intentions of the experiential learning model is to co-create a socially constructed environment through which students can simultaneously explore and assimilate new ideas through more authentic practice combined with examining how they, as individuals, are learning that new practice [13].

The scheme describes that meaningful learning occurs through cycle involving four adaptive learning modes namely concrete experience, reflective observation, abstract conceptualization, and active experimentation. The four stages is divided into two opposed adaptive orientation: concrete experience (CE) is opposed to abstract conceptualization (AC) and active experimentation (AE) is opposed to reflective observation (RO). CE and AC activities are a process of prehension (grasping experience), while AE and RO activities are process of transformation. Kolb stresses that "Knowledge results from the combination of grasping experience and transforming it" [10].

The model has been practiced in kinds of education include in online learning environment. The use of EL in online learning has become popular with e-experiential e-learning (ee-learning). Escow defines ee-learning as a hybrid of e-learning and experiential learning [16]. Bassanajav stresses that ee-learning, refers to the possibility of bringing together everyday experience and communication technologies. The term expresses a relationship between pedagogical approaches, technological integration, and student learning in online learning environments [16].

The strategy is an alternative to encounter inchoate nature of pedagogical approaches to online classes that according to Knowlton [17] and Murphrey [18] has resulted in ineffective teacher-centered courses. Carver and colleges identifies the inchoate includes online as a content management system, online as a discussion room, and combination of both. The components are presented in a separate way so the models do not mirror e-learning but still present traditional classroom. It needs a strategy that could bridge information technology with the nature of learning in a harmonic way. Carver and collogue propose experiential education as a better model [19], and Di Challis argues that the use of ICT is a power in providing learning experiences in multi-faceted ways [20]. Research by McFarland in entrepreneurship education stresses that learning through experience need tools, techniques and theories in order to enable students to flourish. It is imperative that students are provided a space in the form of an experience to apply the knowledge that they obtain so that this knowledge becomes theirs [23].

Much studies have been conducted to implement EL in a wide area of education. For instance, Shahanaz identifies 13 studies on theoretical review and 27 empirical studies concerning experiential learning in management education. Shahanaz concludes that teaching cannot be taught with just a piece of chalk and a blackboard or through a spoon-feeding lecture method, but can effectively through experiential learning strategy where students engage in practicing ability and allowing them to apply their theory knowledge. The studies also reveals that the experiential learning techniques have resulted in positive learning outcomes with regard to student's knowledge, skill and attitude [21]. Based on studies by Clark and college in career and technical education reported EL appears to have the greatest potential within an educational setting and ability to enhance the teacher education process. Clark and college also notes a research into how brain base learning theory that reveals relationship between brain and experience in a process of acquiring career and technical education knowledge. The study concluded that the implementation of EL offer direction towards providing more appropriate or better designed learning environments [22].

Despite the advantages, EL is identified has some limitations. For instance, study by Denisson argues that too dominant role of learner leads to inefficient in building knowledge. According to Denisson learning is not a totally true discovery but involves teacher guide. Denisson argues that " … ELT is not a useful model for higher education, that its attractions (learner-centeredness, grounded in 'reality', the need for a teacher down-graded) are partly illusory." Other limitation identified in the assessment context. Lecturers find it difficult to assess and students find it difficult to undertake in an assessed context [24].

One of the online learning platform is Moodle base management system. MOODLE is the most popular and most used Learning Management System (LMS) in the world. Young suggests that flexibility, open source, and free to download learning management solution are some advantages. The LMS is used by 68 million users and 55,000 Moodle sites deployed worldwide. Moodle is a user-friendly eLearning platform that serves the learning and training needs of people from all types of organizations [25]. The LMS provides menus that foster interaction, inquiry, and collaboration. Instructional developer can create and deliver online courses so their respective audiences can meet and exceed their learning goals.

In this development the platform is used to manage learning environment in Classroom Action Research (CAR) subject using EL online teaching strategy. Three components in this learning environment- CAR, EL and MOODLE- were combined to be an effective online learning environment model.

III. METHODOLOGY

The research was conducted from 2014 to 2017 using Bates Open and Distance Learning Development Model. The model has four steps: course outline development, selection of media, development/production of materials and course delivery [26]. The development stage follows Bates development model as following chart.
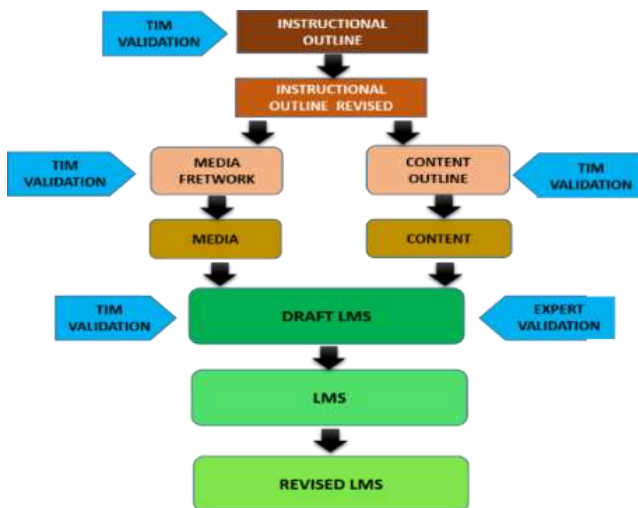

Figure 2 Development Model Flowchart

The development begins with the course outline development. In the first stage the team conducted needs assessment to find level of subject mastery, target orientation and motivation, and online learning readiness. Assessment used online survey interviews. The course outline was developed base on the data. The products of the stages are course design, syllabus, and activity unit plan.

The second stage is selection of media. The team consists of content experts, media experts and a tutor discus the alternative of media. The selection of media considers SECTIONS (students, ease, cost, teaching and learning, interactivity, organization, novelty and speed) media usage framework from Bates [14]. The product of the stage is course media framework included decision on using MOODLE platform, video on demand (VOD) at least one in

every learning activity, provides text base sources, quizzes, tasks and test instrument.

The third stage is development/production of materials. In the stage the content expert, the media expert and the tutor collaborate to produce media. The media produced are learning sources in web, Doc and PDF formats, video, quizzes and learning tasks. The media then is uploaded into MOODLE platform and the end product of the stage is a Learning Management System.

The forth is course delivery. In this stage three kinds of evaluation were carried out: LMS testing, expert validation, and real learning assessment. LMS testing assess the availability and usability learning resources, videos, quizzes and tasks work. In this assessment the team checked every unit of activity was and revised. Expert validation is an assessment that was done by external instructional expert to review both theoretical and practical aspect the LMS. The expert overview has been used to revise the LMS. Real teaching has been conducted to check the accessibility and function of every component. The assessment involved 27 secondary school teachers from three provinces DKI Jakarta, Banten and West Kalimantan.

The real teaching assessment has collected data about the online learning system quality, retention rate and graduation rate. The quality of the system was measured using Delone & McLean IS Model [27] through online survey, while data of retention and graduation rate were pasted from the LMS data log. Besides, the assessment also noted participants problem that were recorded from social media interaction and online interview. The assessment has collected quantitative and qualitative data. The quantitative data was analyzed using descriptive statistic to find tendency of data begun with constructing tables of means, quintiles and measures of dispersion such as variance or standard deviation, and One Way ANOVA using SPSS software to find significant difference between pre and posttest. While the qualitative i.e. complaint and problems was resumed categorized.

IV. FINDINGS

A. Course Design

The course objective is to develop teacher proficiency in writing CAR proposal and the end goal of learning product is a CAR proposal. The program implements product base training approach. This approach is used to support competency-based training. In this approach, the results of the training are not only knowledge but also skills to support the quality of employee performance. At the end of the program the participants are expected to master knowledge and skills with a ratio of 25% and 75%.

Course content is divided into Program Orientation, Learning Activity and Evaluation. It is weighted to 120 lesson hours with a completion time of 16 weeks. The learning activity consists of nine activities that is structured in the following table.

Table 1 Course Structure

NO	COURSE CONTENT	LESSON HOUR	TIME COMPLETION (WEEK)
1	Program orientation	5	1
2	Research Paradigm	10	1
3	CAR Concept and Procedure	10	1
4	CAR Proposal Components	5	1
5	Reconnaissance	10	1
6	Writing Introduction	10	2
7	Writing Theoretical Review	20	2
8	Writing Research Methodology	20	2
9	Writing Research Instruments	15	2
10	End Task	10	1
11	Program Evaluation	5	1
	Sum	120	16

The course is presented in MOODLE Learning Management System in the following structure.
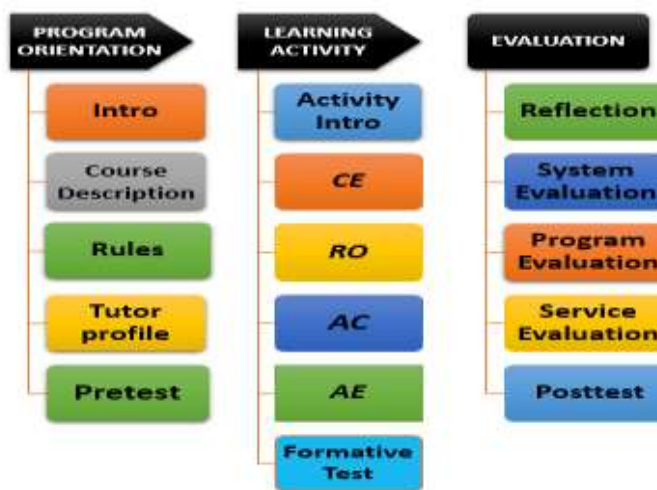

Figure 3 Learning Management System Structure

The course is begun with program orientation. This part provides participants introduction information about the course, rules of the course participation, tutor profile and pretest. The main activity consists of eight activities. Every activity is begun with an introduction, followed by main activities and ended with formative test. Each main activity consists of four sessions that is arranged in David Kolb experiential learning activity syntax (Concrete Experience-Reflective Observation-Abstract Conceptualization-Active Experimentation).

The activity could be synchronous or asynchronous. Some learning methods include case study, field observation, inquiry, problem base, and project base. The methods are used to make activity easier and interesting to participants. Some mind activities are online quizzes, reflection, online discussion, reading, cases study, observation, make a report, watch and comment video, social media chat, video conference, doing task and online test. The LMS is combined with social media to build more interactive and non-formal communication and increase social learning activity. The media is also used by tutor in guiding and give quick feedback.

The last activity is evaluation. This part aims to collect information about the quality of the course and measure participant's mastery of course contents. The course evaluation consists of system (LMS) evaluation, tutor service evaluation, and course management service

evaluation and content mastery measurement. The evaluation uses online survey and quiz/test facilities that is provided in MOODLE.

The course contents are presented in conceptual and logical order and participants have to complete the contents orderly because the previous contents are prerequisite for the next. Participants have to complete each sub category according to time line and need to get passing grade score (76) to move to next sub categories. Participants who have not passed the passing grade score must repeat the learning. Furthermore only those participants who have completed all activities and get accumulated passing grade scores can get certificate.

B. Evaluation

The evaluation activity collected data about quality of online learning system, managerial services, tutor services, graduation rate and retention rate. The followings are the evaluation finding.

1. The quality of online learning system were measured by 34 items survey with five Likert scale that was formulated by Wang and college based on Delone McLean Online System Success framework. The average score is 4.33 with a standard deviation of 0.247. Partially, two items that have score about 3. The items are about space provided for individual expression and completeness of information in the LMS.

2. The quality of tutor services were measured by 15 items survey with five Likert scale that was constructed and validated by development. The average score is 4.58, with deviation standard of 0.11. The lowest score was found in the aspect of giving motivation with a score of 4.13.

3. The quality of managerial services was measured using 21 items survey with five Likert scale. The average score is 4.25 with a standard deviation of 0.26. There are components that still get a score of 3 namely course type and task difficulty.

4. The number of participant who were enrolled to the Program Orientation were 27, and 23 of the competed the course. It means that the graduation rate is 85%. A total of 4 respondents could not complete the course because of sickness and busyness.

5. The retention rate was measured through formative and summative test (posttest). The course applies mastery learning approach that gives participants opportunity to re learn. The test system gives participants two opportunities to do the test. When they have not got the passing grade score, they can relearn the content and do the second test opportunity. The LMS log shows that 79% participants got under average score in the first opportunity and decided to redo the test after relearning the contents. The participants who have got above passing grade score also the the same way to get a better score.

6. The LMS provide pretest at the end of Program Orientation and Posttest (summative test) at the evaluation activity. The average score of pretest 48.65 and the average score of posttest is 86.49. The data shows an improvement in content mastery after the participant completed the course. The dependent t-test in 5% level of significant found that the t-value is -9.14 and the t table (N 23) is 1.71. The area of rejection at a significant level of 0.05 for the number of samples 15 is -1.71 <t value <1.71. The t-test result states that there is a significant differences between the pretest average score with the posttest average score.

7. The LMS provides final assignment (end task). The assignment asks the participants to compile all activity products, edit and complete all proposal components. The end product is a complete CAR proposal was scored using a CAR proposal rubric score. The average score of the assignment is 90,525 with the standard deviation of 2.74.

V. DISCUSSION

The research has resulted some interesting topic to discuss. Firstly, the data shows a clear role of EL as a teaching strategy in the online learning environment. In this regard, the hybrid of EL and MOODLE platform can enhance the learner to learn more intensive and easier that leads to content mastery improvement. It is theoretically and practically understood because EL provides rich learning activities that involves the whole personal aspect through reflection and action processes. It is supported by online media that could support the learners to express their voices in a collaboration, discussion and doing tasks. The environment provides rich sensory inputs and encourages deeper understanding by engaging the students in the rich learning experience.

Much studies prove the arguments. A case study by Rabe, Woolen and Humiston stated that students in the online course may be more reflective in their learning process. Online students spent more time preparing for the course and they felt more connected to faculty [30]. A case study by Murphrey revealed that interactive technologies can be used to enhance experiential activities in an online course. The technologies enabled students to be more expressive and innovative in their assignments. Murphrey stresses that technologies encouraged experiential learning by allowing students to gain ownership of their ideas, communicate their ideas clearly, and encouraged students to use their own voice and express their ideas in an authentic way [18]. A metasyntesis by Mnkandla and Minnar about the use social media in learning revealed that the media can help learner to organize and co-create knowledge. Mnkandla and Minnar suggested that this can only happen in a safe and supportive e-learning where deep learning is facilitated through building trust in one another and in the learning process [31].

Secondly, the average score of LMS quality is 4.33. The quality of LMS was measured by 5 dimensions of a good LMS that is proposed by DeLone and Mclean namely information quality, system quality, service quality, intension to uses, user satisfaction and net benefits [27]. It

means that the LMS has fulfilled a good LMS. However participant's complaint that LMS still lack of audiovisual and pictorial information. The development team embedded video in every learning activity in LMS but the participants need more videos to deliver confirmation or feedback. Furthermore, the learning resources that are presented in the web format should be completed by pictorial information like illustration pictures, concept maps, tables, graphics and so forth.

Thirdly, the tutor's service is very satisfying with the average score of 4.58 however there are two aspects that still have score below average, namely the aspect of giving motivation and respond speed. This is an indication that the use of EL in the online learning environment helps the tutor to serve participants more intensive and systematic but need to increase efforts to motivate participants and increase the speed of response. This is important because motivation in online learning is one of main factor that determines participants successful. Bawa stresses that because online courses are heavily self-directed and self-learned, motivation can be an urgent factor in attrition [5]. Other than that, slow respond of tutor can disappoint participants that leads to attrition. To cope with it, the tutor has to apply better technics and tools.

Fourth, problems that still cannot be resolved in this development is the learning pace, delay in completing assignment, and scores under passing grade in the first try of formative and summative tests. Almost all participants have experienced delays in completing assignments and 7 of 27 participants (25%) were always late. It has been discussed that internal factors are dominantly determine the phenomena, but it should be noted that the learning environment has not successfully solved the problem. It needs further study to identify main factors that can be considered to be a better course design.

Fifth, the low score at the first try indicates the low retention. The participants successfully improve the score after remediation but it causes a delay to move to the next activity. The abstract conceptualization as a stage in EL that is dedicated as a central activity to grasp learning contents particularly is not strong enough to help participants grasping the concept. It could be that the learning activities that are provided in LMS are not good enough to help participants achieve the learning goals. It is recommended to reconstruct better and more meaningful activities. Some examples like building student's rapport that has been already proven by glazier [32], and adding some flipped classroom techniques like using online quizzes and gaming [33] need to be considered.

Sixth, several limitations can be noted in the study that could be reckoned. Firstly, the real learning validation is only a secondary group of teachers. In this regard this research finding cannot be generalized to the whole teacher population. Secondly, the research cannot explain factors that constrain the effectiveness of the course design in receiving learning goals. It needs further study to find the factors that can be considered to revise the course design.

Thirdly, the course is lack of collaborative activities that can support the process of social learning construction in EL. It needs resetting some individual activities to be collaborative activities.

VI. CONCLUSSION

This research and development reveals that Experiential Learning (EL) can be incorporated to MOODLE and built on rich learning environment that leads to better learning. The learning environment has successfully increase retention rate and graduation rate. The retention rate increased from 82.36 after ELT used to 86.48 while the graduation rate increased from 56.24% to 85.00%.

In conclusion, Experiential Learning Theory (ELT) is a superior strategy to support good online learning environment because the combination of prehension and transformation in the learning cycle provides deep learning activities. The theory can be incorporated with MOODLE Learning Management System (LMS) platform to build an experiential e-learning (ee-learning). In the learning environment, four ELT learning syntaxes can be used to arrange systematic learning activity. The hybrid of ELT and MOODLE can be used as a framework to design online learning environment.

The research and development has constructed an online training course in CAR subject based on the framework. The course was developed using Bates instructional development model consists of three main activities (categories) i.e. program orientation, learning activity and evaluation. The learning activity is divided into nie activities and every activity provides four learning sessions following experiential learning syntax. The participants should follow every activity and session orderly because the course uses mastery learning principles. For the purpose the LMS applies an enrolment system in every learning activity and a restriction system in almost every session.

The course has been validated through three steps, team validation, expert validation and real learning validation and has been presented in *http://e-teachertraining.net/*. The evaluation shows the data of completion rate reaching 85% and the retention rate is 87.30% but some participants have problems to get score in the first try in the formative and summative test, and about 25% participants were late to complete activities. The LMS that is constructed reaches a good qualification but it is recommended to revise some activities to provide more interesting and meaningful. Furthermore, the quality of LMS and tutor's services were perceived good but should be increased in the information completeness, audiovisual media, motivation form tutor, and the pace of tutor's services.

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