

Learning Motivation increased due to a Relaxed Assessment in a Competitive e-Learning Environment

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Abstract— In this work, e-learning is used to increase learners' motivation and competence in addition to learning complementary environment. This work is based on the 7-years of hybrid e-learning classes on Operating System, Computer Network, Network Security, Network Management subjects at 3 Indonesian universities, namely, Surya University, STKIP Surya, and IBI Darmajaya. Most of STKIP Surya's students are from Papua and need more attention and motivation than others. Relaxed assessment processes are performed on each module in addition to mid term and final exams. On average, there are 12-18 modules in each subject matter. To motivate the learners, they may perform as many exams as ones' wish to attained the highest possible mark within the semester on all exams and quizzes. Relaxed assessment processes to attained maximum grades seems to increase the learners' motivation as some learners' retrying in exceeding 50 times for the 100 questions final shown in the Level of Competency (LoC) measurement. In addition, to anticipate, any cheating, eliminate remedial and cost savings, all exams are done on moodle via web. Such method of a whole semester relaxed assessment equipped with about 2000-6000 questions bank per subject and is for the first time performed in Indonesia. This study is also found an increase in the majority of learner's understanding on the subject is very good without remedial. Thus, e-learning seems not only complement learning processes but also able to motivate and to improve the competence of learners as well creating healthy competitive environment among learners.

Keywords—E-learning, Relaxed Assessment, motivation, Level of Competency

I. INTRODUCTION

Implementation e-learning in campuses seems to be steadily increased as more universities own and run e-learning websites. The current use of e-learning is normally as a complement to the learning process to deliver teaching materials [1]. Low motivation, urge to learn and boredom are observed in learners while accessing e-learning sites [2].

Previous researches have been done to improve the learners' motivation, such as using a learning style detection approach

[3][4][5][6]. The results showed that the learners' motivation learning style was raised.

The learners' motivation is dynamic, various aspects, such as, the learning subject, pressure and urge to learn may contribute to it. Thus, competency achievement pace may be different for different topic and learner. Methods needs to be examined to maintain and to push the motivation, pressure as well as urge to learn.

This work is based on our experience in seven (7) years implementation of hybrid e-learning classes on Operating System, Computer Network, Network Security, Network Management subjects at 3 Indonesian universities, namely, Surya University, STKIP Surya, and IBI Darmajaya. A relaxed assessment processes are performed on each module of the subject in addition to mid term and final exams. On average, there are 12-18 modules in each subject matter.

II. MATERIAL AND METHOD

A. Development of E-Learning

Development of e-learning has been increased and resulting several several studies. Several researches have been done to optimized the e-learning processes. Some of the main obstacles in using e-learning, i.e., boredom, demotivation and eventually leads to drop out [7][8][9] needs to be overcome.

One possible cause of boredom and lack of motivation and thus drop out is the lack of personalization given to learners [10][11]. Thus, ability to suite each learners' pace in learning would be substantial.

B. Taking Research Data

This work use e-learning website build on Moodle Learning Management System (LMS) at <http://lms.onnocenter.or.id/moodle/> for computer network Surya University course and network management IBI

Darmajaya graduate course, and <http://lms.stkipsurya.ac.id> for computer network STKIP Surya course. In our sample classes, there are 17 students participate in computer network class in Surya University, 35 students participate in computer network class in STKIP Surya, and 31 graduate students in network management class at IBI Darmajaya.

The learners' profile of these three (3) universities is fairly different. The majority of STKIP Surya learners is from Papua, Eastern Indonesia islands, and some from Riau islands. The one from Papua and eastern Indonesia may need more attention as well as different approach to motivate and to increase urge to learn. While the majority of Surya University students are from Jakarta and java families. The IBI Darmajaya graduate students are a little bit older than the other two universities and mainly workers, teachers in South Sumatera and surrounding areas.

C. Research Data Retrieval Process

Research data is taken from the eighteen (18) quizzes, mid test and final exam in the course. A sample of one semester running course was taken in three (3) different universities. The learner may took the exam multiple times within the semester. Since ample questions available in the question bank, a relaxed assessment may be performed. In contrast to conventional assessment, in a relaxed assessment process, the learners may perform as many exams as ones' wish to attained the highest possible mark within the semester on all exams and quizzes. To anticipate, any cheating and eliminate remedials, all exams are electronically performed on moodle via web. In addition, exam time is limited to one (1) hour for 100 questions for mid and final exams.

Since all processes including assessments are electronically performed on moodle. Thus, no paper based processes are involved. Learners may performed their assessment at anytime and anywhere including from their comfort home. It, in turn, significantly reduces campuses' operating costs. to increases competitiveness, intermediate attained mark is weekly published on the web available for all learners as well as public to see. It, in turn, significantly increase pressure among learners to perform much better in each quiz and exam.

Since the exams may be electronically performed many times, the total processed marks reaches a large number of data. For example, one of the student Yomilera Yikwa from Papua took 49 times mid term exam and 121 times final exam. The Level of Competency (LoC) measurement will later clearly show that a more relaxed assessment enable learner's motivation and pressure to learn the subjects.

D. Research Data Evaluation

This paper, Computer Network course at STKIP Surya, Surya University and Network Management graduate course at IBI Darmajaya will be closely examined and compared. These three courses are fairly similar in content, number of quizzes with 2000 questions bank. We will be closely examined and compare the attempts and, thus, learner's motivation to reach highest mark.

Conventional LoC measurement in normal assessment

process may measure the level of learners' competency. In contrast, LoC measurement in a relaxed assessment processes may also evaluate learners' persistence and pressure to reach the highest mark which is not embedded in a more conventional learning method. The persistence measurement may be for the first time realized in formal Indonesian e-learning environment.

III. RESEARCH METHOD

The Methodology Research conducted in this study can be seen in Figure 1.

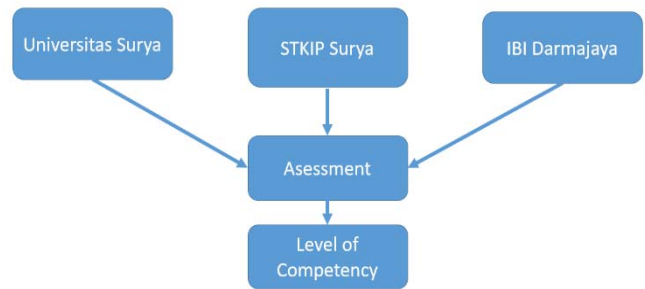


Figure 1 Research Method

Figure 1 shows the used research method to do Student Assessment Evaluation (SAE) in three (3) campuses. In a relaxed assessment process, the students may perform as many exams as ones' wish to attained the highest possible mark within the semester on all exams and quizzes. Such approach is used in the attempt to increase the learners' motivation as well as providing pressure and urge to learn to the learners. The Level of Competency (LoC) measurement will shows that such approach significantly improve competency attained and remove any remedials in the process.

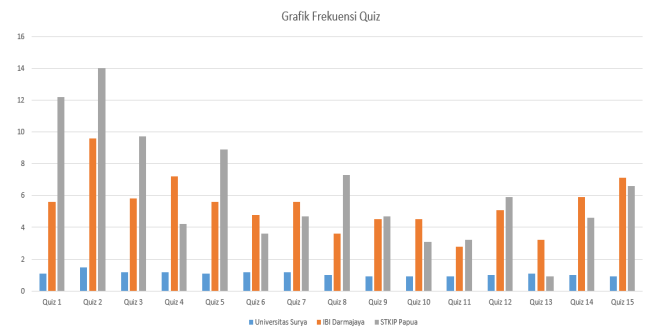


Figure 2 Average Attempts per Quiz of 3 Campuses

Figure 2 shows the average number of attempt performed per learner perquiz in 3 campuses for computer network course in STKIP Surya and Surya University and Network Management in IBI Darmajaya. The figure clearly show significantly more attempt performed by learners at STKIP Surya as compared to the other 2 campuses. Papuan and Eastern Indonesian learners must struggle to do more quizzes to achieve good grades. Quiz re-attempt process is very easy and no cost within the e-learning system. Quiz results can immediately be seen by the learner upon quiz submission. This directly motivates learners to achieve higher marks. Motivation may be internally driven from within learner-self and externally by seeing other learner's mark.

The learners at IBI Darmajaya requires much lower number of attempts perquiz as compare to STKIP Surya at achieve highest marks. It doesn't mean the the learners at IBI Darmajaya is not motivated. It is to say, the learners at IBI Darmajaya require less number of attempt to reach high mark as compare to STKIP Surya.

Unlike STKIP Surya and IBI Darmajaya, many learners at Surya University achieve good mark in their first attempt in each quiz. In other words, not many learners at Surya University re-attempt the quiz after their first attempt. In rare occasion, the learner at Surya University re-attempt their quiz up to five (5) times. Most Surya University student, reach high mark after their first attempt

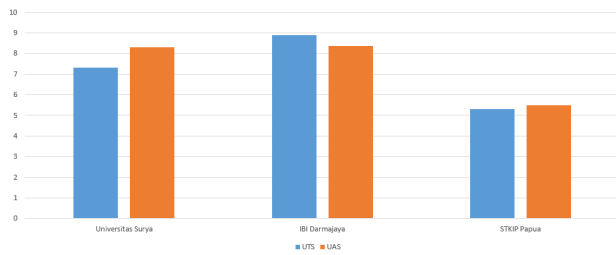


Figure 3 Average Mid Semester and Final Exam mark of the 3 campuses

Figure 3 shows the average Mid Semester and Final Exam mark of the 3 campuses. The comparison shows learners at IBI darmajaya achieve an average better mid term mark and lower in final exam. In contrast to the other 2 campuses, average mark at Surya University shows a significant increase in final exam as compare to mid term exam. A somewhat increase of average final exam mark is also observed in STKIP Papua.

We may note that on-line exam schedule is fairly relaxed and not at all overlap with other exam schedule of other courses. Thus, during mid term on-line exams, students is fairly relax and no pressure from exams and assignments. However, at the end of semester, most students are normally working under pressure to complete the assignment and exams of other courses.

Figure 2 and 3 show clearly that the motivation and spirit to learn much increase as learner may see the result of their exam immediatly after completing the exams. In contrast to conventional assessment proses, it requires longer time to obtain the results. Such long waiting time is one of discouraging aspect in the learning processes.

Immediate release of mark of all quiz, mid term, and final increase motivation and feedback to the learner to concentrate their learning effort. In this study, the number of attempts to do the exams is not limited within the semester. In addition, since only the highest mark is taken into account for the final mark of each quiz, it significantly boost the motivation of the learners to re-attempt the exam and to learn.

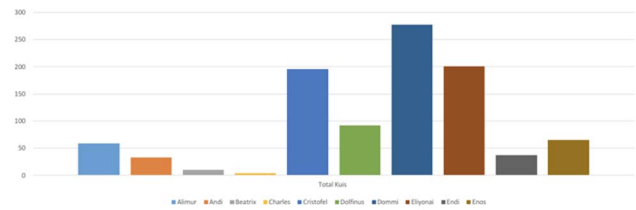


Figure 4 Total Quiz enrolled in 1 semester by STKIP Surya Student

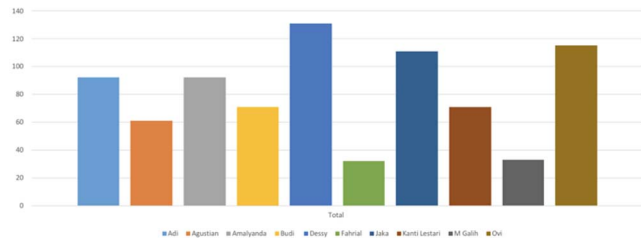


Figure 5 Total Quiz enrolled in 1 semester by IBI Darmajaya Student

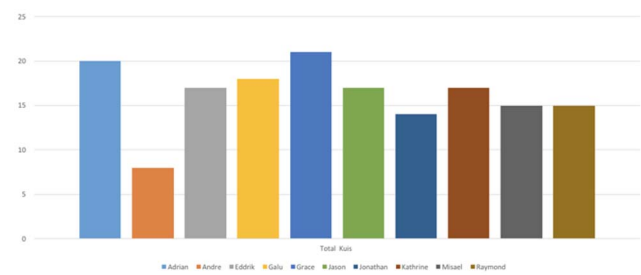


Figure 6 Total Quiz enrolled in 1 semester by Surya University Student

Figure 7,8 and 9 show a sample growth of mark in a single quiz with multiple attempts of one students of STKIP Surya (Figure 7), IBI Darmajaya (Figure 8), and Surya University (Figure 9) who do the exam multiple attempts. The Figures clearly shows an increase trend from its initial attempt to to final attempts and all consistent for all three (3) universities. Thus, it indicate the relaxed assessment process facilitate an increase in level of competency in its particular subject assess in the quiz.

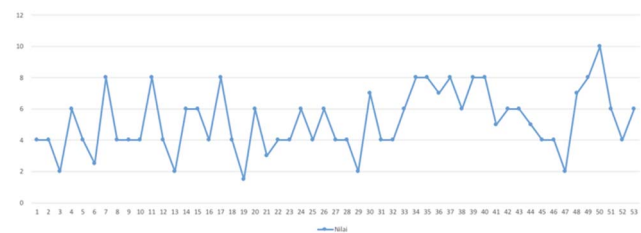


Figure 7 Relax Aesment Quiz 1 STKIP Papua Student

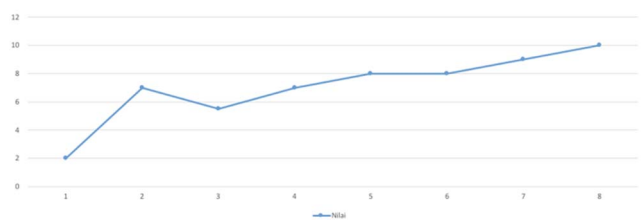


Figure 8 Relax Aesment Quiz 1 IBI Darmajaya Student

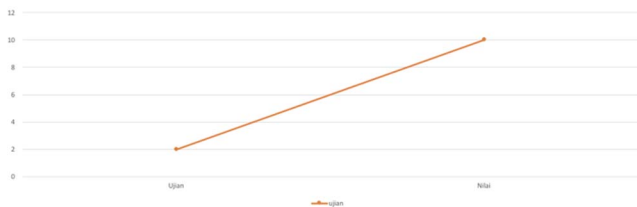


Figure 9 Relax Assessment Quiz 1 Surya University Student

IV. RESULT DISCUSSING

This study found that:

1. E-Learning may be used beyond complementing learning processes.
2. A relaxed assessment method allowing learner to perform as many exams as ones' wish to attained the highest possible mark. This, in turn, enables learner's motivation, persistence and create urge to learn the subjects. Such method is for the first time performed in Indonesian universities.
3. Unlike conventional assessment method, whole semester relaxed assessment method allow us to measure learners' increase in motivation and persistence in LoC Measurement.
4. The use of e-learning adding a significant amount of benefits including anytime and anywhere learning environment to the learners while not increasing, in fact, reducing, campuses' operating costs.
5. Allowing students to perform unlimited attempts and taking into account only the highest mark of each quiz seems to be significantly boost the motivation to re-attempt the exam and to learn, and, in turn, increase the average achievable mark without having remedial.
6. Relaxed Assessment processes with unlimited attempts allowing those who are motivated and wants to struggle to be able to achieve good grades. It is rare in conventional learning environment.

Further research related to learning agent to be explored to provide recommendation of teaching materials in accordance with the evaluation results.

The influence of teaching materials to improve the motivation of learning becomes one of next issue that needs to be investigated.

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