

**ASSESSMENT TECHNIQUES IN EDLI-BASED ONLINE LEARNING TO
MEASURE THE LEVEL OF STUDENT MOTIVATION
AND LEARNING ENGAGEMENT**

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ABSTRACT

Assessment in the process of teaching and learning activities online absolutely must be done to measure the success of a learning system run by a lecturer. Almost all lecturer have difficulty in developing self-assessment tools in online learning. The ability of lecturer in developing assessment tools is one of the descriptions of the quality of learning in higher education. Some lecturer do not understand good and correct assessment tools in the final process of a online learning activity, so it can be said that highr education have not been able to develop assessment tools independently. This study aims to determine the effect of Assessment techniques in EDLI-based online learning to measure the level of student motivation and learning engagement. This study used a quasi-experimental research type with a one-group pre–test–post–test research design with a total of 15 lecturers at universities in North Maluku province who carry out online lectures on certain subjects. The data collection method used a questionnaire. The data analysis used was: 1) Descriptive statistics; 2) Analysis assumption test; and 3) Hypothesis testing. The results show that EDLI-based lecture process assessment technique guidebook has a significant effect on increasing the ability of lecturers to provide accurate assessments of the level of motivation and level of student learning engagement in online lectures, as evidenced by 15 lecturers experienced an increase in scores based on the results of filling in the assessment scale in online lectures. This research has implications for the education sector to increase The lecturer's ability to carry out accurate assessments is related to the level of student motivation and involvement during online lectures that use video conference-based media so that the assessment of student performance in attending lectures becomes more effective.

Keywords: Assessment techniques in EDLI-based, online learning, motivation and learning engagement

ABSTRAK

Penilaian dalam proses kegiatan pembelajaran daring mutlak harus dilakukan untuk mengukur keberhasilan sistem pembelajaran yang dijalankan oleh dosen. Hampir semua dosen mengalami kesulitan dalam mengembangkan alat penilaian mandiri

dalam pembelajaran daring. Kemampuan dosen dalam mengembangkan alat penilaian merupakan salah satu indikator kualitas pembelajaran di perguruan tinggi. Beberapa dosen tidak memahami alat penilaian yang baik dan benar dalam proses akhir kegiatan pembelajaran online, sehingga dapat dikatakan bahwa pendidikan tinggi belum mampu mengembangkan alat penilaian secara mandiri. Penelitian ini bertujuan untuk menentukan pengaruh teknik penilaian dalam pembelajaran online berbasis EDLI untuk mengukur tingkat motivasi dan keterlibatan belajar mahasiswa. Penelitian ini menggunakan jenis penelitian quasi-eksperimental dengan desain penelitian satu kelompok pra-tes-pasca-tes, melibatkan 15 dosen di perguruan tinggi di Provinsi Maluku Utara yang melaksanakan kuliah daring pada mata kuliah tertentu. Metode pengumpulan data menggunakan kuesioner. Analisis data yang digunakan meliputi: 1) Statistik deskriptif; 2) Uji asumsi; dan 3) Uji hipotesis. Hasil menunjukkan bahwa panduan teknik penilaian proses perkuliahan berbasis EDLI memiliki pengaruh signifikan dalam meningkatkan kemampuan dosen untuk memberikan penilaian akurat terhadap tingkat motivasi dan tingkat keterlibatan belajar mahasiswa dalam perkuliahan daring, sebagaimana dibuktikan oleh 15 dosen yang mengalami peningkatan skor berdasarkan hasil pengisian skala penilaian dalam perkuliahan daring. Penelitian ini memiliki implikasi bagi sektor pendidikan untuk meningkatkan kemampuan dosen dalam melakukan penilaian yang akurat terkait tingkat motivasi dan keterlibatan mahasiswa selama kuliah online yang menggunakan media konferensi video, sehingga penilaian kinerja mahasiswa dalam mengikuti kuliah menjadi lebih efektif.

Kata Kunci: Teknik penilaian dalam pembelajaran daring berbasis EDLI, motivasi, dan keterlibatan belajar

A. Pendahuluan

The internet has revolutionized our work methods and is set to significantly impact education as its use and capabilities as a communication medium expand. Scholars acknowledge its vast potential as an educational resource, and many universities are increasingly embracing online learning to provide accessible, up-to-date education to individuals of all ages and

socioeconomic backgrounds, free from time and location constraints. In the realm of online learning, the absence of face-to-face (F2F) interaction poses a challenge for instructors to effectively communicate their intentions and offer suitable feedback, which is crucial for achieving learning objectives. This dynamic affects student motivation and engagement levels during online courses, as well as the degree of

control instructors have over their students (Adedoyin & Soykan, 2023).

Thus, a lecturer needs a measurement procedure guide that can evaluate student motivation and involvement during lectures, which is a psychological aspect. Assessment for learning is a teaching approach that generates feedback to enhance student performance. This method engages students more in the learning process, helping them gain confidence in their expected learning outcomes and standards. The goal of assessment for learning is to bridge the gap between a student's current status and their learning and achievement goals. Lecturers can select and use assessment techniques that meet their specific needs. Formative assessment is the most suitable technique for evaluating the lecture process, as it monitors student learning to provide continuous feedback that instructors can use to improve their teaching and students can use to enhance their learning. Effective assessment for learning strategies lead to continuous improvement in learner progress. The key feature of assessment for learning is the effective feedback teachers provide to students about their

progress (Almahasees, Mohsen, & Amin, 2021). The effectiveness of this feedback depends on its quality and how learners receive and use it. High-quality interactions between instructors and learners are crucial, requiring a blend of assessment skills, subject matter knowledge, and teaching expertise. Instructors must be genuinely engaged in the learning and assessment process and should identify their own values and goals for teaching and learning.

Applied Behavior Analysis (ABA) is a method for identifying changes in behavior. Originating from the science of behavior, ABA helps individuals learn and modify behaviors, potentially enhancing their quality of life. Rather than being a single technique, ABA encompasses a wide range of procedures and principles designed to teach new skills, generalize behaviors across different settings, and reduce challenging behaviors (Lavay, Henderson, French, & Guthrie, 2012). In the context of online lectures, assessments often face inconsistencies due to the systematic approach required to gather information about a learner's processes using information and communication technology. This

approach aims to infer the individual's capabilities accurately. Consequently, lecturers need to provide optimal assessments in online settings to ensure students receive meaningful feedback and interactive support. However, many lecturers lack a comprehensive understanding of online lecture characteristics, particularly concerning student motivation and engagement. They often view student motivation and involvement as merely the time spent on tasks, overlooking the broader aspects of student engagement, which include both the duration and the enthusiasm of participation in classroom activities. As a result, lecturers tend to rely on summative assessments that focus on grades, rather than formative assessments that consider student motivation and involvement (Phuong & Vo, 2019).

In higher education, active student participation is essential for achieving success in the learning process. However, as the duration of learning increases, student engagement often decreases. Therefore, it is crucial for educators at all academic levels to understand, facilitate, and assess engagement effectively (Tang, Jun Shi, & de

Guzman, 2022). Interviews revealed that some lecturers did not assess the online lecture process due to several factors, including limited face-to-face interaction, which makes it harder to accurately gauge student understanding. Unlike traditional classrooms where instructors can observe students' nonverbal cues and body language, online settings lack this advantage. Additionally, lecturers face challenges in ensuring the validity and reliability of assessments, as students complete them independently, increasing the risk of cheating or using external resources. This contrasts with classroom settings where lecturers can monitor students during assessments to ensure their integrity. Implementing Event, Duration, Latency, and Interval (EDLI) assessment procedures can help lecturers systematically and accurately assess student performance in online lectures. These procedures are based on the principles of applied behavior analysis (ABA), which focus on observable, objectively defined, and measurable behaviors. ABA also includes social validation, which, when combined with objective measures, allows lecturers and practitioners to evaluate the

effectiveness and social acceptability of learning behaviors (Anderson, Rodriguez, & Campbell, 2015).

Using this model allows for the creation of measurements to detect and compare the effects of different environmental arrangements on socially significant behaviors. Lecturers need measurement for several reasons: 1) It helps optimize their effectiveness in the learning process; 2) It enables verification of the legitimacy of student learning outcomes; 3) It ensures accountability to students regarding their learning outcomes (Susanto, Rachmadtullah, & Rachbini, 2020). One way to ensure students remain motivated and engaged in online lectures is through repeatability measurements, which assess how often a behavior can be counted or occurs repeatedly over time. Temporal extent measures the amount of time a behavior takes, while temporal locus identifies when the behavior occurs. Various types of measurements can be applied to behaviors in online learning. Event recording counts the number of times a behavior occurs, timing procedures measure aspects of behavior related to time such as duration, response latency, and interresponse time, and

time sampling measures behavior based on different time samples (Baharuddin, Masrek, & Shuhidan, 2020).

The EDLI procedure for assessing online lectures helps evaluate the relationship between teaching methods and their effects on student engagement, academic performance, and intrinsic motivation. This assessment allows lecturers to differentiate between the engagement levels in active and passive learning, as well as identify various engagement patterns. Lecturers can also examine how student participation, as measured by interaction with digital devices, influences academic performance. To ensure successful online learning experiences, it is crucial to promote student readiness. Students must adapt to the technological, managerial, pedagogical, and social demands of online learning (Agus, Juliadharma, & Djamaluddin, 2023). Essential skills for students include articulation (awareness of one's learning and thinking), self-regulation (planning and adjusting learning strategies to meet goals), and self-evaluation (monitoring understanding and seeking help when necessary).

Students need well-developed lifelong learning skills and strategies such as goal setting, action planning, selecting and assessing learning strategies, choosing and evaluating resources, reflective learning, and time management.

This study differs from others by employing the Applied Behavior Analysis (ABA) procedure, which involves evaluating Event, Duration, Latency, and Interval to measure student motivation and engagement during online lectures—an approach rarely used in higher education online settings. This method allows lecturers to more accurately assess student learning outcomes, particularly those related to motivation and involvement, which are often neglected in online education. As online lectures become more prevalent, comprehensive assessment procedures like EDLI (Event, Duration, Latency, Interval) are increasingly necessary for lecturers. EDLI focuses on individual learning behaviors, making it easier for lecturers to apply. Many lecturers struggle with developing self-assessment tools, which is critical for ensuring high-quality learning in higher education. Some lecturers lack an understanding of effective

assessment tools, particularly in the context of online learning, highlighting the need for better assessment development in higher education (Hunter et al., 2022).

This study, grounded in existing issues and prior research, aims to evaluate the effectiveness of the EDLI assessment technique in measuring student motivation and engagement in online lectures. The goal is to offer an alternative assessment model for lecturers in online learning environments. By implementing the Event, Duration, Latency, and Interval (EDLI) assessment method, the study seeks to accurately gauge student motivation and involvement, which are crucial for enhancing learning outcomes. Additionally, the research highlights the importance of motivation in helping students persist through challenges and setbacks, maintaining their commitment to the learning process and finding ways to overcome difficulties.

B. Metode Penelitian

The type of research in this research was quasi-experimental, which means that experimental research uses only one group, which is the experimental group, which will not use the control group as the

comparison group. Apart from that, this research also uses intact groups based on existing lecture classes in accordance with the courses being taught by lecturers using online lectures, so that there is no random assignment process in placing research subjects in experimental groups (Guevara, Verdesoto, & Castro, 2022). What is meant by experimental group in this research is a grouping based on the lecture process carried out by lecturers via online media or devices, not grouping experimental classes based on the number of students, in other words the number of experimental groups consists of 10 lecture classes taught by lecturers who use online lectures. The level of student motivation and learning engagement is measured using the motivation and learning engagement scale given to students taking online lectures and is used as additional information in research to measure the level of student motivation and learning engagement, but this is not the main thing because of the data collection instruments used.

The most important thing in this research is the online learning assessment scale obtained from

lecturers in the form of a Likert scale as a response option and has gone through content validity testing from educational evaluation experts. Tests were given to lecturer to before and after application of the EDLI assessment technique to determine the difference in results. This study used a one-group pre-test and post-test research design (Cresswell, Plano-Clark, Gutmann, & Hanson, 2003). Two assessments were held in the class chosen as an experimental class: the first pre-test to see the group condition before application of the EDLI assessment technique and the post-test to see the difference in group conditions after being given different application of assessment techniques in online lectures. The research subjects were 10 lecturers spread across 5 universities in North Maluku province which implemented online lectures. The research design scheme of one group pre-test – post-test can be seen in the table below:

Table 1. One Group Pretest-Posttest
Research Design Scheme

Pre-Test	Treatment	Post-Test
O1	X	O2

Information:

O1 = Initial assessment (Pre-Test) was held in the experimental

group before being given the experiment;

X = Trial (Treatment), which was carried out in the experimental group in which this study used an experimental application of the Event, Duration, Latency, and Interval (EDLI) Assessment Techniques in Online Lectures;

O2 = Final assessment (Post Test) was carried out in the experimental group after being given the experiment.

The population of this research was lecturers at 5 universities in North Maluku province who are implementing online lectures for semester 5 students in the 2022-2023 academic year. The sample for this study was 10 lecturers selected from each university totaling 10 lecturers who were then designated as the experimental group. This study used data from pretest and post-test classes. The data pretest results from online lecture assessment process before using the EDLI assessment technique. while the data post-test results from the application of EDLI assessment techniques in the online lecture process. The data obtained in this study was in the form of quantitative data. Data was collected

by giving pretest and post-test to lecturers after applying the EDLI technique using research instruments in the form online learning assessment scale. Pretest was given at the beginning of online lecture process, namely when when the lecturer has not obtained and implemented guidance on assessment techniques in online lectures using the EDLI procedure.

This aims to find out the initial abilities or skills of lecturers in conducting assessments of the lecture process and post-test given after applying EDLI assessment techniques in the online lecture process and post-test given after applying the EDLI assessment techniques by the lecturer. Giving a post-test helped monitor The procedures carried out by lecturers in providing assessments in online lectures are mainly related to student motivation and learning engagement. The data analysis process consisted of three main stages: firstly, a descriptive statistical analysis was conducted to offer a concise overview of the data. Following this, an assumption test was performed to evaluate the prerequisites of the analysis, wherein this study specifically employed a

normality test assumption. Lastly, hypothesis testing was executed to determine whether there exists a significant impact of Assessment techniques in EDLI-based online learning on both student motivation and learning engagement levels.

Parametric statistical tests (such as the Test-t) were utilized if the data adhered to the assumption test, while non-parametric statistical tests (like the Wilcoxon Test) were employed if the data failed to meet the assumptions. Assessment techniques in EDLI-based online learning were developed based on development research procedures consisting of: Studying the related literature, Need analysis, Framework preparation, Developing Preliminary Form of

Product, Preliminary Field Testing, and Main Field Testing The influence on the experiment in the form of applying Assessment techniques in EDLI-based online learning on both student motivation and learning engagement levels can be seen based on the difference in the results of pre-test and post-test.

C.Hasil Penelitian dan Pembahasan

This study uses Assessment techniques in EDLI-based online learning, which is believed to accurately assess the level of student motivation and engagement during online lectures. The results of the experimental class research can be seen in the descriptive value analysis pre-test and post-test, as shown in Table 2.

Table 2. Data. Average pre-test post-test

Data	Min	Max	Average
Pre-test	41	100	74
Post-test	43	112	80

Table 2 shows the average pre-test value of 74, with the lowest score at 41 and the highest at 100. Meanwhile, in the post-test, the lowest is 43, the highest is 112, and the average is 80. The average posttest value has increased compared to the pre-test value. The assumption test is conducted through the normality test

with the Kolmogorov-Smirnov test where $\alpha = 0.05$. The results are shown in Table 3. The significance value of the pre-test is $0,207 > \alpha$ indicating that the pre-test data is normally distributed, but the significance value of the post-test is $0.002 < \alpha$ so the post-test data is not normally distributed. Apart from that, because the number

of data is less than 30, it can be assumed that the data is not normally distributed, so to carry out hypothesis

testing it refers to nonparametric statistics conducted through Wilcoxon for hypothesis testing.

Table 3. Kolmogorov-Smirnov Test Results

	Statistic	Df	Sig
Pre-test	0,557	10	0,207
Post-test	0,641	10	0.002

The Wilcoxon test is used to test whether there are differences in the assessment of students' levels of motivation and engagement in online lectures using the EDLI assessment technique model.

in online lectures with the EDLI model is no different.

H1: The assessment of student motivation and learning engagement in online lectures with different EDLI models

H0: The assessment of student motivation and learning engagement

Table 4. Wilcoxon Test Results

	Posttest-Pretest
Z	-1.020a
Asymp.Sig (2-tailed)	0.03

Table 4 shows the results of the Wilcoxon test. The significance value is $0.03 < \alpha$, then it is rejected, which means that assessment of student motivation and learning engagement in online lectures with different EDLI models. The EDLI Model influences the accuracy of lecturers' abilities in assessing students' motivation and learning engagement in online lectures. Other information obtained from the Wilcoxon test is shown in Table 5. Table 4 shows the results of

the Wilcoxon test. The significance value is $0.03 < \alpha$, then it is rejected, which means that assessment of student motivation and learning engagement in online lectures with different EDLI models. The EDLI Model influences the accuracy of lecturers' abilities in assessing students' motivation and learning engagement in online lectures. Other information obtained from the Wilcoxon test is shown in Table 5. Table 5 explains that of the 10

lectures, no lectures experienced a decrease in post-test scores, no lecturer had the same value between post-test and pre-test.

Therefore, it can be concluded that The EDLI assessment model can significantly influence lecturers' ability to assess students' level of motivation and involvement in online lectures. This study's results align with the research of (Peimani & Kamalipour, 2021) states that lecturers who use appropriate assessment techniques in online lectures can provide accurate information about how well students are learning, thereby contributing to pivotal decisions that will affect

students' future. In online lectures, assessment techniques are needed that can truly measure progress over the course of instruction and also present performance criteria that are transparent to students through the use of essential questions and scoring rubrics, so that students can find out what learning behavior can be demonstrated during lectures. online which contributes to the quality of performance assessment during online lectures. Assessment in online lectures also plays an important role in student lectures that tracks how well the class, as well as individual students, grasps the subject matter.

Table 5. Wilcoxon Test Results

Ranks				
		N	Mean Rank	Sum of Ranks
Posttest - Pretest	Negative Ranks	0a	0.00	00.00
	Positive Ranks	10b	7.50	74.00
	Ties	0c		
	Total	10		
a. Posttest < Pretest				
b. Posttest > Pretest				
c. Posttest = Pretest				

Motivation and learning engagement as psychological dimensions of each student need to be translated into observable behavior, especially in online lectures to determine the level of student

performance through a deep understanding of student characteristics, dimensions of the task, and characteristics of the environment (Alemayehu & Chen, 2023). If viewed from the perspective

of the characteristics of the environment, then online lectures as a learning environment certainly greatly influence the level of student performance because A functional approach focuses on identifying the environmental antecedents, consequences, and setting events viewed as important factors that may be functionally linked to specific behaviors. When indicators of motivational behavior and learning engagement are understood comprehensively by educators, the process of assessing student behavior becomes more accurate so that it has an impact on a program of positive behavioral support or academic instruction that is designed to help the student meet his or her needs in a more adaptive and appropriate manners. The use of the EDLI assessment technique model can enable lecturers to always maintain the quality of the lecture process even through online processes and also make more efforts to understand the characteristics of each student in depth, direct students more towards active learning in the classroom, and also provide awareness to lecturers about assessment practices. in higher education because of its influence on

learning, and being able to make changes during the lecture process.

Therefore, the results of this study can be implemented onwards. The EDLI assessment technique in online lectures can encourage lecturers to collect information regarding the performance and achievement of their students, especially Formative assessment occurs on a continuous basis throughout the course (Alemayehu & Chen, 2023). It encourages students to engage in the subject matter, which helps them become familiar with the information they are trying to learn. For effective formative assessment, active participation of the student and lecturer occurs (Jacoby et al., 2014). When students are actively engaged in the activities, Improvements in learners' performances are achieved through supportive feedback from various assessment tasks. The EDLI assessment technique is an assessment procedure for the learning process that refers to the principles of behavioristic learning theory which has one branch of science manifested in Applied Behavior Analysis (ABA) which emphasizes that a person's behavior can be assessed based on observable, objectively defined, and

measurable indicators. Apart from that, behaviorism as a learning theory is a basic competency possessed by every lecturer at the tertiary level which has even been applied in the lecture process based on the principle that people learn through their interactions with the environment so that learning is a change in observable behavior that results from experience . therefore, entirely under the lecturer control.

Every instructor should possess the ability to cultivate diverse assessment skills, as employing various assessment methods aids in adapting teaching strategies throughout the course to facilitate student learning. This is because research indicates that assessments not only gauge the extent of students' comprehension but also significantly contribute to the learning process itself. The "testing effect" phenomenon underscores that students derive greater learning benefits from repetitive testing compared to mere exposure to course material (Karpicke & Roediger, 2008). While exposure, such as through lectures or study sessions, aids in information retention, it is imperative for students to actively engage in

retrieving and applying that information. Regular assessments conducted throughout the duration of a course afford students the crucial practice opportunities necessary for effective learning.

The EDLI assessment technique for assessing students' level of motivation and learning engagement in online lectures will provide lecturers with feedback about their effectiveness as lecturers, and it gives students a measure of their progress as learners and also provides information on what, how much, and how well students are learning. every lecturer in higher education needs to be aware of the need for assessment in online lectures, namely how instructors assess student progress both formatively and summatively, how they distribute graded activities across an entire course, the issues involved in providing effective feedback, and the strategies with which they experiment to address these challenges. through the EDLI assessment model it can improve lecturers' abilities in (1) time management; (2) student responsibility and initiative; (3) structure of the online medium; (4) complexity of content; and (5) informal

assessment. Meanwhile, using assessment techniques to assess students' level of motivation and learning engagement in online lectures will make it easier for lecturer to understand process of gathering and analyzing data in an effort to determine what function an exhibited behavior in online learning. EDLI technical assessment is part of the behavioral assessment procedure which emphasizes assessing and measuring various constituents of a behaviour that are indicative of why a certain behaviour occurs and what causes that behaviour. These would include overt behaviours, feelings, and cognitions and their controlling variables that could be both from within the individual and outside of the individual.

EDLI assessment techniques can be successful when they focus on behavior. Both overt and covered behaviors are measured or evaluated as they occur in specific situations. Behaviors are observed at a specific time and in a limited location. Observers are trained in the use of various measurement techniques of behavioral assessment, recording of the same and collecting information in an objective manner. Observers are

expected to achieve a specified standard of consistency in their collecting data, recording the information and interpreting the data. Lecturers as educators at the higher education level must always have the ability to collect information regarding the performance and achievement of their students so that it leads to promoting student learning.

These abilities must be implemented in Behavioral Assessment procedures or related to the assessment of student performance in the lecture process. Behavioral Assessment is the technique to assess the behavior of the individual. Behavior assessment is very helpful to analyze the undesirable behavior and also helps in converting that behavior into desirable behavior. It includes a technique of Behavior Analysis which forms the foundation for all assessment and behavioral modification procedures. Behavior analyzes capitulates initial analysis of problem situations, the clarification of problems, motivation analysis, development analysis, analysis of self-control, analysis of social relationships, and analyzing the social-cultural-physical aspects of the environment. The value of behavior

asesmen dalam memberikan informasi yang komprehensif kepada dosen terkait dengan kinerja akademik mahasiswa karena terdapat proses gathering evidence allow colleges and universities to discover how well students are progressing toward the institution's overall and programmatic learning outcomes.

Schools could support academic development through behavior assessment, mainly for underachieving students. behavior assessment improves the retention of learning and the quality of students' work. To be effective in higher education contexts, learning assessment requires certain characteristics. First of all, learning assessment should be continuous. An episodic and occasional activity with learning assessment cannot allow students a meaningful opportunity to self-reflect on their own learning. Instead, "regular learning assessment can be motivational, as continuous feedback is integral to the learning experience, stimulating and challenging students". through learning assessment practices, students have the opportunity to understand the meaning of formative comments made either by the

teachers or their peers. Additionally, students can further modify their learning approaches based on their own understandings.

Therefore, assessment and measurement become even more crucial when face-to-face interactions are absent, as teachers can't rely on informal observation to gauge student responses, obtain feedback, and track progress. One advantage for students learning online is the elimination of classroom intimidation based on appearance or personality. The lack of in-person contact requires alternative assessment methods, such as online quizzes, multiple-choice questionnaires, and written assignments sent via email, which might be conducted differently in a traditional classroom. Many believe that the assessment process should be as comprehensive and transparent as the learning process itself. Additionally, concerns about the validity of assessments are important. In fully online environments, using multiple measures, both formative and summative assessments throughout the course, and electronic interactions with learners are effective practices. Since learners and instructors are not physically close, multiple measures

are essential to verify instruction and provide alternatives to face-to-face discussions (Barthakur, Joksimovic, Kovanovic, Richey, & Pardo, 2022).

E. Kesimpulan

Based on the results of data analysis and discussion as described above, it can be concluded that 1) There is a significant difference in the learning outcomes of students who initially studied using conventional learning models and after students studied with local wisdom-based self-directed learning models by a significant value of $0.03 < \alpha$ then it is rejected meaning that The level of student motivation and involvement in lectures based on assessments using EDLI assessment techniques and conventional assessment techniques are different from each other; 2) The average value of lecturer assessment abilities in online learning (post test) increases when compared to the average value of lecturer assessment abilities in online learning (pre-test) after applying EDLI assessment technique, from 10 lecturer, as many as all lecturers experienced an increase, and no lecturers skills decreased. This research has implications for online lectures at

universities the scope of education to add to scientific studies EDLI assessment technique to assess student academic performance in online lectures.

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