# Implementing Quilgo to Monitor Online Learning Evaluations: A Qualitative Case Study

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| Article Info | ABSTRACT |
|---|---|
| | The need for a secure and efficient educational evaluation system in the digital era has been growing, especially with the increasing adoption of online exams. However, security and integrity issues remain significant challenges for educational institutions. This study aims to evaluate the effectiveness of Quilgo in addressing these challenges through its personalized registration system and proctoring features. This research involved observations of several educational institutions implementing online exams using Quilgo. It also included interviews with educators and exam participants as the main data sources. The participants were teachers and students with direct experience using Quilgo in various exam settings. The study begins with data collection through direct observation of Quilgo's use in several educational institutions that have adopted online exams and interviews with educators and exam participants. The collected data include user experiences related to registration ease, technical obstacles, and the effectiveness of proctoring features in preventing cheating. The analysis used qualitative and quantitative approaches to assess the application's efficiency and reliability across different exam scenarios. Moreover, the data analysis process was carried out using behaviorism theory (Skinner, 1963), which highlights the presence of stimuli, responses, and reinforcement—both positive and negative—in the learning evaluation process. The research results show that using personalized link-based registration in Quilgo facilitates registration and enhances security, especially when combined with domain-based email restrictions. Moreover, the proctoring feature that monitors the visual activities of exam participants proved effective in maintaining exam integrity, although challenges related to internet connectivity and device compatibility remain. Despite remaining challenges such as internet connectivity and device compatibility, the results imply that Quilgo has the potential to support more trustworthy and effective online examinations in educational settings. |

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## 1.   INTRODUCTION

In the current digital era, integrating technology has significantly transformed education. This phenomenon also influences teaching methods, leading to the emergence of the online learning concept. Online learning is referred to as remote teaching rather than distance learning. Lamsal [1] distinguishes between the two, noting that remote teaching is not perceived as a permanent approach, allowing for a potential return to traditional instruction. However, this transformation does not diminish the essence of learning. The demand for effective, efficient, and user-friendly learning models has been recognized and developed by experts to ensure learners have the autonomy to manage their learning time and environment [2]. In online learning, adjustments in both teaching methods and supporting media are essential, including the provision of digital learning platforms [3], [4], [5].

Online learning platforms have become commonplace in many educational institutions, allowing broader access and increased flexibility for learners. These learning media platforms are utilized in accordance with the needs of both students and educators. The selection of appropriate learning media "greatly influences learning outcomes" [6]. However, challenges remain in effectively and efficiently monitoring the evaluation process in the context of learning evaluation. Despite these challenges and limitations— including the constraint of distance—the learning evaluation process must still be conducted [7].

To address these challenges, Quilgo has emerged as a promising solution. Quilgo is an innovative platform designed to facilitate the online learning evaluation process by providing various features supporting teaching and learning activities. This platform leverages artificial intelligence (AI) and data analytics to offer real-time insights into students' learning progress. Quilgo is also integrated with Google Forms as its primary tool. Google Forms is chosen for its status as an open-source application, its online accessibility, and its simplicity in design and use [8]. Adding Quilgo to Google Forms aims to enhance its benefits, including increased accuracy, fairness, and time tracking [6].

Quilgo is not merely a tool for creating and managing online quizzes or tests, but also offers additional features such as automated grading, instant feedback, and statistical analysis of individual or group performance. These features make Quilgo a valuable tool for educators seeking to improve the effectiveness of the evaluation process.

In the context of this journal, we aim to explore the implementation of Quilgo as a tool to monitor the online learning evaluation process. Our research will examine how Quilgo can efficiently represent the evaluation process, provide timely feedback to learners and instructors, and facilitate better decision-making to enhance the overall quality of learning.

We adopted a holistic and structured approach to implement Quilgo as a tool for monitoring online learning evaluations. First, we conducted an in-depth analysis of the needs and challenges educators and learners face in online learning evaluations. Then, we reviewed the relevant literature to understand the theoretical foundations that support using Quilgo in this context.

The next step involves designing an implementation strategy considering various technical, organizational, and pedagogical aspects. Researchers have developed a comprehensive guide to using Quilgo, ensuring instructors and learners can make the most of its features. During the implementation, we conduct training and support sessions for users to ensure a solid understanding of Quilgo's functions and how to integrate it optimally within the evaluation process.

In addition, we carry out ongoing evaluations of Quilgo's use, assessing its efficiency, objectivity, accuracy, and fairness in the evaluation process. We also maintain open communication channels with instructors and learners to collect continuous feedback, enabling us to make necessary improvements and adjustments.

This problem-solving approach emphasizes collaboration between Quilgo users and educational researchers to ensure that Quilgo's implementation positively and significantly impacts the quality of online learning evaluations.

This study aims to explore the practical implementation of Quilgo in monitoring online learning evaluations, focusing on its registration system and proctoring features as tools to ensure exam integrity and efficiency. Unlike previous studies that generally emphasize online proctoring tools' theoretical potential or technical overview, this research highlights real user experiences through qualitative and quantitative data, including field observations and interviews. The novelty of this study lies in its application of behaviorism theory to interpret user interactions with the platform, particularly in terms of how reinforcement mechanisms (such as time limits or camera monitoring) influence participant behavior during exams. By bridging technical implementation with pedagogical theory, this study fills a gap in current literature by offering a deeper understanding of how digital tools like Quilgo function and shape user behavior and learning outcomes in real-world online examination settings.

## Behaviorism Theory in Online Learning Evaluation

The behaviorism theory (Pavlov [9]; Clarke [10]; Thorndike [11]; Waters [12]; Watson [13]; Skinner [14]) explains how behavior can be conditioned through various techniques that shape the human environment. Classical conditioning formulates treatments in which a stimulus triggers a specific response, whereas operant conditioning establishes conditions where rewards and consequences are applied to reinforce behavior [15]. These theories have significantly contributed to various disciplines, including education, by offering valuable insights into instructional design to support learning processes and teacher training.

Behaviorists argue that learning occurs through stimulus, response, and reinforcement, which constitute a form of conditioning or associative learning. In this process, students construct complex associations or "chains of habitual behavior" in response to stimuli. Through gradual instructional interventions, increasingly complex behaviors can be developed to receive reinforcement through positive feedback or other consequences [16].

In the learning context, learning outcomes represent the expected "output" of a series of conditioned behaviors. Therefore, the behaviorist approach emphasizes the

importance of clear assessment criteria in defining learning outcomes as part of the educational or conditioning process [17].

Behaviorism theory can be applied in using Quilgo to monitor and evaluate online learning. In this case, stimuli are provided through monitoring systems, and time constraints are implemented in Quilgo, such as exam duration limits and student activity tracking during the test. Students tend to become more disciplined and focused as they know their activities are being monitored. This reflects the behaviorist principle, where responses to stimuli can be reinforced through given consequences.

In this system, positive reinforcement is applied through direct grading and feedback, encouraging students to maintain behavior aligned with expectations in the evaluation process. Meanwhile, negative reinforcement occurs when Quilgo reduces distractions during exams, such as potential cheating or environmental disturbances, allowing students to concentrate better on answering questions.

On the other hand, punishment in this system may take the form of score deductions or academic sanctions, which remain under the teacher's full authority. Although Quilgo itself does not impose sanctions, monitoring reports from Quilgo can serve as a basis for teachers to take action against students who violate exam regulations, such as indications of cheating or behavior that does not comply with established guidelines.

Thus, the application of Quilgo in online learning aligns with behaviorist principles, where stimuli (monitoring and time constraints) shape responses (student discipline and focus), while reinforcement and punishment strengthen desired behaviors in the learning evaluation process. This demonstrates how behaviorist theory can be effectively utilized in technology-based instructional strategies to enhance evaluation effectiveness and student learning discipline.

**About Quilgo**

Quilgo is an online learning platform integrated with Google Forms, designed to enhance test administration and assessment functionality. With features such as a timer and AI-based proctoring, Quilgo helps ensure a more structured and secure evaluation process. Quilgo can be accessed through the website, www.quilgo.com, with the following feature descriptions.

Timer and Time Management

One of the main features of Quilgo is its ability to add time limits to exams created using Google Forms. Users can set the duration for completing the test so that participants must finish within the specified time. Additionally, the scheduling feature enables teachers or examiners to determine when the test opens and automatically closes. With this feature, participants cannot access the test outside the designated schedule.

AI-Based Proctoring

Quilgo offers AI-based monitoring features to reduce the risk of cheating in online examinations. This feature includes camera recording, screen activity tracking, and movement and facial detection.

Exam Results Analytics and Reporting

Upon test completion, Quilgo provides analytical reports on participant performance. These reports include score summaries and responses, trustworthiness metrics, and the ability to export test results, which can be downloaded in Excel or Google Sheets formats.

Security and Compliance

To maintain academic integrity, Quilgo implements various security mechanisms, including 1) preventing participants from reaccessing the test after submission, 2) requiring participants to grant camera access before starting the exam, and 3) employing encryption to protect participant data and test results.

Personalization and Ease of Use

Quilgo is designed to be user-friendly for various users, including teachers, lecturers, companies, and training organizations. Some advantages of this ease of use include 1) direct integration with Google Forms without requiring additional software installation, 2) support for multiple devices, including computers, tablets, and all types of mobile phones, and 3) the ability to customize the exam interface with logos or colors that align with the institution's or organizer's identity.

**Research on the Evaluation of Online Education**

Previous research and community engagement initiatives include a training program on distance learning models using Google Forms as an instructional medium for 30 teachers from various regions in Indonesia. This program aimed to enhance teachers' knowledge and skills in utilizing Google Forms as a distance learning tool. The training was conducted through tutorials and discussions on the steps for creating online quiz media using the Google Forms application. The program results indicated that the participants had gained an understanding of the principles of quiz creation and could develop online quizzes using Google Forms [18].

The second study is titled The Implementation of CBT (Computer-Based Test) in the Network Service Technology Course at SMK Negeri 1 Tuban. The application used in this study was BeeSmart, intended to assess student learning outcomes and responses after utilizing CBT. The findings indicated that using CBT in learning evaluation resulted in a more valid assessment process due to its transparency and the immediate visibility of correct answers [19].

The third study, titled The Implementation of Quizizz in Online Learning Evaluation for English for Food and Beverage Service, aimed to identify the implementation process of Quizizz in the evaluation of online learning for the English for Food and Beverage Service course. This study employed a qualitative descriptive research

approach to obtain information on the evaluation process using the Quizizz application. Data collection methods included interviews, questionnaires, and observations, while data analysis was conducted descriptively. The research findings indicated that the implementation of Quizizz significantly assisted students in recalling all materials delivered online, enhanced students' interest in learning English, and facilitated instructors in evaluating student learning outcomes [20].

The next is a community service article titled Training on the Use of Google Forms Supported by the Quilgo Application as a Biology Learning Evaluation Tool. This study aimed to provide knowledge and skills to Biology teachers in East OKU Regency to enable them to use Google Forms supported by the Quilgo application as a medium for learning evaluation. The training was conducted online and attended by 39 Biology teachers.

The output of this activity was measured through an increase in participants' knowledge by administering pre-tests and post-tests, as well as an improvement in their skills through assignments involving the creation of evaluation questions using Google Forms integrated with the Quilgo application. The findings of this study indicate that the use of Google Forms supported by Quilgo facilitates teachers in conducting learning evaluations and enhances the quality of assessments, even when teachers and students are not in the same location [6].

The next study is User Satisfaction Analysis of Google Forms as an Online Survey Tool in Samarinda City. This research aimed to identify the factors influencing user satisfaction with Google Forms services and their implications for future service development to meet user needs. The findings indicate that the factors affecting customer satisfaction with Google Forms usage are: (1) System Quality (SQ), (2) Information Quality (IQ), and (3) Service. These three factors significantly impact user satisfaction with Google Forms [21].

The final study is titled Development of Computer-Based Testing Using the Kahoot! Application for Learning Evaluation [22]. The use of Kahoot! The application assists teachers in conducting assessments, as scores can be obtained instantly.

The similarity of this study with other research lies in the use of CBT applications for the implementation of learning evaluations. However, the difference is that the three studies utilized different applications. The study by Supartini and Susanti [20] employed the Quizizz application, while Habsari and Ekohariadi [19] utilized the Beesmart application. The article by Dewi et al. [6] is a community service article similar to this study, which uses the Quilgo application; however, it differs in its objective, which is to provide knowledge and skills to Biology teachers in East OKU Regency so that they can use Google Forms supported by the Quilgo application as a medium for learning evaluation.

The notable difference is that the objective of this study is to describe the implementation process of using Quilgo as a monitoring tool for learning evaluations. This objective represents the strength of this research.

Based on the differences between previous studies and this research, the researchers intended to use Quilgo in monitoring learning evaluations.

## 2. METHOD

This study used a descriptive qualitative method to "provide factual and accurate representations of the online learning evaluation process", aligning with the views of Kriyantono [23]. Through this research, we aim to contribute significantly to the development of learning evaluation methods in the online education context and expand understanding of the role of technology in enhancing the quality of education in the digital era.

Descriptive qualitative research is based on post-positivist philosophy and is used to investigate natural conditions where the researcher is a key instrument [24]. This aligns with the goal of this study, which is to understand the real condition of Quilgo's use in monitoring online learning evaluation activities. The researchers actively collected data, making us one of the key instruments in this study.

The participants in this study consisted of 28 individuals, including one instructor and 27 sixth-semester students from Class B of the Japanese Literature Program who were enrolled in the Phonemorphology course. Data analysis was conducted through a thematic coding process, where the researchers identified recurring themes, behavioral patterns, and user perceptions based on questionnaire responses and observation notes. These themes were then categorized to interpret how different features of Quilgo impacted users' evaluation experiences. Ethical considerations were taken into account throughout the research process. Before data collection, participants were informed about the study's objectives and provided consent voluntarily, with anonymity and confidentiality strictly maintained. This research also received approval from the study program's internal ethics committee.

Furthermore, the application of the behaviorist framework—specifically Skinner's theory of stimuli, response, and reinforcement—was employed in the interpretation stage. User behavior, such as time management, adherence to rules, and reactions to the proctoring features, was analyzed through reinforcement theory to understand how external controls (stimuli) influenced participants' responses during the online evaluation process. This approach allowed a deeper exploration of the relationship between system design and user behavior in online learning evaluations.

Further, the study implemented a holistic and structured approach in using Quilgo to monitor online learning evaluations. This approach included needs analysis, strategy design, training, ongoing evaluation, and open user communication. These steps ensured that the process was thoroughly considered from beginning to end to achieve optimal results.
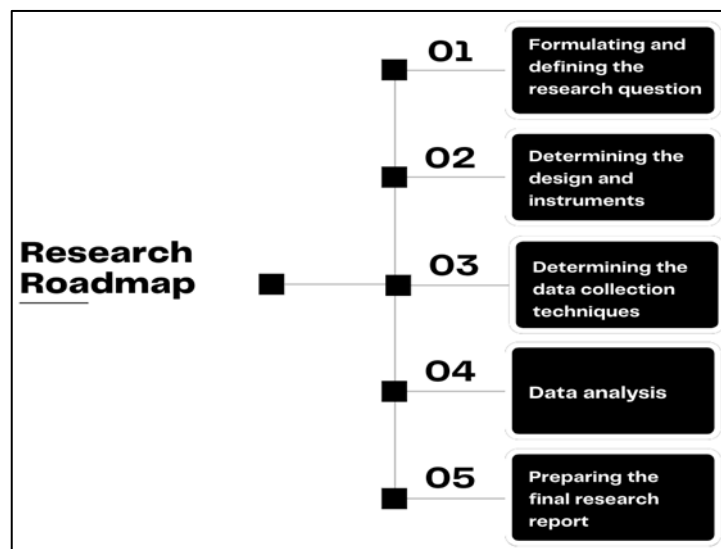
Figure 1. Research Roadmap

The research roadmap is based on Yin [25] and is explained as follows.

**Determining and defining research questions**: The researcher formulates research questions related to the phenomenon or object to be studied and determines the research objectives. The researcher identifies the problems to be studied, focusing on issues that arise during the evaluation process in online learning. The class or learning group that will be the subject of this case study consists of students from the 6th semester, class B, of the Japanese Literature program, who are learning online in the Phonemorphology course.

**Determining the research design and instruments:** The research method used is descriptive qualitative with a case study approach. The data collection process is conducted through observation and questionnaires. The collected data will be analyzed qualitatively. The researcher then designs the case study, including the research method, approach, data collection techniques, and data analysis procedures. This case study uses a single case design, where the researchers focus on only one unit of analysis to achieve a deep understanding.

**Determining data collection techniques:** In the data collection process, the researcher conducts direct observations of the implementation of the Quilgo application in the evaluation process of the Phonemorphology course. Additionally, data are obtained from questionnaires administered to users, namely the instructors and learners.

**Data analysis:** The qualitative data are analyzed using a qualitative approach. The questionnaire transcripts are then analyzed to identify common patterns, key themes, and variations in users' experiences using Quilgo. This analysis will provide deep insights into users' perceptions and experiences using Quilgo during the online learning evaluation process.

**Preparing the final research report:** Content analysis can be conducted on comments, reviews, or feedback provided by Quilgo users. This can help understand users' perceptions, needs, and issues when using Quilgo. The researcher interprets and draws conclusions based on the results of this analysis.

Through this design, the study will provide a comprehensive understanding of Quilgo's use as a tool for monitoring the online learning evaluation process.

## 3. RESULTS AND DISCUSSION
### 3.1. Results

In the context of online learning, the Quilgo application provides various features designed to enhance the management and supervision of the evaluation process. These features not only offer flexibility to educators but also increase the security and integrity of evaluations. Below are the key features offered by Quilgo.
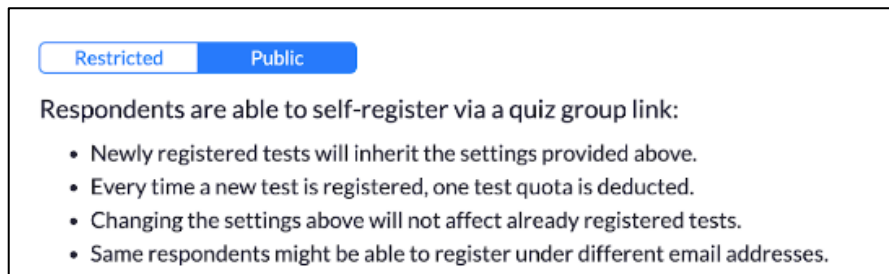
### a. Respondent Registration via Link



Figure 2. Respondent registration via link

Quilgo allows respondents to register individually through a link shared by the educator. This feature facilitates the distribution and access to tests or evaluations, ensuring each student can quickly and easily access evaluation materials. A personalized link also helps monitor participation, as each link is unique and directly associated with one participant. This ensures that only invited students can participate in the evaluation, reducing the risk of unauthorized participation.

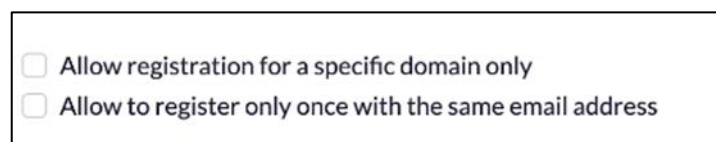### b. Registration Restriction Based on Domain or Email Address



Figure 3. Registration account restriction

Quilgo provides a feature that allows users to restrict registration to specific email domains or to prevent multiple registrations using the same email address. This restriction plays an important role in maintaining the security and exclusivity of the evaluation. By limiting registration to specific email domains, such as institutional email addresses, educators can ensure that only students officially registered in the class or institution can participate in the evaluation.

Moreover, the feature prevents multiple registrations under the same name but uses different email addresses, which enhances data integrity. This prevents potential cheating, where a student could register more than once to gain an unfair advantage. As a result, this feature helps ensure fairness in the evaluation and that each student can participate only once, according to their valid identity.

### c. Time Settings and Submission Restrictions

The ability to set deadlines and restrict submissions is one of the most important features of online evaluation. This feature allows educators to establish strict deadlines and manage task submissions in a more structured manner. In an online learning scenario where face-to-face interaction between educators and students is absent, clear time settings become essential to ensure that all students complete their tasks within the allotted time.
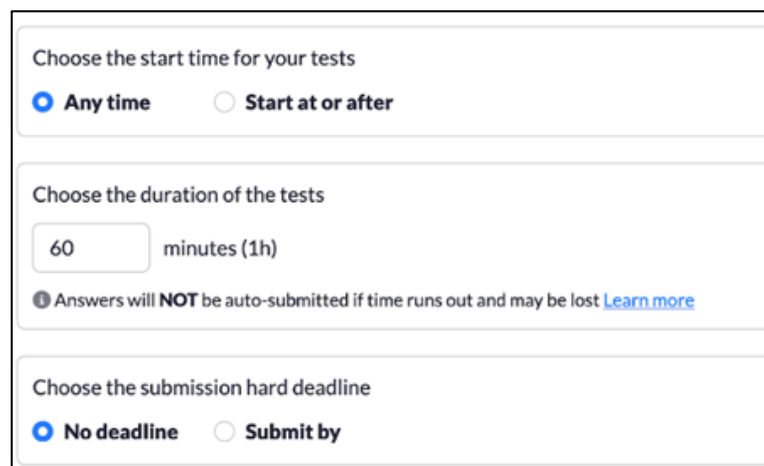


Figure 4. Test time and duration settings

With the option to restrict task submissions after a certain deadline, educators can easily control and ensure that all tasks are submitted on time, preventing delays that could disrupt the grading process. This also supports better time management for students, helping them prioritize tasks and reduce the likelihood of procrastination.

When the test duration ends, the automatic closure feature provides strict supervision during the evaluation process. In online learning settings, the risk of cheating and unequal time allocation is often an issue that needs to be addressed. With this feature, every student has the same amount of time to complete the test, and the system automatically closes access when the allotted time has expired. This ensures that each participant has the same evaluation conditions, reducing the possibility of cheating or unauthorized extra time usage.

This feature also reduces the administrative burden on educators, as they do not have to monitor or close the test when time is up manually. All processes can be automated, allowing educators to focus more on evaluating results than the technical aspects of administering the test.

**d. Free and Paid Options**



Figure 5. Free and paid features

Quilgo offers users two different options: a free and a paid version. This gives users flexibility in choosing according to their needs and budget. Free users can access a number of basic features, while paid users gain access to more advanced features.

Meanwhile, the free option provides a valuable solution for users with limited budgets or those requiring only basic functionality at no additional cost. However, the challenges associated with this option include restrictions on usage capacity and available features compared to the paid version, which may hinder users' ability to monitor the evaluation process effectively.

The offered accessible features may depend on the type of subscription, whether free or paid. These include features such as enabling camera tracking, allowing overtime, hiding the timer, and showing scores after submission, with limited participants.

The free features of the platform enable users to begin their experience with minimal or no financial commitment while still offering essential functionalities such as camera monitoring, overtime tracking, and score settings. This accessibility is particularly beneficial for users with limited budgets or those seeking basic tools for their evaluation processes.

In contrast, the paid features provide access to more advanced functionalities, including screen recording and forced tracking. These enhancements significantly increase the usage capacity, allowing up to 50 participants, expanding users' reach and flexibility on a larger scale. Including additional features exclusive to paid users, such as screen recording and forced tracking, carries substantial implications for enhancing monitoring and evaluation capabilities within online learning environments.

Furthermore, the benefits derived from these advanced paid features contribute to improved evaluation accuracy and depth. The capabilities of screen recording and forced monitoring facilitate a more thorough assessment of participant engagement, ensuring active involvement throughout the evaluation process.

However, while these additional features present significant advantages, it is essential to consider subscription costs when planning budgets for institutions or individual

users. Balancing the benefits of advanced functionalities with financial constraints is crucial for optimizing the use of the platform in educational settings.

Quilgo application has introduced a proctoring feature that provides real-time monitoring of exam participants, particularly by tracking their facial presence during the test. This feature and the ability to record participant activities and track the number of questions completed offer deep insights into student behavior and performance during online exams. Below is an analysis of the implementation and impact of these features.

## Facial Presence Monitoring as a Confidence Indicator


Figure 6. Facial presence monitoring

The proctoring feature that monitors the facial presence of participants during the test is a significant step forward in ensuring integrity and honesty in online evaluations. With this monitoring, the application can detect whether participants remain in front of the camera during the test, which is an important indicator in assessing the consistency and focus of students.

Facial monitoring can also indicate the level of confidence in participants. Students confident in their answers and abilities tend to make fewer unnecessary movements and focus more on the screen. In contrast, less confident students may show discomfort, such as frequently leaving their position, fidgeting, or making other movements that indicate confusion or anxiety. This data can provide educators with additional insights into how students interact with the test, allowing them to identify participants who may need further support in mastering the material or managing anxiety.

One of the most advanced features of Quilgo is its ability to record all participant activities during online exams. This recording not only monitors facial presence but also tracks all activities performed by the participants during the test, such as mouse movements, keyboard usage, and potential distractions from other devices.

This recording feature has several significant benefits in the context of online evaluations. First, it provides clear evidence in disputes regarding exam results or accusations of cheating. Second, the recordings can be a reflection tool for educators to assess how students manage their time and strategies during the exam. For example, do they spend too much time reviewing answers or show signs of difficulty with the exam platform itself?

However, this recording feature raises ethical considerations like participants' privacy. Educators and institutions must ensure students understand and agree to using this

technology before the exam begins. Furthermore, the data collected must be carefully managed to protect the privacy and rights of students.

**Tracking the Number of Questions Completed and Duration of Completion**
        Quilgo's ability to track how many questions participants have completed is an important feature that allows educators to assess the level of engagement and performance in more detail. This information is useful in identifying unusual patterns, such as participants who may spend too much time on certain questions or finish the test too quickly.

**Score:** 55/85 (65%)
**Confidence:** Low

**Start:** 17:42 +07:00
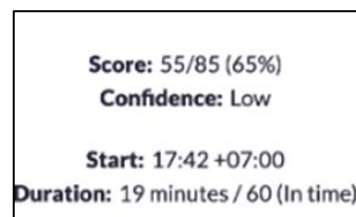**Duration:** 19 minutes / 60 (In time)

Figure 7. Tracking the number of questions and the test duration

        The duration tracked by the application can provide insights into the strategies participants use during the exam. For example, participants who answer all questions quickly may demonstrate high subject mastery or, conversely, rush through difficult questions. On the other hand, participants who spend much time on a few questions may have difficulty understanding or completing them. Analyzing these patterns can help educators provide more focused and specific feedback to students, helping them improve their learning strategies for the future.

        The proctoring feature in the Quilgo application provides a powerful tool for educators to monitor and analyze student behavior during online evaluations. Educators can gain deeper insights into student performance and honesty by monitoring facial presence, tracking the number of questions completed, test duration, and recording all participant activities.

        While these features enhance the integrity and effectiveness of the evaluation process, it is important to consider the ethical implications of privacy and ensure that students feel comfortable using this technology. With the right approach, Quilgo can be a highly effective tool in supporting fair, accurate, and transparent online learning evaluations.

        To complement the technical descriptions, this study analyzed user responses to reveal patterns and variations in their experiences using Quilgo. Several students expressed that the registration via personalized link made the process *"lebih mudah dan cepat tanpa harus login berkali-kali"* (easier and quicker without needing to log in repeatedly). However, some noted issues, such as *"link tidak bisa diakses kalau jaringan lambat"* (the link could not be accessed with slow internet). Educators appreciated the domain-based email restriction feature for ensuring that *"hanya mahasiswa yang benar-benar terdaftar yang bisa ikut ujian"* (only officially enrolled students could participate in the exam), thus enhancing credibility.

Thematic analysis of responses revealed three dominant themes: (1) perceived ease of use, (2) sense of fairness and control, and (3) privacy-related concerns. These are summarized in Table 1 below.

Table 1. Summary of user perceptions and experiences with Quilgo features in online evaluation

| Theme | Positive Insights | Challenges |
|---|---|---|
| Ease of Use | Easy registration, user-friendly interface | Link issues due to internet connectivity |
| Fairness and Control | Time limits and auto-close improve discipline | Some students felt anxious under time pressure |
| Privacy and Monitoring | Facial tracking increases honesty and engagement | Concern about being watched and data storage transparency |

## 3.2. Discussion

The utilization of Quilgo in online evaluations presents a comprehensive solution that significantly enhances the evaluation process's integrity, efficiency, and fairness. Features like facial presence monitoring, tracking the number of completed questions, managing the test duration, and recording participants' activities throughout the exam provide educators with advanced tools to supervise and deeply analyze student performance.

The facial presence monitoring and activity recording functionalities serve as effective deterrents against academic dishonesty, facilitating more detailed assessments of student behavior, including indicators of confidence and focus during the examination. Tracking completed questions and time management offers educators valuable data to evaluate test-taking strategies and student engagement, thereby enabling more targeted and constructive feedback.

Nevertheless, implementing this technology requires careful consideration of ethical and privacy aspects, ensuring transparency, and obtaining informed consent from students. When approached correctly, Quilgo has the potential to become a highly effective tool for supporting fair, measurable, and transparent online evaluations.

### 3.2.1 Theoretical Interpretation: Behaviorism in Online Evaluation

The implementation of Quilgo aligns with the behaviorist perspective, particularly Skinner's theory of stimulus, response, and reinforcement. The features, such as time restrictions, facial presence monitoring, and real-time tracking, are external stimuli that shape student behavior during examinations. For example, the automatic test closure is negative reinforcement, encouraging students to manage their time more efficiently. Meanwhile, camera-based supervision is a positive stimulus, reinforcing focused and honest behavior. These mechanisms help create structured conditions that guide learners toward desired academic conduct, demonstrating how technological tools can be designed to condition user responses in online learning environments.

### 3.2.2 Comparison with Previous Studies

Compared to prior studies focusing primarily on online proctoring tools' technical or security aspects, this study offers a more holistic view by combining user experience analysis with theoretical interpretation. Razak et al. [2] emphasized flexibility in online learning, while Dewi [26] highlighted the importance of appropriate media selection for optimal learning outcomes. Our study extends these findings by showing how tools like Quilgo support evaluation logistics and shape behavioral outcomes through built-in control mechanisms. Moreover, while most previous works only mention proctoring features generally, this study presents detailed user feedback and behavioral patterns, providing richer insights into how such features are perceived and responded to by both students and educators.

### 3.2.3 Practical Implications

The practical value of this study lies in its potential to guide educators and institutions in selecting and implementing online evaluation tools that balance technical capability, user experience, and ethical considerations [27]. Quilgo's registration control, time limitation, and facial presence monitoring can be leveraged to enhance academic integrity while minimizing manual supervision. Additionally, data such as test completion rates and behavioral patterns allow educators to offer personalized feedback and adjust their teaching strategies. This study also supports integrating behaviorist principles into digital assessment design, emphasizing how structured external controls can positively shape student performance and discipline.

### 3.2.4 Limitations

Despite its strengths, this study has several limitations. First, it focuses on a single group of students from one academic program, which may limit the generalizability of the findings. Second, while user feedback was collected, it was based on a relatively short-term usage of Quilgo and did not include longitudinal data. Third, while behaviorist theory offers a useful lens for analysis, integrating additional theoretical frameworks—such as cognitive load theory or constructivism—may provide a more nuanced understanding of learners' reactions and outcomes. Finally, technical constraints such as internet instability and device compatibility continue to pose challenges in effectively implementing online proctoring tools.

### 3.2.5 Reflections on Unexpected Findings

An unexpected insight from the study was the varied emotional responses students expressed toward the proctoring features. While some felt more focused and disciplined, others reported increased anxiety and discomfort under continuous monitoring, even when not engaging in dishonest behavior. This finding highlights the need to balance supervision with student well-being and suggests that institutions should offer clear guidelines, pre-exam orientation, and perhaps alternative evaluation methods for students with special circumstances or anxiety disorders.

## 4. CONCLUSION

This article concludes that Quilgo has the potential to serve as a highly effective tool for managing online examinations with a high level of security. However, further adjustments are necessary to enhance the overall user experience. These findings are intended to assist educational institutions in selecting and implementing appropriate technologies to meet their evaluation needs.

This study concludes that Quilgo has significant potential as an effective tool for managing online examinations, particularly ensuring security, fairness, and efficiency. Its features—personalized registration, time management, and facial presence monitoring—demonstrate how digital platforms can support structured and behaviorally reinforced evaluation environments. The integration of behaviorist theory in this context contributes to theoretical discussions by showing how external stimuli embedded in technology can influence academic conduct and performance.

From a practical standpoint, the findings offer valuable insights for educational institutions seeking to implement online evaluation systems. Institutions are encouraged to maximize the platform's features—especially domain-restricted registration and camera monitoring—while also being attentive to user privacy, technical readiness, and the psychological comfort of students. Providing orientation and support before the exam, ensuring adequate infrastructure, and maintaining open communication channels are essential for optimizing tools like Quilgo.

For future research, we recommend exploring comparative studies that examine other online proctoring platforms to identify strengths and weaknesses across different systems. Longitudinal studies may offer deeper insights into how repeated exposure to such technology affects student learning behavior, anxiety levels, and academic outcomes. Furthermore, future research can expand the scope by including diverse academic disciplines, education levels, and institutional contexts to enhance the generalizability of findings.

## ACKNOWLEDGEMENTS

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