

# Unlocking New Potential in Educational Technology: Using Edutren Application to Increase the Effectiveness of Student Evaluation


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ARTICLE INFO	ABSTRACT
<p><b>Article history</b> Received March, 17, 2025 Revised Sept, 08, 2025 Accepted Dec, 08, 2025</p> <p><b>Keywords</b> Education technology ICT in education Student Evaluation Technology effectivities</p>	<p>This study aims to describe the use of the Edutren application in more effective student evaluation activities, emphasizing the significant impact of information and communication technology (ICT) in education management. A qualitative approach of exploratory case study type was utilized, with data collection employing triangulation techniques. In the interviews, an in-depth interview model by Bingham (2023) was adopted, with five stages of data analysis. Purposive sampling was employed to select participants with 13 individuals including principals, teachers, dormitory guardians, education personnel, students, and student guardians, participating in the study. The result shows that: (1) the utilization of Edutren can be categorized into three distinct stages. The first stage involves data input, which is conducted by the owner of the Middle Account (MA). The second stage encompasses data processing, which is executed by Edutren's automation features and is subject to the contractual agreement between the school principal and the MA. The final stage pertains to the display of various data. (2) The findings indicated that Edutren has been effective in enhancing the efficacy of student evaluation activities. This is due to the fact that it provides an evaluation system that is accurate, and sustainable, fosters collaboration between schools and student guardians, is data-driven, and delivers real-time student progress reports on a daily basis. This facilitates the subsequent design of follow-up decisions by the school and guardians. This is a new key to the future of education technology. Three points to increasing the outcome for school management are recommended.</p> <p>This is an open access article under the <a href="https://creativecommons.org/licenses/by/4.0/">CC-BY</a> license.</p> 

## I. Introduction

In the context of national development, education is a sector that prepares qualified human resources (HR) for the future (Permatasari & Tandiyuk, 2023). It is imperative to ascertain whether students genuinely develop through educational activities over time. The assessment of whether individuals progress in educational activities falls within the remit of educational evaluation (Kamerilova et al., 2020). It is a process of continuous assessment intended to validate a student's progress toward various educational targets, especially learning objectives (Lavanya et al., 2024). Educational evaluation plays a pivotal role in the management of quality education. In the absence of an educational assessment, the nature of student survival and development is likely to be biased (Victoriia, 2020). This can potentially lead to a lack of clarity in subsequent decisions regarding learning interventions, particularly when educational leaders and teachers lack a comprehensive understanding of student progress (Zeghad & Habira, 2023). Research in the field of educational evaluation has been in progress for a considerable period of time, with the evolution of models and methods over time (Maryati & Radiana, 2023). For instance, in the last five years (2019), research has Spatioti et al. (2023) investigated diverse approaches to evaluating learning effectiveness. An additional evaluation model that emphasises collaboration between schools and

students' guardians has been explored Riyadi et al. (2024). This model aligns with the educational philosophy of Ki Hajar Dewantara (Murniyanto, 2022), recognised as the father of national education, who underscored the significance of parental involvement and collaboration in nurturing students' development. However, what are the limitations of the collaborative evaluation model proposed earlier?

Despite the rapid growth in research on educational evaluation models and methods, contradictory phenomena have been reported in other reviews. Many studies have indicated weaknesses, ineffectiveness, and even disorientation in educational evaluation practices. This synthesis is derived from an in-depth review of the research of Hassan et al. (2024) and Pakpahan et al. (2023). A close analysis of these two studies reveals a striking similarity in their findings, with both highlighting the inadequacy of educational evaluation practices in Indonesia in meeting the standards outlined by the national curriculum. Instead of achieving the desired outcome of fostering engagement between guardians and schools, both research findings underscore a significant gap in understanding among schools, teachers, and students regarding the purpose of evaluation and its optimal execution to reflect genuine learning progress accurately. This underscores an urgent need to develop a tailored model of educational assessment in Indonesia, one that

can effectively address these shortcomings and propel the nation towards a more effective and aligned educational evaluation framework.

The authors then consider the significance gained when various technological tools are utilised for educational activities. For instance, Wirawan et al. (2022) it has been demonstrated that learning management systems are significantly more effective and efficient than manual systems. Similarly, Yusnaini et al. (2022) established technology as a strategic tool for educational institutions in responding to the pandemic, Sein Minn (2022) also reported the potential of Artificial Intelligence as an assistant for evaluating students' knowledge development in environmental adaptation-based learning. The three studies under consideration posit the hypothesis that the implementation of specific technologies as an educational evaluation system has the potential to yield substantial benefits. It is against this backdrop that the urgency of this research becomes evident.

Conversely, Edutren is a specialized application developed by a particular ICT vendor for schools within the Daarut Tauhid Rahmatan Lil'aalamiin Foundation (YDTR), including Daarut Tauhid Boys Junior High School (DTBS Putra). A preliminary investigation has revealed that Edutren was conceived as an innovative education management platform, with the application designed to provide real-time reports on student activities and progress at DTBS Putra. This enables parents to monitor their child's progress at any time, facilitating the determination of collaborative support actions for their education.

Despite Edutren's objectives, including supporting education management and facilitating an efficient real-time education evaluation process, the effectiveness of Edutren in this function remains to be ascertained. This is because the application was only trialed by DTBS Putra for four months, from August to November 2024. It is imperative to recognize that evaluating educational management systems is paramount for identifying deficiencies that can be remediated promptly, ensuring system reliability, and averting functional disorientation in their operation (Wang et al., 2022).

The researcher identified a correlation between the need to develop a technology-based educational evaluation model in Indonesia and the importance of integrating technology into educational activities. This prompted conjectures about similar advantages in the domain of academic evaluation, as well as the case of the Edutren application at DTBS for boys, which required testing. These three things are intertwined. The present study is situated within the aforementioned context and aims to describe the effectiveness of the Edutren application as an educational evaluation system. To achieve this objective, the research explored two research questions (Berezki & Kárpáti, 2021; Fadli, 2021) formulated as follows. First, what are the stages of using Edutren? Secondly, the investigation will examine the effectiveness of Edutren in student evaluation activities.

If the findings of Hassan et al. (2024) and Pakpahan et al. (2023), which only highlight significant gaps in understanding between schools, teachers, and students regarding the goals of evaluation and its optimal implementation to reflect actual learning progress accurately, then by answering these two research questions, the results of this study will far surpass the and achievements of their studies. This is because it will describe the good practices of educational evaluation models in a in a

practical, real-time, day-to-day manner that aligns with academic activities in Indonesian schools, moving toward a more effective and harmonious educational evaluation framework.

## II. Method

### A. Research Design

A qualitative case study approach was adopted (Rony et al., 2023) in accordance with the compatibility between this methodological orientation and the formulated research objectives (Charli et al., 2022; Creswell & Creswell, 2018), namely to obtain an in-depth, contextualized, and holistic description of the effectiveness of the Edutren application as an educational evaluation system implemented in a real school setting, in this case Daarut Tauhid Boys Junior High School (DTBS Putra).

Through this approach, the study was able to explore not only the observable outcomes of Edutren's use but also the underlying processes, stakeholder interactions, and institutional dynamics that shape how the application supports student assessment, reporting, and decision-making within the specific organizational culture of DTBS Putra.

### B. For Participant Recruitment

The population of this study comprises the school community and guardians of DTBS male students who utilize and benefit from the Edutren application. The population is characterised by significant heterogeneity in size and distribution, making it impossible for researchers to reach all individuals due to their dispersed geographic locations. Consequently, purposive sampling (Ismawati et al., 2023) was employed to select the sample (Fernandes & Solimun, 2022; Suwardi et al., 2020).

We selected them based on the length of their teaching service, the level of their engagement in daily activities, and their strategic role within the school. The method used to determine the number of participants was also adopted by this study, resulting in 13 participants, including principals, teachers, dormitory guardians, education personnel, students, and student guardians who met the criteria, being chosen and involved in the study (Bingham 2023).

### C. Data Collections and Analysis

A triangulation model was employed to collect and analyse the data, combining interview, observation, and documentation techniques (Suharno et al., 2023). The analysis of interview data was conducted using the in-depth interview technique Bingham (2023), which comprises five stages of data analysis, as presented in Figure 1. The data collection instruments, in the form of open-ended essay questions, are meticulously prepared to capture indicators of the stages of information system use, as articulated by Rosnina et al. (2021), in addition to indicators of evaluation system effectiveness, as promoted by Daryanes & Ririen (2020). The instrument is structured into open-ended essay questions. It is noteworthy that these questions lack statistical functionality. That is to say, the questions compiled merely serve as a fundamental point of reference for the development of questions for researchers, as Rutledge & Hogg (2020) we contend. In in-depth interviews, the researcher plays a pivotal role in posing developmental, categorical questions to explore the interviewee's data in depth.



Fig. 1.A Five-Phase Data Analysis on Qualitative Process, Source: Adopted from Bingham (2023)

The interview instrument was meticulously organized into two Google Forms. Questions such as “How are the input data stages? How can Edutren work? Who can access the Edutren?” became the primary focus of the interview instrument. The initial Google Form, comprising questions 1 (Data collection stage), 2 (Data processing stage), and 3 (Data presentation stage), was specifically addressed to the principal and the designated education personnel responsible for operating the Edutren application as the primary operator (MA). Meanwhile, Google Form 2, which contains questions 4 (Data Coherence), 5 (Reviewing to system data displays), 6 (Create a summary display of system data), and 7 (Make the system data display as a reference in making follow-up decisions) is addressed to the principal (1), teachers (3), foster-dormitory guardians (3), education personnel (2), students (2), and student guardians (2). This is to ensure that the scope of duties, limits of authority, and rights of each participant as a school citizen and as a user of school services are taken into consideration. Following the completion of the Google Form, follow-up interviews were conducted, along with observation and research documentation. Finally, data from interviews, observations, and documentation

were validated or compared to each other to build credible findings.

### III. Results and Discussion

#### A. Stages of Using the Edutren Application

Edutren is an application that was developed by a community of information and communication technology (ICT) developers. This community offers its ICT products to various schools in Indonesia and provides feature development services tailored to school needs. Following an agreement between Da'arut Tauhid Rahmatan Lil'aalamiin Foundation (YDTR) and the community, the latter became an official vendor. Consequently, the Edutren application was developed for schools within YDTR, including DTBS Putra.

DTBS Putra's school management utilized the vendor's feature development services to personalize Edutren to a greater extent. The limited number of features in the initial version of Edutren, which was more akin to a school profile website with homogeneous data displays, underwent gradual modification

since the beginning of 2024. These modifications were designed to transform Edutren into a school management support application at DTBS, with the overarching objective to enhancing accountability, transparency, and the effectiveness of communication between DTBS and student guardians, thereby enabling the delivery of higher-quality educational services. The development process was overseen by the school principal, with all DTBS male stakeholders being consulted through a deliberative approach. Since August 2024, the modified Edutren has been undergoing a trial phase.

At the time of this research, Edutren had evolved into a school-level education management application capable of internalizing, processing, and presenting data on a range of subjects, including staffing, school education programs, school finances, teacher attendance, circular publications, student

learning activities, student memorization progress, lesson planning (including syllabus and lesson plans), student learning outcomes, and student pocket money. The comprehensive integration of academic domains, human resources, and school financial resources within Edutren at DTBS renders it a constituent of the Information & Communication Technology of Education (ICTE) integration model.

The value of student learning outcomes, as one of the primary data elements in student evaluation, can be input by the educator. In each row of the student data, which comprises the student's full name and national student identification number (NISN), there is a feature to enter the values for subject assignments, tests, midterm exams (UTS), and final semester exams (UAS). Look at Figure 2.

No Absen	NISN	NIS	Nama Siswa	Semester	UTS	UAS	Input Nilai
1	0123638072	Abdul Rafay Maher Rohail	Genap	Tugas	Ulangan	UTS	UAS
2	0125642194	Alby Aysar Asyrali	Genap	Tugas	Ulangan	UTS	UAS
3	0119054081	Arkana Dyozora Poetra Wikrama	Genap	Tugas	Ulangan	UTS	UAS
4	0123598060	Aslam Azmi Arifin	Genap	Tugas	Ulangan	UTS	UAS
5	3122986183	Azka Arsyad Husen	Genap	Tugas	Ulangan	UTS	UAS
6	0116228127	Daaric Nadhil Pormana	Genap	Tugas	Ulangan	UTS	UAS
7	0107839146	Dafra Elvadya Putra	Genap	Tugas	Ulangan	UTS	UAS
8	3113518714	Farrel Arya Putra	Genap	Tugas	Ulangan	UTS	UAS

Fig. 2. Data Display of Students in the Edutren Application

As an ICTE that integrates the academic domain, human resources, and school financial resources, access management for Edutren at DTBS is mapped to various account categories based on defined functions and restrictions. All DTBS boys can access Edutren within their respective authority limits. At the same time, the Highest Account (HstA), owned by the YDTR, Principal, and Main Operator (MO), has access to all domains, features, and databases. The three parties are the highest authorities and are responsible for the effectiveness of Edutren functions. The High Account (HA) is owned by the Vice Principal for Public Relations, the Vice Principal for Student Affairs, and the Vice Principal for Finance. The three parties have varying levels of access to each domain, depending on the workload of their respective positions.

Furthermore, the Middle Account (MA) is the property of teaching staff, Foster Guardians, and picket teachers. These parties have less access than HstA and HA, since their account functions are set to input data, including reports about their work. The final category is the User Account (UsA) category, which comprises accounts belonging to the guardians of students as clients of DTBS for boys. Using their Identity Number (NIK) and a designated password, guardians can oversee their children's activities, health conditions, and academic progress at DTBS Putra.

The utilization of the Edutren application in DTBS for boys is categorized into three distinct phases: data input, data processing, and data display. In the initial phase of data input, MA owners are responsible for entering data in accordance with their respective duties daily, following a predetermined schedule. Look at Table 1.

Table 1. Organizing of Input Data to Edutren

No	Middle Account	Data Content	Data Input Schedule
1	Teacher	Student attendance and performance in the learning process is reported in the form of photos and descriptions.	Every day after learning activity
2		Daily test	After the daily test was conducted on the same day
3		Midterm Exam Score	The end of the Trimester
4		End-of-semester exam score	At the end of the Semester
5	Dormitory Guardians	Information on the progress of student's	Tomorrow in the morning

No	Middle Account	Data Content	Data Input Schedule
		memorization of the Qur'an which is carried out in the dormitory three times a day - at 04.45, at 18.21, and at 19.35 o'clock	at 07.00 o'clock
6		Student Health	Everyday at
7		Student allowance information	07.00 o'clock
8	Picket teacher	Teacher presence	Every day after students leave the classroom

Edutren's internal system automated the data processing stage, yet access remains open for HgstA and HA owners to ensure the accuracy of the content generated from the data input stage. They have the capacity to reprimand MA owners who are deemed to have made mistakes in data entry, or to make direct corrections to the results of data entered by MAs. This criterion underscores the automation of data processing, leveraging the sophistication of Edutren as an ICTE enhanced by human control, namely the HgstA and HA owners. It is noteworthy that only data input results approved by the MO and the principal will appear in the data displays. Finally, at the data display stage, edutren presents data as photos, narrative descriptions, numerical figures, videos, and documents in various file types, such as PDF, XLSX, and DOC.

The aforementioned data is then compiled into a cross-domain report, which can be reviewed in real time. Some of the displayed data can be discussed, downloaded, and integrated to support various school management needs at DTBS. Guardians can review their children's health, remaining pocket money, academic progress, and Qur'an memorization in real time. To facilitate guardian feedback, Edutren at DTBS Putra is equipped with a feedback and suggestion input feature and a dormitory hotline available during office hours.

Various suggestions and aspirations of student guardians to further develop their children, as well as other ideas for school development, can be conveyed through the feedback feature. The dormitory hotline serves as a communication bridge between guardians and their children outside of class hours. In addition, Edutren's dynamic data display allows student guardians and DTBS Putra's internal stakeholders to access Edutren on any computer or smartphone, facilitating real-time access to student progress.

The utilization of the Edutren application, as elucidated by this study, aligns with the delineation of Rosnina et al. (2021) the phases of ICTE utilization, which are categorically divided into data input, data processing, and data display, notably, while the general ICTE cycle, which typically spans weeks or months; the Edutren cycle at DTBS Putra is completed daily. This aspect of cycle speed promotes faster data service and allows guardians to obtain more detailed data on their students' progress.

#### *B. Effectiveness of Edutren in Students' Evaluation*

An ICTE is declared effective when four indicators are met, namely the presence of data coherence, the extent to which users listen attentively to the data displays, the degree to which users can summarize the system's data displays, and the intensity with

which stakeholders rely on these data displays as references in making follow-up decisions (Daryanes & Ririen, 2020). In the context of this study, these four indicators are known to be fulfilled to a high degree, thereby positioning Edutren as a robust model of ICTE in the domain of student evaluation at DTBS Putra. The analysis of each indicator not only confirms the system's technical adequacy but also highlights the depth of user engagement and the alignment between technological features and pedagogical needs.

Initially, the data displayed in the Edutren application showed strong alignment with results from student evaluations conducted in the classroom before the start of the data entry process. Students explained that the scores they observed on the Edutren data display corresponded closely to the scores previously communicated in class, thereby establishing a clear sense of continuity between classroom assessment and digital reporting. This alignment demonstrates that the data displayed in Edutren are coherent and can be trusted as valid representations of students' actual performance. The coherence is further substantiated by the testimonies of student guardians, who report that the information they observe on Edutren is supported by substantial evidence regarding their children's daily progress in Qur'an memorization, regularly updated by dormitory guardians. This is particularly relevant because some student guardians independently assess their children's Qur'an memorization during school holidays; the congruence between these home-based assessments and the Edutren records strengthens the perception that the system maintains consistent and reliable data over time.

Secondly, the indicator related to users' listening to data displays is also well fulfilled, especially among student guardians. Despite their diverse professional backgrounds and busy schedules, almost all guardians reported deliberately arranging their routines to access and listen to Edutren data updates, with the explicit intention of monitoring their children's daily development at DTBS. This behavioral pattern indicates that Edutren has successfully become an integral part of guardians' information-seeking practices. Some guardians acknowledged experiencing occasional difficulties logging in when they could not recall their passwords, yet these technical obstacles did not significantly diminish their enthusiasm. Rather, the consistently high level of effort they invest in following the updates suggests a strong acceptance of Edutren as a valuable educational resource and as an official channel through which the school communicates student progress.

Thirdly, users' ability to summarize information in the system is reflected in the practices of a select group of student guardians who actively compile summaries of student evaluation results posted on the Edutren app. This reaction model, previously demonstrated to be effective in other educational contexts, emerges particularly among guardians who highly prioritize their children's development and who display a cooperative, participatory attitude toward the school. In addition to preparing written summaries, another reaction model is the synthesis of student development conducted at the family level, in which parents discuss, interpret, and plan responses to the information they obtain from Edutren. Furthermore, a subset of guardians choose to document their children's progress by taking screenshots at the end of each week, thereby creating a visual archive of achievements and areas that may require further attention. These practices indicate that the information is not

merely read passively, but is processed, restructured, and integrated into the guardians' decision-making processes.

Fourthly, and perhaps most importantly, school members use the information on student evaluation results from the Edutren application as one of the primary sources when making follow-up decisions on student development. Among the four indicators, this final one is fulfilled most prominently and to the greatest extent. Teachers and dormitory guardians, who are directly involved from the data input stage, use the information they have entered as the primary basis for designing subsequent learning plans, teaching strategies, and intervention models. Student guardians, both those who summarize the data displays in writing and those who archive them via screenshots, likewise use Edutren as a reference to determine what actions they should take at home to support their children's academic, spiritual, and personal growth at DTBS Putra. Moreover, the principal of DTBS Putra, as the key decision-maker, conducts an in-depth daily review of the data displayed in Edutren and draws on it to inform various school management decisions, including program planning and policy adjustments. Taken together, these findings show that the Edutren application is efficient in student evaluation, as evidenced by the fulfillment of the four indicators of an effective ICTE, in line with the theoretical framework proposed by Daryanes & Ririen (2020).

The authors perceive that Edutren's effectiveness is closely aligned with the perspectives of Hwang & Chien (2022) those who argue that an educational application can be regarded as ideal when it adequately fulfills three key aspects: "shared," "persistent," and "decentralized." The "shared" aspect refers to the application's capacity to support collaboration among multiple stakeholders. At Edutren at DTBS Putra, this aspect is evident in two main ways. First, the modification and contextualization of Edutren to meet the needs of school management were undertaken through a deliberative process from the outset, involving dialogue and negotiation among institutional actors. Second, the methods of data entry and processing are organized around collaborative practices among teachers, dormitory supervisors, leading operators (MOs), and vice principals, ensuring that evaluation is not an isolated activity but a shared institutional endeavor.

Conversely, the persistence aspect is manifested in the continuity and longitudinal nature of the data displayed in Edutren, which reveals patterns that extend from one day to the next and from one domain of development to another. This persistence enables stakeholders to trace student progress trajectories rather than merely observing static snapshots. Meanwhile, the decentralized nature of Edutren is evident in two distinct dimensions. Primarily, the YDTR grants educational institutions within its network the autonomy to modify Edutren according to their specific contexts, thereby fostering a sense of ownership and independence in educational development. This flexibility allows schools at different levels to design personalized development initiatives aligned with their unique visions and needs. Secondly, at the micro level, teachers are given autonomy in inputting students' final grades, either by entering data directly into the available columns in the system or by compiling them into an Excel file and uploading it, after which Edutren automatically converts the file into the appropriate display format. This decentralization not only enhances efficiency but also acknowledges teachers' professional judgment in managing evaluation data.

The efficacy of Edutren in supporting student evaluation thus extends beyond fulfilling the four indicators of effective ICTE (Daryanes & Ririen, 2020) and the three ideal aspects of educational application (Hwang & Chien, 2022). The school has invested substantial effort in leveraging Edutren to facilitate data-based communication between the school and student guardians regarding student development. This effort is highly relevant to the trilogy of education, which emphasizes collaboration between schools, families, and communities as a pivotal determinant of educational success (Murniyanto, 2022; Presiden Republik Indonesia, 2021). Effective, transparent communication between student guardians and the school is therefore a crucial element for ensuring student success, and the integration of ICTE can function as a conduit for direct, timely communication, enabling rapid problem resolution and fostering a collaborative climate (Wyne et al., 2021).

Research supports this interpretation by demonstrating that web-based platforms used in school activities can strengthen parent-teacher collaboration, provided that they offer real-time, continuously updated data through efficient data management. Such conditions allow for close monitoring of student progress and create opportunities for increased parental involvement. The criteria outlined Velasco et al. (2024) are clearly relevant to the implementation of Edutren at DTBS Putra, where the principal, teachers, dormitory guardians, operators, and student guardians are interlinked in an ongoing evaluation process and in the design of follow-up decisions for student development. Furthermore, student guardians are provided with a suggestion column that enables them to offer constructive input to the school, enriching the evaluation process by incorporating multiple perspectives on student growth and challenges (Kelliher, 2018). This multidirectional flow of data and feedback underscores the role of Edutren not only as a technical tool, but also as a socio-educational platform that supports participatory, data-informed educational governance.

### *C. The Weakness of Edutren Utilization in Student Evaluation*

The weaknesses of Edutren can be categorized into two significant aspects. The first concerns the limited completeness of its features and the inadequacy of several data entry options. This limitation was explicitly mentioned by several interview participants, particularly those who directly record students' Qur'an memorization. They reported encountering repeated difficulties and constraints when entering data on students' memorization progress, both due to the structure of the available forms and the absence of specific fields essential for tahfiz management.

From a system usability perspective, these complaints indicate that Edutren has not yet fully accommodated teachers' and Qur'an instructors' actual workflows. In practice, teachers need flexible and detailed input formats. For instance, fields for surah, number of verses, types of errors, tajwid aspects, repetition frequency, and memorization status (new, muraja'ah, or reinforcement). When these elements are not adequately provided, users are compelled either to compress information into inappropriate fields or to use manual side records outside the application. Both practices reduce data accuracy and undermine the very purpose of having an integrated information system.

This finding is particularly significant given the ongoing enhancement of Edutren. At the time of the research, DTBS students were preparing to discuss these constraints with the ICT vendor who had previously provided technical guidance and

implementation support. The dialogue between end-users (teachers, dormitory guardians, and school management) and the vendor is a crucial part of the application development cycle. It ensures that technological possibilities do not merely drive the evolution of Edutren, but are also driven by authentic pedagogical and administrative needs that arise in the field.

The development of an ICT in Education (ICTE) application is widely recognized as an iterative and continuous process. Silveira et al. (2023) emphasize that educational platforms rarely reach a final, "finished" form. Instead, they evolve through cycles of design, implementation, evaluation, and refinement. Within this framework, user feedback, such as complaints from teachers about Qur'an memorization data entry, is not a sign of failure but an essential input for quality improvement. Each iteration should bring the system closer to a configuration that balances feature completeness, user-friendliness, and technical robustness.

Continuous development is expected to ensure long-term effectiveness, resource efficiency, and adaptability to changing educational needs. An effective ICTE system should not only function well at the moment of implementation, but should remain relevant and responsive as curricula change, assessment models evolve, and institutional priorities shift. Ye et al. (2024) highlight that adaptability is a key characteristic of sustainable educational technology: systems that cannot adapt tend to be abandoned, even if they were initially well designed. In the case of Edutren, the ability to expand or modify features, especially those related to core activities such as Qur'an memorization, academic evaluation, and character development, will determine whether the platform can continue to support the school's long-term vision.

Moreover, ensuring resource efficiency is important in institutions with limited time, human resources, and financial capacity. A system that is incomplete or poorly aligned with user needs can paradoxically increase inefficiency because teachers must duplicate work by entering partial data into the system while maintaining manual records to capture information the system does not accommodate. Through thoughtful and participatory development, Edutren has the potential to move from being perceived as an additional burden to becoming a central tool that streamlines documentation, analysis, and reporting. When this transformation occurs, the benefits extend not only to students and educators but also to the broader educational ecosystem, including parents, school leaders, and policymakers who rely on accurate data for decision-making (Ye et al., 2024).

The second major weakness identified in Edutren concerns the agreed-upon policy of school management regarding the necessity of daily data entry. On paper, the requirement for daily recording appears beneficial because it enables the collection of rich, detailed, and up-to-date information about student development. With daily entries, longitudinal data can be constructed with fine granularity, allowing monitoring of trends, detection of early signs of learning difficulties, and timely interventions. However, this same policy has significant implications for workload, especially for teachers and dormitory guardians who are tasked with carrying out these routines.

Dormitory guardians are assigned to input data on students' daily activities and development in the dormitory. They typically carry out this responsibility each morning, usually before or after routine supervision activities. Interestingly, this daily data-entry

task is carried out with minimal direct oversight from the administration. The primary reason for this limited oversight is the absence of detailed job descriptions or activity standards for dormitory guardians that the government formally stipulates. As a result, while the school internally requires them to perform daily recording, this task is not explicitly recognized as a formal teaching or educational obligation within the national regulatory framework. This gap creates a grey area regarding professional expectations, workload recognition, and potential compensation or workload adjustments.

The situation for teachers is even more complex. Teachers are required to input data every day after the conclusion of class activities. The information they must enter is not limited to academic achievement, but can also include attendance, participation, behavioral notes, and, in some cases, spiritual or character development indicators. At the same time, teachers must fulfill a set of duties and responsibilities clearly defined by the government for the teaching profession in Indonesia. These include lesson planning, implementation of learning processes, assessment and evaluation of learning outcomes, remedial and enrichment programs, professional development activities, and sometimes additional administrative responsibilities at the school level.

The imposition of daily data entry on top of existing formal obligations creates a substantial cumulative workload. Teachers find themselves in a position where, after teaching and completing face-to-face or online interactions with students, they must allocate additional time to enter detailed data into Edutren. When this pattern occurs consistently every day, it can lengthen working hours, blur boundaries between work and personal time, and increase mental fatigue. In the long run, such conditions may contribute to experiences of work overload.

Empirical findings in organizational and educational psychology support this concern. Aldrup et al. (2018) show that continuous exposure to high job demands, especially when not balanced by adequate resources and autonomy, can lead to job stress among teachers. Job stress in this context is not only associated with emotional exhaustion, but can also affect job satisfaction, motivation, and the quality of interactions with students. For an educational institution that seeks to strengthen not only cognitive achievements but also religious and character dimensions, the emotional well-being of teachers and dormitory guardians is a strategic asset that must be protected.

The tension between the need for comprehensive data and the risk of overburdening staff raises an essential question about proportionality and prioritization. On the one hand, detailed data are crucial for evidence-based decision-making, personalized learning, and accountability to stakeholders. On the other hand, if the mechanisms for collecting such data are not carefully designed, they can undermine the very human resources that are central to the learning process. Teachers who are exhausted and stressed may find it difficult to maintain enthusiasm, creativity, and warmth in their interactions with students, even when supported by sophisticated digital systems.

To address this challenge, immediate and long-term coping strategies must be formulated. In the short term, schools can consider several practical measures. For example, they might simplify the daily input forms by focusing only on key indicators needed for decision-making, while moving less critical data to weekly or monthly summaries. Another option is to distribute data-entry responsibilities more evenly among staff or to rotate

specific tasks so that the same individuals are not consistently overloaded. Providing brief, targeted training on efficient data-entry techniques can also reduce the time teachers spend navigating the system.

From a long-term perspective, more structural strategies are required. One avenue is to engage in dialogue with policymakers and relevant authorities to recognize digital administrative tasks as part of teachers' official workload. When ICT-based documentation is acknowledged in regulations or workload calculations, schools can legitimately adjust teaching hours, assign additional support staff, or provide incentives tied to digital reporting responsibilities. This alignment between institutional practice and policy frameworks can reduce the sense of "invisible labor" often experienced by educators.

In parallel, the design and development of Edutren itself should increasingly adopt user-centered and workload-sensitive principles. For instance, integration with other systems (such as academic information systems or national reporting platforms) can minimize duplicate entries. Automation features, such as auto-completion, templates, or bulk-upload options, can significantly reduce the time required for repetitive input. In the context of Qur'an memorization data, features such as pre-registered surah and verse ranges, standard error codes, and preset assessment scales can not only speed up data entry but also increase the consistency and reliability of the recorded information.

Another critical dimension is cultivating a digital culture that views Edutren not merely as an obligation but as a tool that genuinely supports pedagogical reflection. When teachers perceive clear benefits, such as the ability to quickly review students' progress, identify patterns of difficulty, or generate reports to support parent-teacher meetings, they are more likely to accept the additional effort required for regular data input. To achieve this, school leaders need to regularly demonstrate how data from Edutren are used in decision-making, intervention planning, and evaluation of educational programs. Transparency in data utilization can increase a sense of ownership and reduce resistance.

In conclusion, the identified weaknesses of Edutren, namely limited feature completeness and the burden of daily data entry, should be understood not as isolated technical problems but as symptoms of a broader interplay among technology, policy, and human resources in the school environment. Addressing these weaknesses requires a combination of technical refinement, workload management, policy alignment, and cultural change in how data and digital tools are perceived. If these aspects can be systematically handled, Edutren has the potential to transform from a system that adds to teachers' and guardians' workload into a strategic platform that enhances the quality and sustainability of educational practices in the long term.

#### IV. Conclusion

This study aims to describe the effective use of the Edutren application in student evaluation activities, which is necessary to develop a technology-based educational evaluation model. The results showed that the use of Edutren is categorized into three stages: (1) data input carried out by the owner of the Middle Account (MA), (2) the data processing stage with Edutren's automation features and contract from the school principal and Main Operator (MA), and (3) various data displays. The findings

of this study indicate that the implementation of Edutren has led to a notable enhancement in the effectiveness of student evaluation practices. Despite ongoing development requirements during the trial phase, Edutren has been recognized as a promising ICTE model for its ability to offer a rigorous and sustainable evaluation system, foster collaboration between schools and student guardians, prioritize data utilization, and provide real-time student progress reports daily. This facilitates more informed decision-making processes for schools and guardians. However, the investigation acknowledges the potential for stress, particularly among teachers, who often shoulder an onerous workload and are required to enter daily data. The study's findings have yielded three key recommendations: (1) Education policymakers at the school level should consider incorporating Edutren or analogous applications to support student evaluation activities. (2) The development of school-level ICT applications must be a continuous process to maintain effectiveness in the face of evolving educational demands. (3) The development of educational applications should be accompanied by the formulation of strategies for organizing teachers' workload. Subsequent quasi-experimental research is recommended to ascertain more specific impacts on the utilization of certain systems or applications in education management activities.

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