



Effectiveness of Google Forms for Final Exams at MTs Bustanul Ulum During the Pandemic

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Abstract:

Purpose: This research aims to develop a web-based examination system using Google Forms to support the effective and efficient administration of the Final School Examination for Grade 9 students in Junior High Schools and Islamic Junior High Schools during the 2021–2022 academic year, particularly in response to remote learning conditions.

Methods: The implementation method in this research followed a structured sequence of stages. It began with the design of exam questions using Google Forms, a web-based tool integrated with Google Drive that allows flexible access and permission settings. In the requirements analysis stage, the necessary tools were identified, primarily a web browser, with student responses recorded in Google Spreadsheets. The system design phase addressed existing problems and guided the development process, which was executed in the design implementation stage using Google Forms and Spreadsheets. Next, the system underwent testing to evaluate its functionality, stability, and identify areas for improvement. Finally, in the system implementation stage, the completed system was applied in a real-world setting during the Computer-Based Madrasah Examination (UMBK) held in April 2022, including an introductory simulation and the actual online exam administration.

Results: The activity was implemented from April 9 to April 17, 2022, in two daily sessions held in the Computer Laboratory of MTs. Bustanul Ulum Yosowilangun, Lumajang, with strict adherence to health protocols. The evaluation revealed that the online Madrasah Final Examination was highly effective, offering significant advantages in cost and time efficiency. Although it required digital infrastructure, the use of Google Forms enabled automatic grading, allowing instant score generation and streamlined result processing into Excel format. Documentation of the activity highlights the successful use of Google Forms during the COVID-19 pandemic for Grade IX student assessments.

Conclusions: Online exams using Google Forms at MTs. Bustanul Ulum, prompted by COVID-19 restrictions (PPKM), marked a positive transition from manual to digital systems. Formerly conducted with printed materials, the Madrasah Examination adapted effectively to online methods, proving Google Forms to be a suitable and efficient solution during the pandemic.

Keywords:

covid-19 pandemic, digital assessment, google forms, madrasah education, online examination



1. Introduction

Student worksheets are essential learning tools that assist teachers in delivering instructional material and help students understand and practice the content in a structured and independent way (Evans & Cleghorn, 2022). However, the Covid-19 pandemic has forced Indonesia to implement various policies to minimize virus transmission (Prasetyo, Surtiari, & Nawawi, 2023). One such policy in the education sector is the shift to home-based learning (Pradana & Syarifuddin, 2021). This new approach relies heavily on video conferencing and digital learning platforms, with the intention of maintaining effective teaching and learning during the pandemic (Goh, Wong, & Kwek, 2023).

In practice, both teachers and students face challenges in adapting to technology-based learning tools (Wahab, Ismail, & Cusairi, 2023). Many are unfamiliar with online learning and lack sufficient knowledge in Information and Communication Technology (Asad, Hussain, Wadho, Khand, & Churi, 2021). During the pandemic, teachers often resorted to assigning tasks by sending textbook photos or internet screenshots through WhatsApp groups (Chara, Paucar, Alarcon, & Talavera-Mendoza, 2023). This method has caused students to lose interest and made learning less effective (Flynn, et al., 2021). Moreover, the lack of motivation and competence among teachers to assess student learning has led to a decline in student interest, particularly in subjects like mathematics (Frommelt, Schiefele, & Lazarides, 2023). The one-way nature of this teaching approach fails to actively involve students, resulting in boredom and disengagement (Mane, 2020). Therefore, there is a need for improved learning tools that can enhance student engagement and educational outcomes (Girdzijauskienė, Norvilienė, Šmitienė, & Rupšienė, 2022).

Google Forms is an effective digital tool for the learning process. This platform is easy to share with students or parents who have a Google account (Makarenko, Aleksieieva, Fysiuk, Filimonova, & Tsypliak, 2024). Google Forms offers various types of question formats, including short answers, essays, and multiple-choice options. Its user-friendly and visually appealing interface can enhance student motivation, and it is available free of charge (Pascu, Petculescu, & Stupariu, 2023). Additionally, responses are automatically recorded and scored, which simplifies the assessment process for teachers. The platform also enables educators to design diverse, interactive, and innovative questions, making assignments more engaging for students (Khan & Jawaid, 2020).

Recent studies have highlighted the numerous advantages of using Google Forms in educational settings (Martin, 2021). It facilitates interactive communication between students and teachers, allows for efficient distribution and collection of assignments, and supports paperless assessment practices (Ferran, 2021). Research has also shown that Google Forms are more accessible and time-efficient, with visually engaging designs that make the evaluation process more appealing (Cheng, Hampton, & Kumar, 2022). For teachers, the use of Google Forms significantly reduces the costs, time, and effort involved in assessment. For students, it promotes greater interest, participation, and a positive attitude towards exams and learning activities (Toma, Ardelean, Grădinaru, Nedelea, & Diaconu, 2023).

In response to the challenges posed by the COVID-19 pandemic – particularly during the implementation of restrictions on public activities (PPKM) in Indonesia – this research developed a web-based examination system to support the implementation of the Final School Examination for Grade 9 students in Junior High Schools and Islamic Junior High Schools (MTs) at the end of the 2021–2022 academic year. To accommodate remote learning conditions, the system utilized Google Forms as a practical and accessible platform. Google Forms, a feature of Google Docs, is a useful tool for conducting online assessments, enhancing the efficiency of teaching and learning processes. By leveraging Google Forms, this study aims to facilitate teachers in creating and administering exams while improving efficiency in terms of time, resources, and cost. This initiative is expected to provide an effective solution for maintaining assessment quality during online learning environments.

2. Method



Figure 1. Research Method

The implementation method used in this research consists of several activity stages as follows:

A. Design

The exam questions were designed using Google Forms, which is a web-based system integrated with Google Drive. It can be accessed by anyone using different Google accounts. The form creator can set access permissions, such as viewer or editor.

B. Requirements Analysis

Requirements analysis is the stage of gathering requirements for conducting the online exam. The software needed for this online exam is simply a web browser such as Mozilla Firefox or Google Chrome. The responses from students are recorded using Google Spreadsheets.

C. System Design

This stage involves designing the system based on the existing problems.

D. Design Implementation

In this stage, the system design is implemented using Google Forms and Google Spreadsheets.

E. System Testing

Once the system is built, it undergoes testing to identify any weaknesses or shortcomings. Based on the results, further evaluation and improvements are made to enhance the system. The purpose of this testing is also to determine how stable and reliable the application is. The system is tested by accessing the web page or using the link that has been created.

F. System Implementation

System implementation is the process of applying the designed exam system in the actual execution of the Computer-Based Madrasah Examination (UMBK), which was held from April 9 to April 17, 2022, at Madrasah Tsanawiyah Bustanul Ulum Krai Yosowilangun Lumajang.

The implementation process includes several steps:

1. Introducing the application to students during a UMBK simulation.
2. Conducting the UMBK online.

3. Results and Discussion

A. Activity Implementation

The implementation of this activity took place from April 9 to April 17, 2022, and was divided into two sessions. Session I started at 07:30 AM and ended at 09:30 AM, while Session II ran from 10:00 AM to 12:00 PM. The exams were held in the Computer Laboratory of MTs. Bustanul Ulum Yosowilangun, Lumajang, with health protocols strictly observed.

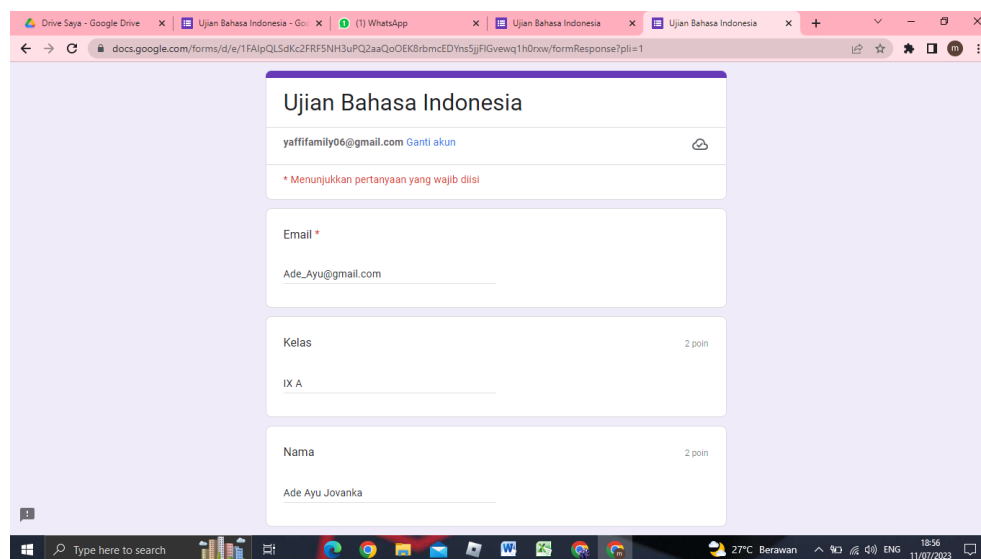


Figure 2. Exam Questions in Google Form Version

B. Activity Evaluation

The evaluation of activities following the online Madrasah Final Examination showed that this method was highly effective in terms of both cost and time. From a cost perspective, online exams are more economical, although they require digital facilities such as a PC/laptop and internet connection. In terms of time, the process is faster and more efficient because once students finish the exam, their scores are automatically generated. This is made possible by the automatic grading feature in Google Forms. The final result of the online exam is a student data recap in Excel format.

C. Activity Documentation



The following is documentation of the use of Google Forms for the Madrasah Final Examination of Grade IX students at MTs. Bustanul Ulum Yosowilangun, Lumajang during the COVID-19 pandemic.

	A	B	C	D	E	F	G	H	I
1	Timestamp	Score	Nama	Kelas	1.	2.	3.	4.	5.
13	16/04/2022 9:27:00	38 / 102	Alifatus sholeha	IX A	See you		17 At a half past seven	secretary	a dipper and a fr
14	16/04/2022 9:29:16	32 / 102	Ana maicarah	IX A	See you		17 At a quarter past seven	secretary	a dipper and a fr
15	16/04/2022 9:29:18	30 / 102	adinda yuniar rahmah	IX A	See you		17 At a quarter past seven	secretary	a dipper and a fr
16	16/04/2022 9:29:24	32 / 102	ERNIDWI FATHAWATI	IX A	See you		17 At a quarter past seven	secretary	a dipper and a fr
17	16/04/2022 9:29:34	30 / 102	hiya sabila	IX A	See you		17 At a quarter past seven	secretary	a dipper and a fr
18	16/04/2022 9:29:47	34 / 102	Hikmatul hasanah	IX A	See you		17 At a quarter past seven	secretary	a dipper and a fr
19	16/04/2022 9:30:26	40 / 102	adinda rizka dwi vanessii	IX A	See you		15 At a half past seven	waitress	a stove and a ke
20	16/04/2022 9:36:30	30 / 102	Lyena Eka Putri	IX A	See you		16 At a half past seven	secretary	a rice bowl and i
21	16/04/2022 9:43:07	20 / 102	firda dwi cahyani	IX A	See you		16 At a half past seven	waitress	a rice bowl and i
22	16/04/2022 9:43:54	36 / 102	Evatussa Adah	IX A	See you		17 At a quarter past seven	secretary	a pan and a plat
23	16/04/2022 9:44:44	74 / 102	Maratus shofiyah	IX A	See you		17 At a quarter to seven	secretary	a stove and a ke
24	16/04/2022 9:46:47	34 / 102	Falentina Alfaini Maburo	IX A	See you		17 At a half past seven	stewardess	a pan and a plat
25	16/04/2022 9:48:59	30 / 102	Clara Audyza	IX A	See you		17 At a half past seven	stewardess	a pan and a plat
26	16/04/2022 10:47:13	26 / 102	syamsul arifin	IX B	Good morning		17 At a quarter past seven	waitress	a rice bowl and i
27	16/04/2022 10:48:25	22 / 102	nurwanita muh hasim sap	IX B	Good Night		15 At twenty five to seven	secretary	a pan and a plat
28	16/04/2022 10:50:53	22 / 102	Putri haryani eka pujiyan	IX A	Good morning		17 At a quarter to seven	stewardess	a rice bowl and i
29	16/04/2022 10:54:10	14 / 102	M sholeh andre anto	IX B	Good morning		14 At a quarter past seven	teller	a pan and a plat
30	16/04/2022 10:54:22	26 / 102	M nur hasan	IX B	See you		15 At a quarter past seven	teller	a dipper and a fr
31	16/04/2022 10:54:29	46 / 102	Nurul Aini	IX A	See you		17 At a quarter to seven	secretary	a rice bowl and i
32	16/04/2022 10:54:41	47 / 102	CAI KADIA EESDIANA	IX A	See you		17 At a half past seven	waitress	a rice bowl and i

Figure 3. Student Responses from Google Forms

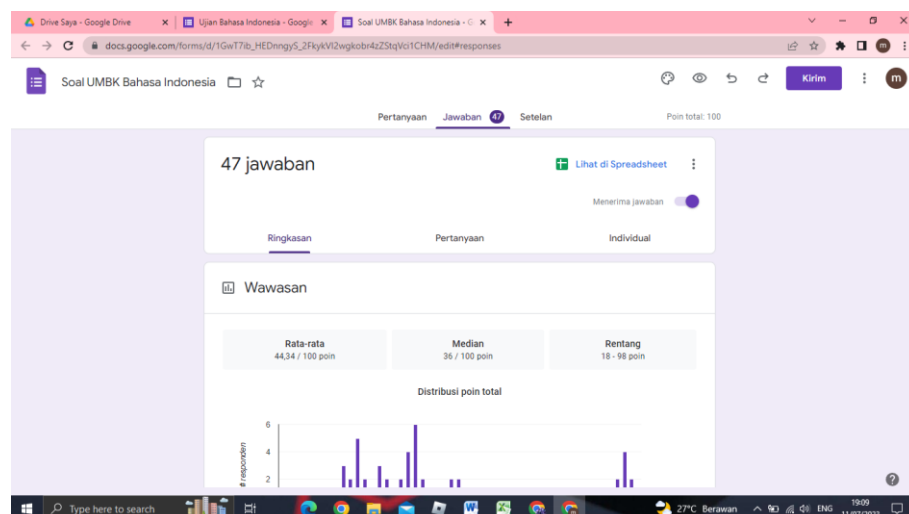


Figure 4. Answer Recapitulation From Google Form



Figure 5. Exam Situation



4. Conclusion

Based on the previous discussion regarding the use of Google Forms as a medium for online exams, several conclusions can be drawn. Initially, the Madrasah Examination at MTs. Bustanul Ulum was conducted using printed question sheets and answer sheets. However, the implementation of public activity restrictions (PPKM) unintentionally brought positive changes in the field of education by encouraging a shift from offline to online learning, and from manual to digital systems. In this context, the use of Google Forms as a medium for administering Madrasah Exams proved to be an effective and appropriate solution during the COVID-19 pandemic.

References

- Asad, M., Hussain, N., Wadho, M., Khand, Z., & Churi, P. (2021). Integration of E-Learning Technologies for Interactive Teaching and Learning Process: an Empirical Study on Higher Education Institutes of Pakistan. *Journal of Applied Research in Higher Education Vol. 13 No. 3*, 649-663.
- Chara, J. J., Paucar, F. H., Alarcon, D. A., & Talavera-Mendoza, F. (2023). Training Needs of Teachers in the Acceptance and Use of WhatsApp in Online Teaching. *International Journal of Information and Education Technology Volume 13 Number 11*.
- Cheng, L., Hampton, J., & Kumar, S. (2022). Engaging Students Via Synchronous Peer Feedback in A Technology-Enhanced Learning Environment. *Journal of Research on Technology in Education, 56(3)*, 347–371.
- Evans, R., & Cleghorn, A. (2022). Do student teachers see what learners see? – Avoiding instructional dissonance when designing worksheets. *South African Journal of Childhood Education, 12(1)*.
- Ferran, F. M. (2021). Extended Technology Acceptance Model to Examine the Use of Google Forms - based Lesson Playlist in Online Distance Learning. *Recoletos Multidisciplinary Research Journal, 9(1)*, 147–161.
- Flynn, N., Keane, E., Davitt, E., McCauley, V., Heinz, M., & Mac Ruairc, G. (2021). ‘Schooling at Home’ in Ireland during COVID-19’: Parents’ and Students’ Perspectives on Overall Impact, Continuity of Interest, and Impact on Learning. *Irish Educational Studies, 40(2)*, 217–226.
- Frommelt, M. C., Schiefele, U., & Lazarides, R. (2023). The Contributions of Teachers’ Educational Interest and Relational Goals to Instructional Quality and Student Interest in Mathematics Classrooms. *Contemporary Educational Psychology, Volume 73*.
- Girdzijauskienė, R., Norvilienė, A., Šmitienė, G., & Rupšienė, L. (2022). Strengthening Student Engagement in Learning Through Use of Digital Tools. *Acta Paedagogica Vilnensia, 49*, 115–130.
- Goh, H., Wong, H., & Kwek, D. (2023). Home-Based Learning During School Closure in Singapore: Perceptions from The Language Classrooms. *Educ Res Policy Prac 22*, 367–387.
- Khan, R. A., & Jawaid, M. (2020). Technology Enhanced Assessment (TEA) in COVID 19 Pandemic. *Pakistan Journal of Medical Sciences Vol. 36 No. COVID19-S4*.
- Makarenko, V., Aleksieieva, O., Fysiuk, A., Filimonova, T., & Tsypliak, N. (2024). Google’s Digital Tools for Education: A Selection of Tools. *Journal of Curriculum and Teaching Vol 13 No 3*.



- Mane, D. T. (2020). Active Teaching Learning Methods for Improving Students Engagement in The Classroom. *Journal of Engineering Education Transformations, Volume 33*.
- Martin, B. A. (2021). Teachers Perceptions of Google Classroom: Revealing Urgency for Teacher Professional Learning. *Canadian Journal of Learning and Technology Vol. 47 No. 1*.
- Pascu, M., Petculescu, D. C., & Stupariu, I. P. (2023). Investigating Students' Perception of Online Assessment as a Result of the Interaction among the Extrinsic Assessment Factors on Students Psychological Characteristics. *Education Sciences, 13(2)*.
- Pradana, M., & Syarifuddin, S. (2021). The Struggle Is Real: Constraints of Online Education in Indonesia During the COVID-19 Pandemic. *Frontiers in Education Volume 6*.
- Prasetyo, Y. E., Surtiari, G. A., & Nawawi. (2023). Unlocking The Interaction of Social Restriction and Social Protection in Indonesia's Covid-19 Policy: Future Risk and Adaptation. *Journal of Integrative Environmental Sciences, 20(1)*.
- Toma, F., Ardelean, A., Grădinaru, C., Nedelea, A., & Diaconu, D. C. (2023). Effects of ICT Integration in Teaching Using Learning Activities. *Sustainability, 15(8)*.
- Wahab, R. A., Ismail, S., & Cusairi, R. M. (2023). Implementation and Challenges of Home-Based Teaching and Learning (PdPR) in Religious Schools in Kubang Pasu, Kedah. *World Journal of English Language Vol.13 No.6*.