

## Development of Google Form-based Digital Worksheets to Increase the Learning Spirit of High School Students

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### ABSTRACT

This study aims to produce a Valid and Practical Google Forms-based Digital Worksheet to enhance the Learning Enthusiasm of High School Students. The method used is Research and Development with the ADDIE design, focusing on the development of digital worksheets with both validity and practicality. The ADDIE design stages involve analysis, design, development, implementation, and evaluation. The research was conducted at State High School 3 Luwu, involving 20 students as participants. Data were collected through observation and questionnaires. The questionnaires were used for validation by subject matter experts and media experts, using a rating scale of 1-5. Additionally, the questionnaires assessed student responses to the digital worksheets after the trial, using the same rating scale. Data were processed through descriptive statistical and qualitative descriptive analysis. The research results showed material validity of 86% and media validity of 95%, providing a strong foundation for the use of technology in learning. Student responses obtained an average percentage of 85.14%, indicating that the digital worksheets were highly practical.

Keywords: Worksheet, Google Form, Spirit of Learning

### ABSTRAK

Penelitian ini bertujuan menghasilkan Lembar Kerja Digital berbasis Google Form yang Valid dan Praktis untuk meningkatkan Semangat Belajar Siswa SMA. Metode yang digunakan adalah Research and Development dengan desain ADDIE, menitikberatkan pada pengembangan lembar kerja digital yang memiliki validitas dan praktikalitas. Tahapan desain ADDIE melibatkan analisis, perancangan, pengembangan, implementasi, dan evaluasi. Penelitian dilaksanakan di SMA Negeri 3 Luwu, melibatkan 20 siswa sebagai partisipan. Data dikumpulkan melalui observasi dan angket. Angket digunakan untuk validasi oleh ahli materi dan ahli media, dengan skala penilaian 1-5. Selain itu, angket juga menilai respon siswa terhadap lembar kerja digital setelah uji coba, dengan skala penilaian yang sama. Data diolah melalui analisis statistik deskriptif dan kualitatif deskriptif. Hasil penelitian menunjukkan validitas materi sebesar 86% dan validitas media sebesar 95%, memberikan dasar kuat untuk penggunaan teknologi dalam pembelajaran. Respon siswa mendapatkan persentase rata-rata 85,14%, menunjukkan bahwa lembar kerja digital dinilai sangat praktis.

Kata Kunci: Lembar Kerja, Google Form, Semangat Belajar

## INTRODUCTION

Learning enthusiasm plays a crucial role in the journey of high school students' education. This enthusiasm serves as the primary driver for achieving academic success and personal development. At the high school level, students are confronted with increasingly complex materials and higher assessment demands. High learning enthusiasm provides positive energy for students to overcome these challenges. With strong learning enthusiasm, students can overcome learning barriers, gain a deeper understanding of the material, and enhance their critical and analytical abilities (Lidia Susanti, 2020; Zakarya et al., 2023).

Furthermore, learning enthusiasm creates a positive learning environment, fosters collaboration among students, and encourages active participation in extracurricular activities. Through learning enthusiasm, students not only develop academic competencies but also interpersonal and personal skills that form the foundation for future success (Yasa et al., 2021). Therefore, nurturing and fostering learning enthusiasm among high school students not only has a positive impact on academic achievement but also forms a solid foundation for their holistic growth.

Learning enthusiasm also helps students engage in the learning process with high enthusiasm and perseverance. In optimal learning enthusiasm conditions, students are better able to overcome fatigue or frustration that may arise during learning (Dari & Sudatha, 2022; Humayrah & Watini, 2022). Willingness to learn and self-development are also key for high school students to explore their interests and talents. With a burning enthusiasm, students can take more initiative, seek additional information, and delve into knowledge beyond the formal curriculum (Al Zuhry & Ghofur, 2021; Fiteriani, 2017). Moreover, well-maintained learning enthusiasm helps students face exams and evaluations with more confidence, as they see them as opportunities to measure their progress (Jainiyah et al., 2023). Therefore, schools and the educational environment need to build an atmosphere that stimulates learning enthusiasm, provides positive encouragement, and offers support and guidance so that students can maintain their learning enthusiasm throughout their high school education.

The condition of high school students' learning enthusiasm in Indonesia poses challenges and reflects various factors. Observations indicate that some students still face various obstacles, such as heavy workloads, exam pressure, and limited access to educational resources. Nevertheless, there are still a considerable number of students who show high learning enthusiasm, especially those who receive adequate support from their family and school environment. Students who receive positive encouragement and guidance from parents and teachers tend to be more motivated to face learning tasks. In efforts to enhance learning enthusiasm, attention should be given to providing psychosocial support, nurturing interests and talents, and creating a fun learning atmosphere that encourages creativity. Involving students in extracurricular activities and providing space for self-expression can be crucial steps in building a positive learning enthusiasm among high school students in Indonesia.

One interesting alternative solution to enhance the learning enthusiasm of high school students is through the development of Google Form-based Digital Worksheets. By integrating this technology into the learning process, students can benefit from the practicality of accessing materials, interactivity, and direct engagement in learning activities. Through Google Form, digital worksheets can be designed by adapting learning materials, presenting creative challenges, and providing real-time feedback. With the use of this technology, students can overcome boredom in conventional learning and feel more engaged in the study material. Furthermore, Google Form allows teachers to efficiently monitor the individual progress of students and provide more specific guidance according to their needs. The implementation of Google Form-based digital worksheets is expected to create a more dynamic learning atmosphere, enhance student motivation, and bring positive impacts on their learning enthusiasm at the high school level.

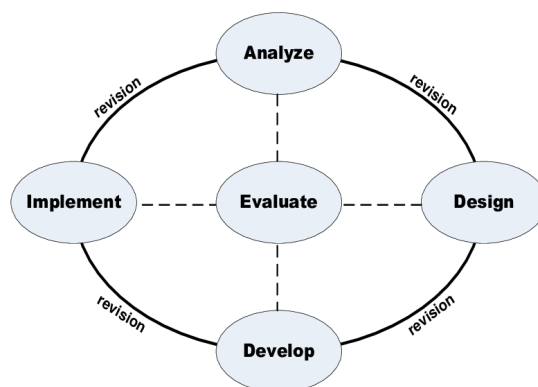
Previous studies have also provided support for the concept of developing Google Form-based digital worksheets as a solution to enhance students' learning enthusiasm at the high school level. Research by Yuwono revealed that technology integration in the form of digital

worksheets can increase student interaction with study materials and enhance their active involvement in learning (Yuwono et al., 2020). This finding aligns with the concept of learning theories emphasizing the importance of interactivity and direct experience in shaping students' understanding. Additionally, research by Bulan and Maksum highlighted that the use of Google Form in learning can provide flexibility and ease in monitoring individual student progress, enhancing teachers' responsiveness to the specific learning needs of each student (Bulan & Zainiyati, 2020; Maksum & Fauzi, 2021). The results of all these relevant studies contribute significantly to designing and implementing digital worksheets that can motivate and enrich high school students' learning, creating a strong foundation for enhancing their learning enthusiasm.

This research distinguishes itself from relevant studies by exploring the development of Google Form-based Digital Worksheets specifically in the context of Islamic Education learning at the high school level. While previous research tended to have a general approach to the use of technology in learning, this research details specific aspects relevant to the material and characteristics of religious learning. By focusing on the material of avoiding extravagant living, this research adds a deep religious dimension, creating digital worksheets that are not only engaging and interactive but also grounded in religious values. The novelty of this research lies in the holistic approach to the development of learning media, covering aspects such as material validity, visually appealing design, and the enhancement of students' learning enthusiasm. Therefore, this research provides a new contribution to understanding the implementation of technology in Islamic Education learning at the high school level, laying a solid foundation for further development in this context.

## **METHODS OF RESEARCH**

This study adopts the Research and Development method with the ADDIE design, focusing on the development of a valid and practical digital worksheet. The ADDIE design stages can be seen in Figure 1. The research was conducted at State Senior High School 3 Luwu as the implementation context. Data were collected through observation and questionnaires. The questionnaires were used for validation by material experts and media experts regarding the digital worksheet, with a rating scale of 1 to 5. Additionally, the questionnaires were used to assess students' responses to the digital worksheet after the trial, using the same rating scale. The questionnaire results will be statistically processed and categorized based on Table 1.



**Figure 1** ADDIE Design Stages

**Table 1** Valid and Practical Criteria

<b>Intervals</b>	<b>Valid Criteria</b>	<b>Practical Criteria</b>
<21%	Very Invalid	Very Unpractical
21-40%	Not Valid	Not Practical
41-60%	Moderately Valid	Moderately Practical
61-80%	Valid	Practical
81-100%	Very Valid	Very Practical

## RESULTS AND DISCUSSION

### *Digital Worksheet needs analysis*

Through direct observation in the learning environment, the researcher identified that students tend to be more motivated when learning materials are presented interactively and accessible through digital platforms. Interviews with teachers also revealed that the use of digital worksheets can provide flexibility in content delivery and facilitate real-time assessment. Students expressed a desire for easy and quick access to learning materials, making the use of Google Form considered an appropriate solution. The analysis results provide a strong foundation for designing digital worksheets, considering not only academic aspects but also student motivation and comfort in their learning process. By understanding these needs, it is expected that the developed digital worksheets can have a greater positive impact on the high school students' learning spirit.

Support from research results indicating that students are more motivated when learning materials are presented interactively and accessible through digital platforms aligns with modern learning theories (Hutahaean, 2019). Constructivism theory, for example, emphasizes that learning should not be passive but involve active interaction between students and the material (Sugrah, 2020). This interactive approach allows students to build their understanding through direct experience, consistent with the observation findings that students are more motivated in interactive learning.

The use of digital worksheets as a solution, especially through Google Form, aligns with technology-based learning theories. This theory states that the use of technology can enhance accessibility, flexibility, and interactivity in learning (Handayani et al., 2023; Said, 2023). Google Form as a digital tool enables students to access materials quickly and provide real-time feedback, creating a more dynamic learning experience.

Interviews with teachers highlighting flexibility in content delivery and real-time assessment also support the concept of flexible and adaptive learning theory. This theory emphasizes the importance of adjusting learning to the needs and development of students, which can be facilitated through the use of technology such as digital worksheets. Through a deep understanding of student needs and support from modern learning theories, the design of digital worksheets considering interactivity, accessibility, and flexibility is expected to have a greater positive impact on the high school students' learning spirit. Additionally, the implementation of technology in learning is expected to help students develop essential digital literacy skills to meet the demands of the modern world.

Based on the needs analysis results, the researcher developed digital worksheets based on Google Form to enhance the learning spirit of high school students. The development results can be seen in Figure 2.

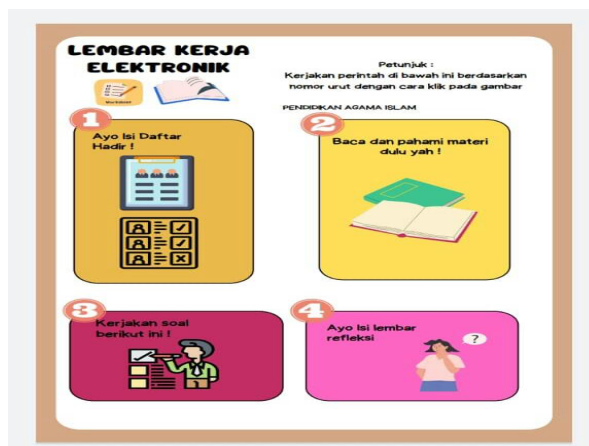


Figure 2 Digital Worksheet Design

### Validity of Digital Worksheets

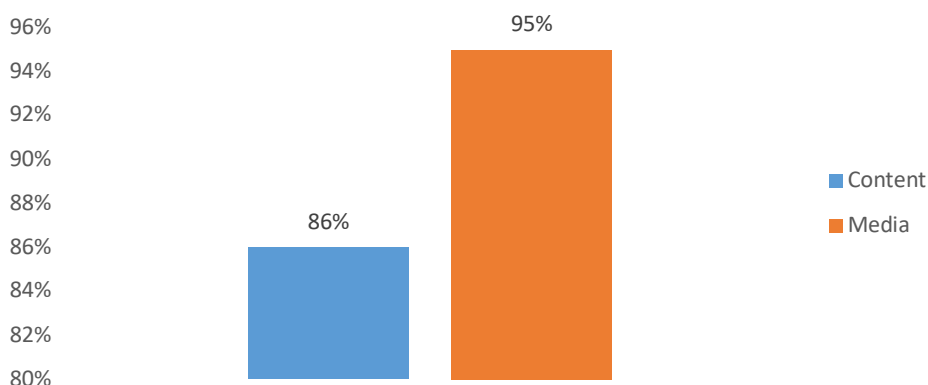


Figure 3 Digital Worksheet Validity Test Results

In Figure 3, the results of the material validity on the digital worksheet for Islamic Religious Education, particularly on the topic of avoiding a luxurious lifestyle, indicate valid criteria with a percentage reaching 86%. Several relevant assessment aspects involve the alignment of content with basic competencies and learning indicators, which have been well-fulfilled, ensuring that the material aligns with the learning objectives. The clarity of terms in the electronic worksheet is also assessed well, facilitating students' understanding of the conveyed concepts. Furthermore, the clarity and sequence of material in the electronic worksheet are considered positive, creating a systematic understanding for students. Aspects of image selection, media clarity, and material completeness are all evaluated as very clear. The material is presented according to theories and facts relevant to daily life, and the language is easy to understand and use. The success of the electronic worksheet in enhancing students' enthusiasm for learning the topic of avoiding a luxurious lifestyle is also recognized as an effective learning aid. Overall, the results of material validity provide solid support for the development and implementation of digital worksheets in Islamic Religious Education at the high school level.

Meanwhile, the results of media validity show that the developed digital worksheet achieves a validity level of 95%, reflecting success in meeting the established evaluation

criteria. In terms of visual format, the image design creates a positive impression that can captivate learning interests, making it an effective element in supporting the learning process. The appropriateness of images on the media display, text selection, and text color is considered very good, creating a visual harmony that enriches students' learning experience. The compatibility between color, writing, and images in the media is also viewed positively, resulting in an aesthetic and easily understandable display.

Concerning material aspects, the presentation sequence of material in the media is well-adjusted, creating a logical and structured learning flow. The clarity of concepts conveyed through the media is considered good, providing a profound understanding of the learning material. The alignment of learning objectives with the media is also well-fulfilled, guaranteeing that the media can support the achievement of desired learning objectives.

The language aspect in the media also receives high ratings, with the language being considered good and effective. The sentences used are seen to reinforce the media's effectiveness in conveying information. The clarity and completeness of information in language or sentences are considered optimal, providing comprehensive understanding to media users. Overall, the results of this media validity evaluation provide confidence that the media not only meets evaluation standards well but is also capable of improving the quality of learning through engaging visual presentations and clear content.

The research results, which recorded a high percentage of material validity in the digital worksheet for Islamic Religious Education, provide strong support for learning development at the high school level (Bulan & Zainiyati, 2020; Iqbal et al., 2018; Maksum & Fauzi, 2021; Mirandanu, 2022; Yuwono et al., 2020). The alignment of material with basic competencies and learning indicators serves as the main foundation for success, in line with the theory that relevant material to learning objectives will be more effectively absorbed by students. The clarity of terms in the electronic worksheet also plays a key role, consistent with the theory that language clarity can enhance students' understanding of religious concepts. Meanwhile, the success of the electronic worksheet in boosting students' enthusiasm for learning aligns with visual and audiovisual learning theories (Fhabella & Kuntari, 2022). Clear visual presentation, appropriate image selection, and engaging media use can motivate students and improve information retention. This support aligns with the concept of learning theories that emphasize the importance of visualization and multimedia experience in the learning process.

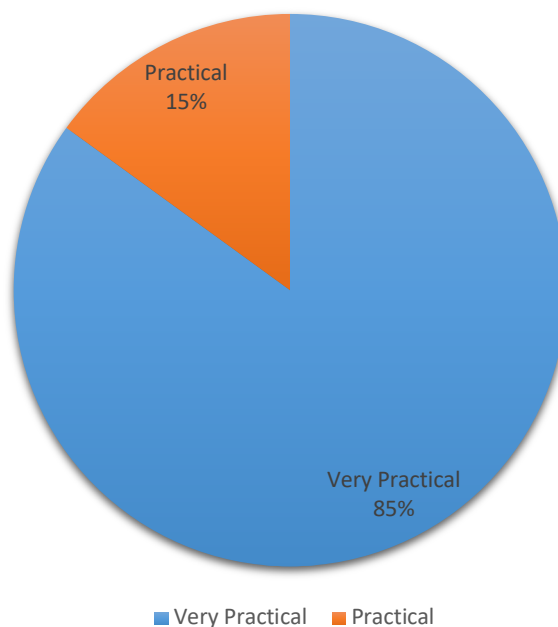
The results of the media validity evaluation, achieving a validity level of 95%, provide concrete support for the effectiveness of the digital worksheet. The appropriateness of images, text selection, and text color align well with instructional design theory, emphasizing the importance of engaging design that facilitates understanding. The concept of organizing material logically and structurally also supports teaching theories that state a clear learning flow can enhance the effectiveness of learning.

Similarly, the language aspect in the media, which receives high ratings, aligns with the theory of effective communication in education. Good and effective language, sentences that strengthen the media's effectiveness, as well as the clarity and completeness of information in language or sentences, all support the theory that good communication between teachers and students through media can enhance students' understanding.

Overall, the research and evaluation results provide strong support from various learning and instructional design theories. The development of digital worksheets supported

by valid research results not only meets evaluation standards well but also proves effective in enhancing the quality of Islamic Religious Education learning at the high school level.

### ***Practicality of Digital Worksheets***



**Figure 4** Practicality Test Results of Digital Worksheets

Figure 4 presents the data on the assessment of students' responses to the instructional media in Islamic Religious Education, focusing on the topic of avoiding a luxurious lifestyle. Respondents provided a quite positive response, with the average score percentage reaching 85.14%. In terms of assessment criteria, the majority of students stated that the instructional media was "Very Practical." Considering the percentage results reaching 85%, it can be concluded that this instructional media is well-received by students and falls into the category of Very Practical. Therefore, no revisions are needed for the electronic worksheet in Islamic Religious Education concerning the topic of avoiding a luxurious lifestyle. This positive evaluation indicates that the instructional media is effective in capturing students' interest and maintaining their attention during the learning process. The data source for this table is processed from collected primary data, providing a valid overview of students' positive responses to the developed instructional media.

This positive outcome also encourages a greater utilization of technology in school learning. By expanding the use of digital instructional media, schools can enhance students' learning experiences and prepare them for the demands of an increasingly digital world. The integration of technology into learning not only builds academic skills but also introduces students to skills relevant to the modern era, such as digital and critical literacy. Therefore, these positive results can serve as motivation to continue exploring the potential and innovation in the development of instructional media in the future.

The positive support from students' responses to instructional media in the subject of Islamic Religious Education not only reflects the effectiveness of implementing digital worksheets but also aligns with several learning and psychological theories. Cognitive theory

states that the use of engaging media can facilitate students' understanding and retention of information (Sutarto, 2017). The research results, showing a positive response with an average percentage of 85.14%, provide evidence that the developed instructional media design for Islamic Religious Education successfully captures students' interest and maintains their attention.

Moreover, motivation theory asserts that the practicality of instructional media can provide an additional incentive for learning (Uno, 2023). The majority of students stating that this instructional media is Very Practical indicates that this success can be a motivating factor for students to actively participate in Islamic Religious Education learning. This aligns with the concept of intrinsic motivation, where students feel personally engaged and satisfied with the learning process.

The encouragement to leverage technology in learning, as explained in the positive results, also supports constructivist theory, emphasizing the importance of experiential learning (Suparlan, 2019). The use of digital instructional media can create more interactive and in-depth learning experiences, helping students build their understanding of Islamic Religious Education content. Additionally, the introduction of digital and critical literacy concepts through the application of technology in learning aligns with the needs of students facing the modern era. Overall, the positive results from students' responses not only provide direct support for the implementation of Islamic Religious Education instructional media but also strengthen the validity of the learning theories that underpin the development of this media. The ongoing efforts to explore the potential and innovation in learning through technology in the future are expected to continue enriching students' learning experiences and preparing them for challenges in this digital era.

## **CONCLUSION**

Based on the results of the research and discussion, the development of digital worksheets for Islamic Religious Education at the high school level through Google Forms demonstrates success in meeting the needs of students. The material validity test results reached 86%, while the media validity reached 95%, providing a strong foundation for the use of technology in learning. Support from learning theories, such as constructivism and technology-based learning, is evident through interactivity, ease of access, and success in capturing students' interest. Positive student responses with an average percentage of 85.14% indicate that the digital worksheets are considered highly practical. These results encourage the utilization of technology in education, not only for academic skills but also for digital and critical literacy in line with the demands of the modern era. This conclusion reinforces the innovative role of technology in enhancing the quality of Islamic Religious Education learning at the high school level, creating a solid foundation for the development of more effective and relevant learning strategies.

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