

## Implementation of Liveworksheet-Based Interactive E-Modules in Learning Islamic Education to Increase Student Motivation

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### *Abstrack*

Islamic Religious Education learning achievement in high school is still low because students are less enthusiastic, often postpone assignments, and teachers are less able to motivate students and prepare learning. Access to PAI material on the internet is still limited, and conventional learning methods make students passive, causing low learning outcomes. One solution to overcome this problem is to implement interactive e-modules based on live worksheets. This research aims to analyze planning, implementation, supporting factors, solutions, effectiveness of implementing for the implementation of live worksheet-based interactive e-modules in Islamic religious education learning. This research uses an analytical narrative method with a qualitative approach. As for Data collection techniques are carried out through interviews, observation and documentation. The findings show that the implementation of Liveworksheet-Based Interactive E-Modules in Islamic Religious Education Learning at SMA Negeri 1 Cidahu requires steps including preparation, introducing the module to students, using the module in learning, evaluating student progress, and joint reflection for improvement. Different approaches are used to create an inclusive and effective learning environment. Full support from school leaders and teacher training supports implementation, while the obstacles are limited technological infrastructure and variations in teacher skills. To overcome these obstacles, support and collaboration between teachers is the key to overcoming these obstacles, and outreach to students is also part of the solution to increase their understanding.

**Keywords:** *Interactive E-Module, Liveworksheet, Students Motivation, Islamic Education.*

### *Abstrak*

Prestasi belajar Pendidikan Agama Islam di SMA masih rendah karena siswa kurang antusias, sering menunda tugas, dan guru kurang mampu memotivasi siswa dan mempersiapkan pembelajaran. Akses terhadap materi PAI di internet masih terbatas, dan metode pembelajaran konvensional membuat siswa menjadi pasif sehingga menyebabkan rendahnya hasil belajar. Salah satu solusi untuk mengatasi permasalahan tersebut adalah dengan mengimplementasikan e-modul interaktif berbasis live worksheet. Penelitian ini bertujuan untuk menganalisis perencanaan, pelaksanaan, faktor pendukung, solusi, efektivitas penerapan penerapan e-

modul interaktif berbasis live worksheet dalam pembelajaran pendidikan agama Islam. Penelitian ini menggunakan metode naratif analitis dengan pendekatan kualitatif. Adapun teknik pengumpulan data dilakukan melalui wawancara, observasi dan dokumentasi. Temuan penelitian menunjukkan bahwa implementasi E-Modul Interaktif Berbasis Liveworksheet dalam Pembelajaran Pendidikan Agama Islam di SMA Negeri 1 Cidahu memerlukan langkah-langkah yang meliputi persiapan, pengenalan modul kepada siswa, penggunaan modul dalam pembelajaran, evaluasi kemajuan siswa, dan refleksi bersama untuk perbaikan. . Pendekatan yang berbeda digunakan untuk menciptakan lingkungan belajar yang inklusif dan efektif. Dukungan penuh dari pimpinan sekolah dan pelatihan guru mendukung pelaksanaannya, sedangkan kendalanya adalah terbatasnya infrastruktur teknologi dan variasi keterampilan guru. Untuk mengatasi kendala tersebut, dukungan dan kolaborasi antar guru menjadi kunci untuk mengatasi kendala tersebut, dan sosialisasi kepada siswa juga menjadi bagian solusi untuk meningkatkan pemahaman mereka.

*Kata Kunci: E-Modul Interaktif, Liveworksheet, Motivasi Siswa, Pendidikan Islam.*

## INTRODUCTION

Islamic Religious Education (PAI) plays a crucial role in forming the character and morals of students. PAI is not only part of the school curriculum, but also a spiritual foundation for students in understanding and practicing Islamic values in everyday life. However, the problem that occurs in the field is the low motivation to learn PAI. Students show symptoms that indicate a lack of interest and enthusiasm in the PAI learning process. They tend to get bored quickly with PAI learning activities, lack enthusiasm and enthusiasm in participating in learning, and their attention is not focused on PAI learning material.

Students at SMA Negeri 1 Cidahu tend to delay doing PAI school assignments, indicating a loss of interest and obstacles in understanding and applying Islamic religious concepts in everyday life. Low motivation to learn PAI has the potential to damage the understanding and acceptance of Islamic religious values as well as the formation of students' character and morals. In the field, there are still many teachers who are unable to motivate and arouse students' interest in learning.

Observation results show that students' interest in learning is still low, many students are less motivated, and they tend to only want to learn according to their talents. Many teachers also do not prepare the learning process well,

especially under certain conditions. Preliminary studies at SMA Negeri 1 Cidahu show that the majority of educators and students obtain PAI material from the internet, using various search engines such as Google, Yahoo, YouTube and other social media. Students prefer to access the internet via smartphone because it is considered easier to carry, lighter and easier to use (S. Haifa, personal communication, 2024).

An unpleasant mood can hinder students' learning concentration. To increase interest in learning, support from facilities and media such as the internet is very important because it allows easy access to learning materials. Interest in learning is influenced by sustained attention to an object, which encourages individuals to carry out learning activities. This is an activity that involves various aspects, such as cognitive, affective and psychomotor, in an effort to achieve behavior (Arisanti & Subhan, 2018).

In reality, there is still a lot of learning that uses conventional methods known as one-way learning. In this method, students listen more to the material presented by educators in class, so they only receive information without being actively involved. Students tend to be passive objects in this learning process, while educators explain the material more through lectures and students only take notes. As a result, students become passive and their learning outcomes tend to be low. This method is one of the main causes of low student participation in learning and a decline in the quality of learning outcomes (Ramadhani, 2017).

Islamic Religious Education (PAI) learning at SMAN 1 Cidahu, Sukabumi Regency, some still adopt conventional methods where educators act as learning centers, while students only listen and receive information. The lack of attractiveness in the teaching materials delivered by educators also has a negative impact on student motivation. Lack of preparation before learning causes discussions in class to become passive, strengthening the role of educators as the center of teaching. In the 2022/2023 even semester academic year, the average PAI score in report cards is still low because it has not yet reached the KKM High PAI learning motivation is very important to achieve the goals of Islamic religious education which should form good character and morals in students.

The low learning motivation, students tend to lose interest in studying Islamic teachings, which can hinder their spiritual and moral growth. Therefore, increasing motivation to learn PAI becomes an urgent need to ensure good

understanding and correct implementation of Islamic values among students. If not handled seriously, low motivation to learn PAI can have a negative impact on student academic achievement at SMA Negeri 1 Cidahu. Apart from that, this can also influence the quality of students' character and morals, which is an important aspect in forming their personality. Therefore, efforts to address this issue will not only have a positive impact on PAI learning, but also on the holistic development of students as responsible and ethical individuals.

A motive is everything that encourages someone to take action to do something. It can also be said that a motive is a complex statement within an organism that directs behavior or actions towards a goal or stimulus (Nasrudin, 2022). Motivation is a drive within a person in his efforts to fulfill desires, aims and objectives which is a psychological drive on a scientific basis and the nature of human events, such as religious motivation (Nasrudin, 2011).

One of the factors that is thought to influence the low motivation to learn PAI at SMA Negeri 1 Cidahu is the learning model used by teachers. Learning models that are inappropriate or less interesting can reduce students' interest and motivation to actively learn and participate in the PAI learning process. Therefore, it is important for schools to evaluate the learning models used and find appropriate solutions to increase student learning motivation in PAI subjects. The solution offered is to apply Liveworksheet-Based Interactive E-Modules in Islamic Religious Education learning at SMA Negeri 1 Cidahu, Sukabumi Regency. Through this platform, teachers can create interesting and interactive learning modules, which can increase student interest and motivation. The use of digital technology also allows wider access to learning materials, as well as providing a more interesting and independent learning experience for students. Thus, the implementation of the Interactive E-Module is expected to effectively increase motivation and quality of PAI learning in the school.

One application that can be used to create activity sheets / LKPD is Liveworksheet. The use of interactive based applications such as Liveworksheets in the learning process makes students feel less bored in the learning process. Children become more enthusiastic about learning and can create a positive competitive spirit in the souls of students. The use of technology makes carrying out tasks more interesting when they are done. The bigger benefit is that students become more active when studying. Live worksheets are a platform that can help teachers create e-worksheets or student activity sheets which are often known as

LKPD (Pulungan et al., 2022). Apart from its attractive appearance, Liveworksheet is easy to use. Based on the research results, Liveworksheets can be used as part of learning, especially as an online-based assessment tool that is interesting, interactive, easy to access, and presents a variety of activities that can be adapted to the characteristics of students (Rhosyida et al., 2021).

E-Module development with Liveworksheets makes learning easier. Liveworksheets have been proven effective in increasing learning activities. Students can do exercises online and submit answers online, motivating and saving time. Liveworksheet can be accessed via the Liveworksheet (Sudarman et al., 2022).

Thus, the use of Liveworksheet-Based Interactive E-Modules can increase student involvement and PAI learning efficiency at SMA Negeri 1 Cidahu, Sukabumi Regency. The trial results show that the use of Liveworksheet-Based Interactive E-Modules has been effective in improving student learning outcomes. Before using the E-Module, the average student score was 39.89. However, after implementation, the average score increased to 87.85 in the categories "Very Good" and "Complete". This shows a significant increase in student learning achievement after using the Liveworksheet-based Interactive E-Module. Thus, the results of this trial provide concrete evidence that the use of this technology can effectively improve the quality of PAI learning at SMA Negeri 1 Cidahu, Sukabumi Regency (Panjaitan & Karo-Karo, 2023).

Sholehah (2021), in their research stated the benefits of Liveworksheets as follows: There are 3 benefits of Liveworksheets, namely, (1) for students, the interactive features make students interested so that they can increase student learning motivation and improve learning outcomes, (2) for teachers, it saves teachers having to correct questions, and (3) for the environment, reducing paper use. Apart from that, the graphic design is attractive and interactive, students will be more interested and motivated to learn. Apart from that, using Live Worksheets can also make students more active in learning, because they can immediately fill in digital worksheets and see the results directly (Safitri et al., 2023).

Therefore, the researcher in this case tried to create a central question, namely how to "Implement live worksheet-based interactive e-modules in Islamic religious education learning to increase student motivation at SMA Negeri 1 Cidahu, Sukabumi Regency".

## **RESEARCH METHOD**

This research uses a qualitative approach, data collection techniques used are observation, interviews, and documentation. Data analysis techniques are using data reduction, data display and conclusion drawing/verification. Meanwhile, the instrument in qualitative research is the researcher himself, then a simple research instrument is developed which is expected to complete the data and compare with data that has been found through observation and interviews (Sugiyono, 2009). The analysis technique in this research refers to the analysis method of Miles and Huberman. The stages are data reduction, display/presentation of data and drawing conclusions (Firman & Rahayu, 2020). In this regard, the data is divided into words and actions, written data sources, photos and statistics. Checking the validity of data is a step to reduce errors in the process of obtaining research data which will of course have an impact on the final results of a study. There are four criteria, namely: 1) credibility (internal validation); 2) transferability (external validation); 3) dependability (reliability); and 4) confirmability (objectivity) (Lexy J, 2017).

Research data was collected by gathering information from interviews with school principals, teachers and students. Through documentation, analyzing documents that contain information related to the research topic, and also direct field observations (Mitra et al., 2024). Data reduction is the process of summarizing, determining important things and focusing on the main things. Data from documentation, observations and interviews are grouped based on the problem formulation. Presentation of this data is done by presenting the data in a simpler form through narrative presentation presented in a systematic and easy to understand report (Arikunto, 2014).

## **RESEARCH FINDINGS AND DISCUSSION**

### **Liveworksheet-Based Interactive E-Module Planning for Learning Islamic Religious Education at SMA Negeri 1 Cidahu Sukabumi Regency**

The Liveworksheet-Based Interactive E-Module planning process for Islamic Religious Education Learning at SMA Negeri 1 Cidahu Sukabumi Regency involves analyzing the curriculum and student needs. Teachers design diverse and interactive learning modules, taking into account the optimal use of technology. it is important to note that learning is not only the teacher's responsibility, but rather a collaboration between the teacher and students. Both

must have the same awareness and understanding of the learning objectives that have been set. This awareness is a non-negotiable prerequisite, so that during the learning process, teachers and students move towards the same goal with joint efforts (Putrianingsih et al., 2021).

The main aim of this learning process is to achieve changes in student behavior, both in cognitive, affective and psychomotor aspects. This change in behavior is at the heart of the real learning goal. Therefore, all efforts made by teachers and students must be directed towards achieving these changes. Thus, the Interactive E-Module designed must be able to facilitate the learning process so as to encourage the expected behavioral changes in students.

This is in line with Rokhmawati and colleagues' emphasis on the vital role of learning planning in achieving learning goals. Furthermore, they highlight the importance of improving the quality of educators through increasing pedagogical competence (Mahmawati & Yuswandari, 2023).

Thus, integration between thorough learning planning and increasing pedagogical competence is the key to success in advancing the educational process, including in the context of developing the Interactive E-Module. The process of planning Liveworksheet-Based Interactive E-Modules for Learning Islamic Religious Education at SMA Negeri 1 Cidahu, Sukabumi Regency shows the importance of conducting an in-depth analysis of the curriculum and student needs.

First, the curriculum analysis allows teachers to understand the learning objectives set, so that they can design learning modules according to standards that are relevant to the educational needs and classes. Ana Nurhasanah et al explained that curriculum analysis has a positive impact on changes towards a better direction, along with the implementation of the curriculum. In carrying out this analysis, understanding the content and results of the curriculum analysis is key (Nurhasanah et al., 2021).

Second, student needs analysis allows teachers to understand the characteristics, level of understanding, interests and learning styles of students in their class. By understanding students' individual needs and tendencies, teachers can design learning modules that can attract their attention, accommodate different learning styles, and ensure that the material taught can be adapted to students' learning needs. Research by Renny Permata Saputri and Monica Fransisca shows that students need Android learning media for digital

simulation subjects, as shown by the results of a questionnaire with 94.23% of students agreeing to use this media (Saputri & Fransisca, 2020).

Needs analysis shows that students need more interesting and interactive teaching materials to make it easier to understand the material according to their preferences in learning. Considering the progress of the times, it is important for students to get used to using technology-based teaching materials to meet the demands of 21st century learning, namely mastery of technology. In the learning context, the use of appropriate media and learning strategies can create a new atmosphere that motivates students. This is in line with Fitriana's opinion, which emphasizes that information technology-based teaching materials, such as videos, interactive teaching materials and e-learning, are able to increase the efficiency and effectiveness of learning (Fitriana, 2021).

By conducting an in-depth analysis of the curriculum and student needs, the Liveworksheet-Based Interactive E-Module planning process can produce learning materials that are more effective, relevant and responsive to student needs and curriculum objectives. This will increase the effectiveness of learning and help create an inclusive learning environment and enable every student to reach their maximum potential in learning Islamic Religious Education.

### **Implementation of Liveworksheet-Based Interactive E-Modules in Islamic Religious Education Learning at SMA Negeri 1 Cidahu, Sukabumi Regency.**

The essence of the statement by PAI teachers and deputy principals for curriculum and student affairs is that the implementation of Liveworksheet-Based Interactive E-Modules in Islamic religious learning at SMA Negeri 1 Cidahu, Sukabumi Regency aims to increase student motivation and learning effectiveness.

The steps taken in using learning modules involve careful preparation beforehand, where the teacher prepares the material, understands the module content, and adapts it to the needs and characteristics of students. Next, the module is introduced to students by explaining the learning objectives, how to use it, and the expectations to be achieved. When the module is used in the learning process, students are given the opportunity to work independently or in groups with guidance and support from the teacher.

Evaluation of student progress is carried out regularly to monitor their learning progress, either through tests, assignments, observations, or discussions.



Finally, teachers and students reflect together to evaluate the success of using the module, identify obstacles, and plan improvements or enhancements for future learning. By following these steps, it is hoped that the use of learning modules can provide maximum benefits for students in achieving learning goals.

A differentiated learning approach is the main focus, with teachers trying to present material according to students' needs and level of understanding to create an inclusive and effective learning environment. The use of Liveworksheet-Based Interactive E-Modules in the context of a differentiated learning approach brings a number of significant benefits. This tool allows teachers to present learning materials tailored to each student's individual needs, through customizable content and adaptive assessment.

Making differentiated LKPD with live worksheets in the Independent Curriculum needs to be supported by qualified teacher competence. Teachers must be skilled in designing LKPD that suit students' needs and using live worksheet applications effectively. Support for increasing teacher competency through training and coaching is very important to improve the quality of learning (Madang et al., 2024).

Student involvement in Liveworksheet-based Interactive E-Modules allows them to adjust the pace of learning according to their individual needs. Students who quickly understand the material can continue with enrichment, while students who need additional help can receive remediation from the teacher. Likewise, Liveworksheet-based interactive LKPD can also support a differentiated learning approach by providing interesting content and tasks that suit individual students' level of understanding. With an attractive design and relevant material, this learning media is suitable for use in differentiated learning in elementary schools to improve student learning outcomes (Hardiansyah et al., 2023).

The instant feedback provided by E-Module allows students to evaluate their understanding in real-time and correct errors quickly. In addition, the collaboration and discussion features in the E-Module support interaction between students and facilitate the exchange of understanding. Thus, the use of Liveworksheet-Based Interactive E-Modules not only increases learning effectiveness, but also creates an environment that supports individual student development in a differentiated learning approach.

**Supporting and Inhibiting Factors in Implementing liveworksheet-based interactive e-modules in Islamic religious education learning to increase student motivation at SMA Negeri 1 Cidahu, Sukabumi Regency.**

The implementation of Liveworksheet-based interactive e-modules in Islamic Religious Education learning at SMA Negeri 1 Cidahu, Sukabumi Regency, was successful thanks to full support from school leadership, adequate training for teachers, and collaboration between teachers.

First of all, supportive school leadership ensures that there is the necessary support and resources for the implementation of the e-module. The school principal is responsible for directing and facilitating the implementation process, as well as ensuring that technological infrastructure and human resource support are available.

The leadership of school principals plays a very important role in developing strategies and policies that support improving the quality of education, as explained by Tila Paulina and Siti Patimah. School principals need to have a strong commitment and be able to formulate appropriate strategies to improve the quality of education in schools. However, they are also faced with several obstacles and challenges, including limited resources, resistance from some teachers to change, and lack of available time. Therefore, effective management of resources, effective communication with staff, and efficient management of administrative tasks are very important for school principals in supporting the successful implementation of education quality development programs (Paulina & Patimah, 2023).

Second, adequate training for teachers is the key to successful implementation. Teachers need to be equipped with skills and knowledge in using Liveworksheet-based interactive e-modules in Islamic Religious Education learning. This training includes the use of technology, e-module based learning design, and integration of Islamic Religious Education content into the Liveworksheet platform.

As stated by Surya, in carrying out their functions, teachers do not act alone but must interact with other related teachers through a partnership atmosphere that is systematic, synergistic and symbiotic. Likewise, scientific disciplines should interact and cooperate with each other in dealing with various problems that arise (Fakrurridha & Nurdin, 2019).

Finally, cooperation between teachers is an important factor in creating a collaborative and supportive learning environment. Through the exchange of ideas, experiences and resources, teachers can enrich each other's learning and improve the quality of e-modules presented to students. With full support from school leadership, adequate training for teachers, and collaboration between teachers, the implementation of Liveworksheet-based interactive e-modules in Islamic Religious Education learning at SMA Negeri 1 Cidahu, Sukabumi Regency, succeeded in creating a more interesting, interactive learning experience, and effective for students.

Effective instructional leadership by school principals impacts classroom climate and teacher performance, which influences the quality of learning. The dominant factor in this case is teacher performance. As a leader in a school, the principal has an important role in encouraging the achievement of the school's vision and mission through planned programs. Its role includes organizing educational activities, school administration, developing teaching staff, and maintaining infrastructure. With strong leadership, school principals can create an environment that supports teacher growth and improves the quality of learning.

However, there are several challenges such as limited technological infrastructure, variations in technological skills among teachers, and resistance to change. Although the implementation of Liveworksheet-based interactive e-modules in Islamic Religious Education learning at SMA Negeri 1 Cidahu, Sukabumi Regency, was successful with full support from school leadership, adequate training for teachers, and cooperation between teachers, there are several limitations that need to be implemented. overcome.

First of all, limited technological infrastructure is an obstacle. Some classrooms may not be equipped with stable internet access or adequate computer equipment. This can affect student and teacher access to interactive e-modules. Solutions to address these issues may involve improving the technology infrastructure in schools or finding other alternatives to provide adequate access.

Second, variation in technology skills among teachers is also a challenge. Some teachers may be more skilled in using technology than others, which may lead to gaps in the use of interactive e-modules. Additional training and support tailored to individual skill levels can help reduce these disparities.

This is in line with Lestari's opinion Lestari (2015), which states that obstacles to the use of Information and Communication Technology (ICT) by teachers in the educational context can be influenced by several factors, namely lack of access, lack of ICT facilities, learning not integrating ICT, teachers not having knowledge about ICT, and the lack of teacher willingness to utilize ICT. Lastly, resistance to change also needs to be overcome. Some teachers may feel reluctant or uncomfortable with the adoption of new technology in learning. It is important for school principals and management teams to understand these concerns and provide the necessary support and guidance to teachers to overcome this resistance.

Sahelatua et al., (2019) also said that the factors causing the low pedagogical competence of teachers in using the internet are that teachers still experience problems in operating IT as a learning medium, including teachers' lack of knowledge about IT, lack of IT facilities available in schools, abnormal electric current in schools, the internet cannot reaching all classes, and there is no obligation from the school for teachers who teach to use IT (Sahelatua et al., 2019).

Overcoming limitations in technological infrastructure, variations in technological skills among teachers, and resistance to change, the implementation of Liveworksheet-based interactive e-modules can be smoother and more successful in supporting Islamic Religious Education learning at SMA Negeri 1 Cidahu, Sukabumi Regency.

**Solutions to overcome obstacles in implementing live worksheet-based interactive e-modules in learning Islamic religious education to increase student motivation at SMA Negeri 1 Cidahu, Sukabumi Regency.**

To overcome obstacles in implementing Liveworksheet-based interactive e-modules in Islamic Religious Education learning at SMA Negeri 1 Cidahu Sukabumi Regency, various solutions have been implemented.

First, schools improve technology infrastructure by investing in adequate hardware and software. Second, technology training was carried out for teachers to improve their skills in using interactive e-modules. Third, strong support from school leadership has been provided, including providing resources and encouraging collaboration between teachers. Fourth, collaboration between teachers in the development and use of interactive e-modules has been carried

out to overcome obstacles. Finally, socialization and coaching is carried out for students to improve their understanding and skills in using technology for learning. By implementing these solutions comprehensively, it is hoped that obstacles in implementing interactive e-modules can be overcome, so that Islamic Religious Education learning can be more effective and increase student motivation at SMA Negeri 1 Cidahu, Sukabumi Regency.

Increasing PAI teachers' pedagogical and professional competence in mastering the use of digital platforms requires effective strategies. This is important because the use of digital platforms in PAI learning can improve the quality of teaching, expand access to learning resources, and facilitate interaction and collaboration between teachers and students (Wahzudik et al., 2018).

To improve the pedagogical and professional competence of Islamic Religious Education (PAI) teachers in using digital platforms, appropriate and effective strategies are needed. Mastery of digital technology is very important because it can improve the quality of teaching, expand access to various learning resources, and facilitate interaction and collaboration between teachers and students, thereby supporting the creation of more interactive and effective learning.

### **Effectiveness of Implementing Liveworksheet-Based Interactive E-Modules in Learning Islamic Religious Education at SMA Negeri 1 Cidahu, Sukabumi Regency.**

The implementation of Liveworksheet-based interactive e-modules in Islamic Religious Education learning at SMA Negeri 1 Cidahu, Sukabumi Regency has proven to be very effective in increasing student learning motivation. The evaluation stated that student participation increased, understanding of the material increased, and student response to the technology was very positive. Thus, the implementation of interactive e-modules has succeeded in creating a learning environment that is inclusive and responsive to student needs, as well as improving the overall quality of Islamic Religious Education learning.

One application that can be used to create activity sheets / LKPD is Liveworksheet. The use of interactive based applications such as Liveworksheets in the learning process makes students feel less bored in the learning process. Children become more enthusiastic about learning and can create a positive

competitive spirit in the souls of students. The use of technology makes carrying out tasks more interesting when they are done. The bigger benefit is that students become more active when studying. Live worksheets are a platform that can help teachers create e-worksheets or student activity sheets which are often known as LKPD, apart from its attractive appearance, Liveworksheet is easy to use (Pulungan et al., 2022).

Based on the research results, Liveworksheets can be used as part of learning, especially as an online-based assessment tool that is interesting, interactive, easy to access, and presents a variety of activities that can be adapted to the characteristics of students (Rhosyida et al., 2021).

E-Module development with Liveworksheets makes learning easier. Liveworksheets have been proven effective in increasing learning activities. Students can do exercises online and submit answers online, motivating and saving time. Liveworksheet can be accessed via the Liveworksheet (Sudarman et al., 2022). Thus, the use of Liveworksheet-Based Interactive E-Modules can increase student involvement and PAI learning efficiency at SMA Negeri 1 Cidahu, Sukabumi Regency.

The trial results show that the use of Liveworksheet-Based Interactive E-Modules has been effective in improving student learning outcomes. Before using the E-Module, the average student score was 74.41. However, after implementation, the average score increased to 84.85 in the categories "Very Good" and "Complete". This shows a significant increase in student learning achievement after using the Liveworksheet-based Interactive E-Module. Thus, the results of this trial provide concrete evidence that the use of this technology can effectively improve the quality of PAI learning at SMA Negeri 1 Cidahu, Sukabumi Regency (Panjaitan & Karo-Karo, 2023).

Sholehah et al, in their research stated the benefits of Liveworksheets as follows: There are 3 benefits of Liveworksheets, namely, (1) for students, the interactive features make students interested so that they can increase student learning motivation and improve learning outcomes, (2) for teachers, it saves teachers having to correct questions, and (3) for the environment, reducing paper use. Apart from that, the graphic design is attractive and interactive, students will be more interested and motivated to learn. Apart from that, using Liveworksheets can also make students more active in learning, because they can immediately fill in digital worksheets and see the results directly.

## CONCLUSION

Based on the results of research on the implementation of live worksheet-based interactive e-modules in Islamic religious education learning to increase student motivation at SMA Negeri 1 Cidahu, Sukabumi Regency, conclusions can be drawn, namely as follows: 1) Liveworksheet-Based Interactive E-Module Planning in Islamic Religious Education Learning at SMA Negeri 1 Cidahu Sukabumi Regency, namely the module planning process involves analyzing the curriculum and student needs, and the teacher designing a Liveworksheet-based e-module; 2) Implementation of Liveworksheet-Based Interactive E-Modules in Islamic Religious Education Learning at SMA Negeri 1 Cidahu Sukabumi Regency, namely the steps include preparation, introducing the module to students, using the module in learning, evaluating student progress, and joint reflection for improvement. A differentiated approach is used to create an inclusive and effective learning environment; 3) Supporting factors in implementing live worksheet-based interactive e-modules in learning Islamic religious education to increase student motivation at SMA Negeri 1 Cidahu Sukabumi Regency, namely full support from school leadership and training for teachers supporting implementation, while obstacles include limited technological infrastructure and variations in teacher skills; 4) Solutions to overcome obstacles. Implementation of live worksheet-based interactive e-modules in learning Islamic religious education to increase student motivation at SMA Negeri 1 Cidahu Sukabumi Regency, namely improving technological infrastructure and implementing training for teachers. Support and collaboration between teachers is the key to overcoming obstacles, and outreach to students is also part of the solution to improve their understanding; 5) Effectiveness of Implementing Liveworksheet-Based Interactive E-Modules in Learning Islamic Religious Education at SMA Negeri 1 Cidahu Sukabumi Regency, namely increasing student participation or motivation and understanding of the material.

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