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Analysis of the Need for Interactive E-LKPD Assisted by the Live-Worksheets Platform to Enhance Student Engagement in Reading and Viewing Learning

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Abstract

This study aims to analyze the development needs of an e-LKPD assisted by the Live-Worksheets platform in reading and viewing lessons at SMA Negeri 2 Padang. The research method used is qualitative descriptive, focusing on the define phase in the 4-D development model. The research subjects consist of teachers and eleventh-grade students, with primary data collected through semi-structured interviews, student learning style questionnaires, and secondary data through documentation study. Data analysis techniques follow Creswell's (2016) stages: data reduction, data presentation, and data verification. The results show that printed LKPD is still monotonous and lacks interactivity, not supporting the development of students' critical thinking and digital literacy skills. The student learning style questionnaire reveals a variety of preferences that are not fully accommodated by the printed LKPD. Students are more motivated by interactive features, multimedia, and automatic feedback found in the e-LKPD Live-Worksheets. This study also highlights the need for activities that support intensive reading skills and visual analysis, such as evaluating news accuracy and understanding visual elements in media. The integration of e-LKPD Live-Worksheets can enhance learning effectiveness, student engagement, as well as the development of critical thinking and digital literacy skills, taking into account diverse learning styles.

Keywords: E-LKPD, Live-Worksheets, Reading and Viewing Skills, Critical Thingking, Digital Literacy

Introduction

Digital competence aims to address various problems and challenges in today's knowledge-based society. The rapid advancement of technology has made the integration of digital tools into teaching strategies essential for educators. For teachers, digital competence involves using Information and Communication Technology (ICT) with a solid pedagogical-didactic understanding, while also recognizing how it can influence teaching strategies and the development of student education. Teachers must possess skills in utilizing technology to enhance the learning experience and meet the challenges of 21st-century education. One of the rapidly growing technological innovations is digital teaching materials, such as Electronic Student Worksheets (E-LKPD), which are designed to support the learning process. (Zebua, 2023). These materials are crucial in assisting students with diverse learning styles. Although digital learning materials are becoming increasingly popular, printed materials still dominate in many schools. Therefore, innovation in the use of educational technology is vital to overcoming these challenges (Indriyani et al., 2023).

Technological advancements have significantly impacted the field of education, urging educators to integrate technology into the learning process to create more interactive and relevant learning experiences in line with the demands of the 21st century. Technology enhances students' cognitive skills

by providing access to various resources and interactive platforms that support learning (Wang, 2024). Furthermore, digital technology enables personalized learning experiences tailored to the individual needs of students (Hamzah et al., 2024). One innovation that is gaining popularity in education is the use of Electronic Student Worksheets (E-LKPD). This technology-based tool combines text, images, and interactive elements to create a more effective and engaging learning process for students. he use of teaching media, both print and electronic, also supports the creation of more effective and efficient teaching and learning for both teachers and students. Based on technology, teaching media is divided into two main categories: print media (such as textbooks, magazines, newspapers, etc.) and electronic media (such as TV broadcasts, radio, CDs, DVDs, films, videos, etc.)(Zebua, 2023).

However, in many schools, traditional teaching materials such as printed Student Worksheets (LKPD) still dominate. Conventional LKPDs, which typically only provide summaries of the material, often fail to deliver an in-depth and interactive learning experience. This teacher-centered approach limits students' active participation in learning (Suratmi et al., 2023). Additionally, the lack of interactive elements in traditional LKPDs makes it difficult for students to fully understand the material, ultimately leading them to rely on additional assistance from teachers (Elfina & Sylvia, 2016).

As technology continues to advance, the learning materials used in schools need to be evaluated to better support interactive and effective learning processes. Several challenges commonly found in traditional learning resources, such as textbooks that lack in-depth material descriptions, unreliable online sources, and books that fail to capture students' interest through visuals and color, highlight the need for innovation in resource development (Indriyani & Ramadhan, 2017). E-LKPDs based on the Live-Worksheets platform can offer a solution by creating a more dynamic, engaging, and reliable learning experience that not only motivates students but also enhances their digital literacy skills

In the context of language learning, the Indonesian Language Curriculum includes various language skills such as speaking, listening, reading, viewing, speaking and presenting, as well as writing, which students must master at the primary and secondary education levels. The Ministry of Education and Culture includes viewing skills in the curriculum due to technological developments that have changed the way communication occurs, shifting from audio-based to visual-based communication. Survey data from Nielsen (2018) shows that the younger generation in Indonesia accesses visual media, such as television and the internet, more frequently than audio media, highlighting the importance of viewing skills in education. This shift has made viewing a fifth component of macro language skills that students must learn in the 21st century, alongside technological advancements (Donaghy, 2019; Webb et al., 2019).

Given the low literacy rates in Indonesia, particularly in reading and viewing, interactivity in learning becomes crucial. The 2018 PISA survey placed Indonesia 74th out of 79 countries in reading literacy (OECD, 2019), indicating the need for more interactive and effective technology-based learning. Digital literacy now encompasses not only the ability to read text but also the ability to view and process visual and audio-visual information, which is becoming increasingly important in a technology-dominated world.

Therefore, innovation in the form of interactive E-LKPDs supported by the Live-Worksheets platform is essential to create a more engaging, independent, and effective learning experience. This platform offers various benefits, including increased student engagement through a student-centered design and interactive elements. By integrating multimedia and digital tools, E-LKPDs can make learning more dynamic and in-depth (Xu, 2023). The Live-Worksheets platform provides interactive features such as online exercises and automated feedback that accelerate students' understanding of the material. Additionally, it is environmentally friendly by reducing paper usage (Le & Prabjandee, 2023).

In addition, the E-LKPD can also integrate learning models as a guide in creating the steps for student worksheets. One of the models that can be integrated is Discovery Learning. The Discovery Learning model, integrated into the E-LKPD, also helps students develop critical thinking and problem-solving skills through case studies and real-life application simulations. Therefore, the implementation of E-LKPDs supported by the Live-Worksheets platform is expected to enhance students' interest in reading and viewing learning, as well as support the achievement of optimal learning outcomes in the digital era. This study aims to analyze the need for Live-Worksheets-based E-LKPDs that can enhance reading and viewing skills and optimize students' learning experiences in 21st-century education.

Methods

The research method used in this study is a qualitative descriptive approach, focusing on the definition (define) stage of the 4-D development model. The study was conducted at SMA Negeri 2 Padang, with the research subjects consisting of teachers and students in the 11th grade. The selection of subjects was based on their direct involvement in the implementation of e-LKPD supported by the Live-Worksheets platform in the Reading and Listening subject. The study lasted for one month.

Primary data were obtained through semi-structured interviews with experienced teachers in the relevant subject and students directly involved in the learning process. The interview guide was designed to explore the needs, challenges, and potential for implementing e-LKPD assisted by Live-Worksheets. Secondary data were collected from curriculum documents, syllabi, and LKPDs used at the school.

Data collection techniques included interviews and document studies. Semi-structured interviews were conducted to gather in-depth information about learning needs, while document studies were used to strengthen the findings from the interviews. The collected data were then analyzed using a qualitative data analysis technique based on Creswell (2016), which involves three main stages: data reduction, data presentation, and data verification.

The interview results were transcribed in full and then abstracted to focus on information relevant to the research. Data from document studies were used to confirm or complement the interview findings, leading to valid conclusions about the needs for developing e-LKPD supported by the Live-Worksheets platform. Triangulation was employed to enhance data validity by comparing results from different data sources.

Result and Discussion

This section will discuss the key findings from the research on the need for an E-LKPD supported by the Live-Worksheets platform in reading and viewing learning at SMA Negeri 2 Padang. The research findings include an analysis of the need for E-LKPD development, student analysis, task analysis, concept analysis, and the formulation of learning objectives. This discussion aims to provide a clear overview of the advantages and disadvantages of using technology-assisted E-LKPD in supporting 21st-century learning.

1. Analysis of the Need for the Development of E-LKPD Based on the Live-Worksheets Platform

An interview conducted with an Indonesian language teacher, Mrs. Rani Mahendra, S.Pd., revealed several important findings related to the use of printed LKPDs and the potential for developing E-LKPDs supported by the Live-Worksheets platform. The teacher mentioned that although printed LKPDs are frequently used, the learning process with them is considered ineffective due to their monotonous and non-interactive nature. Below is a quote from the teacher's interview:

"Our experience with printed LKPDs has been unsatisfactory. They feel monotonous and lack interactivity. Students tend to search for answers online without truly understanding the material, especially when it comes to reading and viewing elements."

The teacher also pointed out the lack of effectiveness in the learning process, as many students only fill out the worksheets without genuinely comprehending the material. Furthermore, printed LKPDs do not support the development of students' critical thinking skills and digital literacy. This poses a challenge, especially when teaching digital literacy skills that require an in-depth understanding of texts and accurate information. Here are additional findings related to the challenges faced by the teacher in using printed LKPDs and expectations for E-LKPDs supported by the Live-Worksheets platform. The following are further findings related to the challenges faced by teachers in using printed LKPD and expectations for E-LKPD assisted by the Live-Worksheets platform.

Tabel 1. Teacher Interview Results

No.	Aspect	Interview Results
1	Experience Using Printed LKPD	"Printed LKPD feels monotonous and less interactive. Students tend to look for answers online without understanding the material in depth."
2	Effectiveness of Learning Using Printed LKPD	"Student responses to printed LKPDs are not enthusiastic. Student activities tend to be non-collaborative since answers can be found online."

(Analysis of the Need for Interactive E-LKPD)

3	Development of Critical Thinking and Digital Literacy Skills	"Printed LKPDs do not sufficiently support the development of critical thinking and digital literacy skills."
4	Challenges in Teaching Digital Literacy	"Students struggle to find and verify accurate information from news texts."
5	Desired Features in e-LKPD	"We hope for videos, interactive exercises, and automatic feedback to help with understanding the material."
6	Role of Technology in Motivating Students	"Technology plays an important role. Learning with e-LKPD motivates students to engage more actively in learning."

An interview with a student, Ariq Ahmad Maulana, revealed that students feel bored with the printed LKPDs because they lack interactive elements. The student expressed a desire for learning to be more engaging and involve various interactive media. Below is a quote from the student interview:

" I prefer learning to be more interactive, like on a platform such as Live-Worksheets. There, I can immediately know if my answer is correct or wrong, and there are images or videos that help me understand the material better than just reading text."

The student also stated that they are more engaged when there are interactive exercises that provide immediate feedback, as well as videos or quizzes that make learning more interesting. Below are the findings from the student interview:

Tabel 2. Student Interview Results

No.	Aspect	Interview Results
1	Experience Using Printed LKPD	"The experience with printed LKPD feels uninteresting. Students often get bored because there is only text with no interaction."
2	Language Skills	"Understanding the importance of language skills, especially in reading and viewing, is crucial to obtaining accurate information."
3	Learning Process	"Students feel less involved in learning that focuses only on filling out worksheets. I would be more focused if there were discussions or other activities."
4	Needs in LKPD for Reading and Viewing	"I want LKPDs to be more interactive, such as with videos or quizzes."
5	Desired Interactive Features in the New e-LKPD	"I hope there are questions that I can answer directly and see the results. If there are fun games or exercises, I will be more excited to learn."
6	Opinion on Using Video or Interactive Media	"I really like it when there are videos and interactive media, because it makes it easier for me to understand the material."
7	Importance of Immediate Feedback from Exercises	"Immediate feedback is very important to help me know whether my answers are correct or wrong."
8	Expected Skills to be Improved through E-LKPD	"I aim to enhance critical thinking and analytical skills, especially when reading news texts."
9	I aim to enhance critical thinking and analytical skills, especially when reading news texts.	“A positive and enjoyable learning environment motivates me to study more enthusiastically”

Based on the analyzed documents, particularly the Learning Outcomes (CP) and the Learning Time Allocation (ATP), it was found that the curriculum at SMA Negeri 2 Padang emphasizes the importance of developing reading and viewing skills in Indonesian language education. However, in the observed printed worksheets (LKPD), the presented material primarily focuses on reading aspects alone.

On the other hand, since the materials are available on the SIBI website, students can easily find the answers from the teacher's book on the same platform. Additionally, the printed worksheets remain limited in format, containing only text and questions with minimal interactive elements to engage

students. This limitation arises from the technology constraints in the printed LKPD. The following table illustrates a comparison between traditional LKPD and platform-assisted Live-Worksheets based on interactive and multimedia elements:

Table 3. Comparison between Traditional LKPD and Live-Worksheets-Assisted LKPD

Element	Traditional LKPD	Live-Worksheets-Assisted LKPD
Interactivity	Limited interactivity, primarily in paper-based activities.	High interactivity with features like self-correction and instant feedback.
Use of Multimedia	Minimal multimedia use, mostly static text and images.	Extensive multimedia use, including audio, video, and interactive elements.
Student Engagement	Engagement through physical activities and problem-solving tasks.	Increased engagement through interactive tasks and multimedia content.
Assessment	Traditional assessment methods, often requiring manual evaluation.	Automated assessment with instant feedback, supporting formative assessment.
Environmental Impact	Paper-based, leading to higher paper consumption.	Environmentally friendly, significantly reducing paper usage.
Adaptability	Less adaptive to diverse learning styles and needs.	Highly adaptive, supporting various learning styles and needs through diverse multimedia.
Teacher's Role	Teachers facilitate and provide manual corrections directly.	Teachers save time in task design and focus more on personal guidance.
Learning Outcomes	Effective in promoting deep learning and higher-order thinking skills.	Effective in improving learning outcomes, especially in online learning environments.

The use of Live-Worksheets in teaching and learning activities offers several advantages compared to traditional LKPD. In terms of interactivity, conventional LKPD only includes physical activities and manual task completion. In contrast, Live-Worksheets provide advanced features such as automatic corrections and instant feedback, significantly enhancing student participation. From a multimedia perspective, Live-Worksheets enable the integration of audio, video, and interactive content, making the learning process more dynamic and engaging compared to the static text and images in traditional LKPD (Windari & Suryadharma, 2019; Le & Prabjandee, 2023).

Live-Worksheets simplify learning evaluation with automated assessment and rapid feedback, making formative assessment more efficient than traditional LKPD. Automatic assessments save teachers' time and provide immediate feedback to students, helping them learn from mistakes quickly (Bernius & Bruegge, 2019). This efficiency allows teachers to focus on teaching and personalized support. The interactive features of Live-Worksheets also increase student engagement with various tasks tailored to their learning styles. Additionally, digital usage reduces paper dependency, promoting environmental sustainability (Le & Prabjandee, 2023). In large classes, this platform enables fast, large-scale feedback (Alhamad & Mohieldin, 2013), and encourages self-monitoring and self-assessment, fostering a culture of continuous improvement (Malmi & Korhonen, 2004). From an environmental perspective, Live-Worksheets are also more eco-friendly as they drastically reduce paper usage, while paper-based LKPDs tend to increase paper consumption.

Overall, Live-Worksheets offer greater flexibility, adaptability, and student engagement. The multimedia features used in Live-Worksheets align with various learning styles, making education more engaging and effective. Students receive instant feedback, accelerating their learning process and significantly boosting their motivation and participation. Live-Worksheets also support the teaching of multiple language skills (listening, reading, writing, and speaking) along with grammar and vocabulary, providing a comprehensive learning experience (Le & Prabjandee, 2023)

E-LKPD (Electronic Student Worksheets) play a crucial role in enhancing students' intensive reading and viewing skills, particularly in identifying accurate information in news texts. Intensive reading skills are essential for analyzing texts deeply, identifying main ideas, and extracting important

details, which can be facilitated through interactive and multimedia technology in e-LKPD (Elturki & Harmon, 2020; Ali et al., 2023). Additionally, reading strategies such as scanning, skimming, and critical reading are vital for effectively evaluating news texts. For viewing skills, students need to develop visual literacy, analyzing graphics and infographics while considering media context and biases (Apairach, 2023). E-LKPD can include videos and infographics to enrich learning and enhance student engagement with multimedia content (Lopatovska & Sessions, 2016; Haddad & Salhieh, 2023). Thus, e-LKPD integrating technology, reading strategies, and visual elements can improve students' intensive reading and viewing skills in the context of news texts.

The following table summarizes the needs and benefits of developing e-LKPD to improve students' intensive reading and viewing skills, especially in identifying accurate and up-to-date information in news texts:

Table 4. Summarize the Needs and Benefits of Developing E-LKPD to Imrove Students' Intensive Reading and Vieweing Skills

Skill	Needs	Benefits
Intensive Reading	Deep text analysis	Improved comprehension and critical thinking
	Effective reading strategies	Higher engagement through digital resources
Viewing	Critical literacy for visual media	Improved interpretation and analysis of visual information
	Exposure to multimedia content	Increased engagement and motivation

In conclusion, integrating e-LKPD for intensive reading and viewing skills can enhance students' ability to identify accurate and current information in news texts. By focusing on deep text analysis, effective reading strategies, and critical literacy for visual media, e-LKPD provides a more engaging and effective learning experience. The use of digital resources and multimedia content further supports these skills, creating a more interactive and holistic learning process.

2. Student Analysis

a. Student Learning Styles

Data analysis obtained through surveys with students and teachers reveals various relevant characteristics related to students' needs in reading and viewing lessons. Their learning styles are not limited to a single category, such as visual, auditory, or kinesthetic. Instead, students tend to use a combination of these learning styles during the learning process. The following are the results of the student learning style survey at SMA Negeri 2 Padang.

Tabel 5. Student Learning Styles at SMA Negeri 2 Padang

Gaya Belajar	Frekuency	Persentase
Visual	10	29%
Auditory	16	47%
Kinesthetic	8	23%

Based on these results, auditory-visual learning styles dominate, highlighting the need for an e-LKPD supported by the Live-Worksheets platform to accommodate diverse student learning preferences. Auditory learners better understand and retain information delivered through listening, such as teacher explanations, audio recordings, or reading aloud (Hariyanto & Koehler, 2017). Visual learners respond more effectively to materials presented in images, charts, and videos, as they find it easier to remember what they see rather than what they hear (Fahrurrozi et al., 2019). The use of visual elements such as symbols, images, and colors can significantly enhance their understanding of concepts. Auditory learners are often more engaged through discussion and verbal instruction. Meanwhile, kinesthetic learners prefer hands-on activities or physical experiences. They remember information better through actions and enjoy using body language and physical expressions. Interactive activities, such as role-playing or hands-on exercises, are highly effective for kinesthetic learners (Narayanan, 2012). To address these diverse learning styles, Indonesian language instruction should incorporate various

teaching methods, including visual aids, auditory materials, and kinesthetic activities. The integration of multimedia resources and interactive exercises can help meet students' diverse preferences, creating a more inclusive and effective learning environment.

In the context of reading and viewing lessons, the use of e-LKPD aligns well with current student needs. Interviews with students and teachers reveal that learning materials presented through interactive elements such as videos, images, and interactive exercises are more engaging and easier to understand. Some students reported feeling more interested and active when assigned tasks involving interactive media. One student mentioned, *"When there are videos or images, I understand better because I can see how the material is explained."* This emphasizes the importance of leveraging technology to create a more enjoyable and immersive learning experience.

Additionally, teachers noted that technology-based platforms such as LiveWorksheets facilitate more flexible and independent learning. As one teacher stated, *"Some students seem more active and engaged when given tasks involving interactive media."* This demonstrates that technology-supported e-LKPD can enhance student motivation and support better learning outcomes.

b. Learning Motivation

Students expressed that technology-based learning through e-LKPD is more engaging compared to conventional LKPD. Some key reasons include the presence of challenging interactive features and automatic feedback, which help them better understand the material. Through LiveWorksheets-assisted e-LKPD, students enjoy a more dynamic learning process, including drag-and-drop activities and interactive exercises. One significant benefit highlighted by students is the enjoyable learning experience, with instant feedback providing clear explanations for errors. As one student expressed, *"Learning feels more fun when I immediately know the answers and get explanations, unlike traditional paper worksheets."* This quote underscores the critical role of interactive elements in enhancing student motivation and understanding.

In modern education, Student Worksheets (LKPD) have become an effective tool to support classroom learning. However, with technological advancements, innovations such as e-LKPD supported by digital platforms like LiveWorksheets have emerged. These two types of LKPD have significant differences, particularly in terms of student engagement, intrinsic motivation, student response, learning outcomes, and technology integration. The following table provides a clear comparison between traditional LKPD and LiveWorksheets-assisted e-LKPD, highlighting their respective roles in enhancing student motivation across key aspects.

Tabel 6. Comparison Between Traditional LKPD and LiveWorksheets-Assisted e-LKPD

Aspect	Traditional LKPD	E-LKPD
Student Enggagement	Guides learning activities but lacks digital appeal	More engaging with interactive features and multimedia elements
Instrinsic Motivation	Builds motivation through structured activities but lacks dynamism	Enhances motivation with interactive content and appealing visuals
Student Response	Generally positive but varies by presentation	Highly positive with appreciation for quality content and design
Learning Outcomes	Improves learning outcomes but limited motivational impact.	Significantly enhances learning outcomes with strong motivational effects
Technology Integration	Limited to printed materials, less appealing to tech-savvy students	Leverages technology for a more relevant and engaging experience.

Based on the table, the comparison between traditional LKPD and LiveWorksheets-assisted e-LKPD highlights significant differences in student motivation. While traditional LKPD effectively guides students through structured activities, student engagement is often limited due to its reliance on printed text and written tasks (Windari & Suryadharma, 2019; Finali et al., 2020). tudents tend to remain passive, with engagement highly dependent on the teacher's ability to manage learning activities. Conversely, e-LKPD with LiveWorksheets offers a more dynamic experience through interactive features such as drag-and-drop tasks, multimedia elements, and instant feedback that quickly clarify

students' mistakes. These features have been proven to significantly increase student engagement and encourage more active learning (Alexon & Handayani, 2024; Eriana et al., 2024; Talysheva et al., 2021).

Additionally, while traditional LKPD builds intrinsic motivation through structured activities, it often falls short in sparking students' curiosity due to the lack of dynamic and interactive elements (Finali et al., 2020). On the other hand, e-LKPD successfully boosts students' intrinsic motivation through engaging content, attractive visuals, and diverse activities. These elements foster greater enthusiasm and active participation during the learning process (Bai et al., 2023). Student responses to traditional LKPD vary depending on content presentation and the teacher's management approach (Windari & Suryadharma, 2019; Finali et al., 2020). n contrast, student responses to e-LKPD are overwhelmingly positive, with students appreciating content quality, appealing designs, and the ease of completing tasks, all contributing to increased motivation and satisfaction (Alexon & Handayani, 2024; Eriana et al., 2024).

In terms of learning outcomes, both traditional worksheets (LKPD) and electronic worksheets (E-LKPD) contribute to improving students' understanding. However, the impact of traditional LKPD on motivation is often less optimal due to limited interactive features and delayed feedback (Windari & Suryadharma, 2019; Finali et al., 2020). In contrast, E-LKPD has a stronger impact on learning outcomes through features such as automatic feedback and real-time explanations that help students quickly understand their mistakes (Alexon & Handayani, 2024; Eriana et al., 2024; Talysheva et al., 2021). The integration of technology in E-LKPD is also a crucial factor in capturing the interest of the digital-native generation. Traditional LKPD, limited to printed materials, tends to be less appealing to students familiar with digital tools. Meanwhile, E-LKPD leverages technology to create a more engaging and relevant learning experience for students growing up in the digital era.

Overall, while traditional LKPD still holds value in guiding learning activities, E-LKPD supported by LiveWorksheets offers significant advantages in enhancing student motivation, engagement, and learning outcomes. Interactive features, automatic feedback, and the integration of technology tailored to the characteristics of today's students make E-LKPD a more effective choice for creating enjoyable and meaningful learning experiences.

In traditional LKPD, learning tends to be passive as students focus solely on printed text and written tasks with minimal interaction. The lack of interactive features and immediate feedback reduces student engagement in the learning process (Alexon & Handayani, 2024; Finali et al., 2020; Windari & Suryadharma, 2019). As a result, student motivation to complete tasks often declines. On the other hand, E-LKPD supported by LiveWorksheets offers interactive features such as drag-and-drop activities and automatic feedback that provide instant explanations for students' mistakes. These features not only enhance student engagement but also make the learning process more enjoyable and appealing (Pratiwi & Khotimah, 2023). Additionally, the implementation of E-LKPD has been shown to improve student learning outcomes. For instance, a scientific approach using LiveWorksheets-based E-LKPD successfully increased students' understanding of the interaction between living organisms and their environment, as evidenced by significant improvements in post-test scores. Student responses to E-LKPD have also been overwhelmingly positive. They appreciate the quality of content, attractive visuals, and ease of understanding the material, which directly contribute to a more effective learning experience (Alexon & Handayani, 2024). Thus, the significant differences between traditional LKPD and E-LKPD are clearly evident in student motivation, engagement, and learning outcomes.

3. Task Analysis

The analysis of task descriptions in the reading and viewing elements shows that the interactive E-LKPD assisted by the Live-Worksheets platform offers a structured approach focused on enhancing students' skills in evaluating, understanding, and analyzing news and visual information. The tasks presented align with the Learning Outcomes (CP ATP) set in the Indonesian language curriculum, particularly in basic competencies related to reading and viewing skills.

a. Activity 1: Identifying Current New

In this activity, students are tested on their ability to identify current and accurate news and match images with relevant news contexts. This task evaluates students' cognitive skills in understanding (C2), evaluating (C4), and analyzing (C3) images to assess the relevance and accuracy of information. This

aligns with CP ATP, emphasizing the importance of understanding news texts and critical skills in evaluating acquired information, as part of 21st-century media literacy (Kemendikbud, 2018).

To ensure the accuracy and relevance of news, appropriate strategies are crucial. Trust in credible sources forms the foundation for assessing news credibility. Information verification involves cross-referencing multiple sources to ensure factual consistency (Almoqbel et al., 2023). Quality indicators, such as those provided by SciLens, are used to evaluate the content and context of articles, including scientific references and social reactions (Smeros et al., 2019). Content similarity analysis across publishers and objectivity based on sources and subjective phrases are employed to assess news credibility (Nagura et al., 2006). Image evaluation requires verifying image authenticity and relevance to the news, using image explanation systems to match them with news contexts (Dengel et al., 2016; Biten et al., 2019). Cognitive skills in understanding (C2), evaluating (C4), and analyzing images (C3) are essential for developing students' ability to critically and relevantly evaluate news.

b. Activity 2: Assessing News Accuracy

In this activity, students are guided to assess the accuracy of news information based on key criteria, such as facts, credible sources, and context. Students learn to verify information by checking trustworthy sources (Heuer & Glassman, 2023; Sagui et al., 2008) and ensuring the reliability of the news sources used (Burdisso et al., 2024; Siani et al., 2024). Additionally, they analyze the context of news to determine its relevance and accuracy (Ripoll & Matos, 2020).

The methods used to test students' abilities include multiple-choice questions and exercises matching images with their sources. These tasks aim to develop students' skills in analyzing (C4) and evaluating (C4) news while teaching the importance of verifying information from credible media (Şencan & Soydal, 2023). Students are also provided with fact-checking guidelines to train them in verifying information and fostering skepticism toward unverified news.

This activity also enhances students' digital literacy, which includes the ability to understand and filter news in an era overloaded with information. Technologies such as Natural Language Processing (NLP) can assist in verifying news more quickly and automatically (Baharom et al., 2023). Furthermore, students are taught to recognize bias and manipulation in news, such as emotional language or skewed reporting, to differentiate between reliable and unreliable information (Vargas et al., 2023). Overall, integrating media literacy into education aims to help students wisely evaluate news and understand the impact of disinformation.

c. Activity 4: Viewing Audio-Visual Content

In this activity, students are tested on their ability to analyze and identify visual elements in airplane accident videos. This activity aims to enhance students' visual analysis skills through questions covering dramatic visual elements, event sequences, and the emotional impact of the video. These tasks approach cognitive levels of analyzing (C3) and evaluating (C4), where students are asked to explain or sequence events based on their observations. This activity also develops viewing skills, which are part of the basic competencies in the Indonesian language curriculum, focusing on the ability to process visual and audio-visual information (Donaghy, 2019).

Overall, the tasks presented in this E-LKPD provide opportunities for students to sharpen critical thinking skills through activities involving understanding and analyzing news texts and visual media elements. Research indicates that learning models and digital tools effectively improve students' critical thinking skills, including using Live-Worksheets for news literacy and digital skills. The Think-Talk-Write (TTW) model with illustrated worksheets has been proven to enhance critical thinking skills (Purwita et al., 2020). Interactive digital worksheets with multimedia elements, such as videos and activities, make learning more engaging and effective (Utaminingsih et al., 2024; Maharani et al., 2022).

4. Concept Analysis

The concept of developing an E-LKPD assisted by the Live-Worksheets platform in reading and viewing elements focuses on developing critical literacy skills that help students understand and evaluate media information, both in text and visual formats. Based on interviews with teachers and curriculum document analysis, the concepts applied in this E-LKPD are designed to enhance students' critical thinking skills and active participation in learning.

a. Understanding Information Concept

This concept serves as the foundation for developing the E-LKPD. Its goal is to enable students to identify key facts and understand the essence of presented news texts. Interviews with teachers revealed that more interactive reading instruction helps students master this skill. In terms of E-LKPD design, the Live-Worksheets platform provides interactive elements that allow students to highlight or underline key information directly in the news text. According to interview data, teachers noted that these features keep students more focused and engaged in the learning material.

b. Cross-Checking Information Sources Concept

This concept is designed to teach students how to compare news from various sources, both online and print, to verify information accuracy. Interview data shows that students often lack the skills to evaluate source credibility. In the Live-Worksheets-assisted E-LKPD, students are given exercises to find additional news sources and compare similarities or differences in information. This platform makes it easier for students to access multiple sources directly, enhancing their digital literacy skills.

c. Analyzing Current Information Concept

This concept directs students to assess whether the information they receive remains relevant and credible based on the timing and sources of news. Interviews with teachers revealed that many students lack a clear understanding of how to assess timeliness in news. In the E-LKPD, the Live-Worksheets platform provides various news simulations with different dates, requiring students to evaluate whether the information is still contextually relevant.

d. Digital Literacy Concept

Digital literacy is taught to help students use technology as a tool to find and evaluate news quality. Discussions with teachers highlighted that while most students are familiar with technology, they often lack critical evaluation skills. Through the Live-Worksheets platform, students are guided to search for additional sources online, teaching them to use digital platforms in a structured manner.

e. Critical Viewing Concept

This concept focuses on students' ability to analyze visual elements in news, such as images and videos. In the digital era, information reliability depends not only on text but also on accompanying visual elements. Documentation studies show that many students lack critical skills in assessing news visuals. This E-LKPD includes exercises requiring students to analyze images and videos from multiple critical perspectives.

The concepts explained above illustrate how an E-LKPD supported by the Live-Worksheets platform can more effectively enhance students' critical literacy skills compared to traditional LKPD. To provide a clearer comparison of the differences and advantages of each approach, the following table outlines a comparison between E-LKPD with Live-Worksheets and traditional LKPD based on key aspects discussed earlier.

Table 7. Comparison Between E-LKPD with Live-Worksheets and Traditional LKPD in Enhancing Students' Critical Literacy Skills

Aspect/Concept	E-LKPD with Live-Worksheets	Traditional LKPD
Understanding Information	Interactive; students can highlight or underline key information directly on the platform.	Static; students can only manually take notes or underline.
	Higher focus and engagement due to appealing digital elements.	Lower engagement as activities are limited to printed materials.
Cross-Checking Information Sources	Students can directly access various online news sources via the platform.	Limited to news sources printed in the LKPD.
	Cross-checking exercises are more practical and efficient.	Cross-checking requires extra effort as students must search for additional sources outside the LKPD.

Analyzing Current Information	Simulations of news with different dates can be integrated directly into the platform.	News sources tend to be static and not updated in real-time
	Relevance exercises are more varied and realistic.	Students struggle to understand the timeliness of information.
Digital Literacy	Trains students to use technology to search, validate, and evaluate information.	Digital literacy is hard to apply due to printed media limitations.
	Activities are more structured with features supporting hands-on practice.	Activities depend on teacher instructions outside the LKPD.
Critical Audience	Visual analysis exercises (images and videos) can be done directly on the platform.	Visual analysis is limited to printed images in LKPD.
	Students can access various visual examples from real sources.	No access to dynamic elements such as videos or other interactive content.

5. Formulating Learning Objectives

The learning objectives in developing E-LKPD with the Live-Worksheets platform are designed to improve students' abilities in reading and analyzing news texts, specifically in identifying accurate and up-to-date information. These objectives align with the Basic Competencies (KD) and Learning Objective Flow (ATP) outlined in the syllabus, focusing on critical thinking skills and information evaluation.

a. Evaluating Ideas and Opinions Based on Logical Reasoning

According to the KD in the syllabus for the material "Finding Accurate and Up-to-Date Information in News Texts," students are expected to evaluate ideas and opinions in news texts using proper logical reasoning. In this context, learning objectives are formulated to help students process and analyze information more critically. E-LKPD with Live-Worksheets supports this process by presenting news texts in various formats, both print and electronic, and providing interactive elements that encourage students to analyze ideas and test the logic of the texts they read.

b. Identifying Accurate and Up-to-Date Information

One of the main learning objectives is for students to identify and evaluate accurate and relevant information in news texts. Skills in evaluating the credibility of news sources and identifying essential facts are crucial in this regard. According to the ATP in the syllabus, this objective aims to train students to use cross-checking skills when evaluating information from both print and online sources. The Live-Worksheets platform offers interactive exercises that hone these skills, with automated feedback provided to students after they identify key information or respond to text-related questions.

c. Appreciating Fiction and Non-Fiction Texts

In addition to finding accurate information, learning objectives also include the ability to appreciate both fiction and non-fiction texts. Appreciating texts means not only understanding their content but also connecting the ideas or messages within them to real-life contexts. With the E-LKPD platform, students can more easily comprehend and appreciate news texts in broader contexts, as they can access various multimedia texts (e.g., news texts, videos, images) aligned with 21st-century literacy developments.

d. Developing Critical Thinking Skills

To achieve this objective, students are encouraged to develop critical thinking skills, particularly in evaluating the information in news texts. The goal is for students not only to understand information superficially but also to assess its strengths and weaknesses and connect the ideas and facts with their personal experiences or existing knowledge. E-LKPD with Live-Worksheets provides various exercises that help students develop these skills in a more engaging and interactive manner.

When formulating learning objectives, it is essential to consider approaches that can support the achievement of desired skills. Using E-LKPD with Live-Worksheets offers numerous benefits, especially in developing students' critical thinking and information evaluation skills, specifically in reading and analyzing news texts. With interactive features and automated feedback, E-LKPD allows students to be more active in the learning process. Meanwhile, traditional LKPD remains relevant, particularly in contexts with limited technological resources. This comparison will help understand how both approaches can contribute to effective learning objectives.

Table 8. Comparison of E-LKPD with Live-Worksheets and Traditional LKPD in Developing Students' Critical Thinking Skills in News Texts

Aspect	E-LKPD with Live-Worksheets	Traditional LKPD
Evaluating Ideas and Opinions Based on Logical Reasoning	Provides news texts in various formats and interactive elements for logical reasoning analysis. Students can test ideas directly with automated feedback.	Texts are read statically without interactivity. Logical reasoning analysis is done manually and relies on discussion or Q&A.
Identifying Accurate and Up-to-Date Information	Facilitates cross-checking exercises with various news sources (print and online). Automated feedback helps students evaluate information more easily.	No direct cross-checking exercises; learning relies on teacher explanations.
Appreciating Fiction and Non-Fiction Texts	Uses multimedia elements (texts, images, videos) to help students appreciate texts in real-life contexts and enrich understanding.	Learning is limited to reading texts without supporting multimedia elements.
Developing Critical Thinking Skills	Provides interactive exercises aimed at in-depth analysis and reflection on ideas and facts in texts. Direct feedback improves students' thinking processes.	Critical thinking learning is more passive, often relying on class discussions or simple questions..

In formulating learning objectives, both E-LKPD with Live-Worksheets and traditional LKPD have their respective roles. E-LKPD offers a more interactive experience, enhancing students' critical thinking skills, while traditional LKPD remains effective in technology-limited environments. Choosing the right approach based on students' conditions will better support the achievement of learning objectives.

Conclusion

This study aims to analyze the need for developing an e-LKPD assisted by the *Live-Worksheets* platform in reading and viewing lessons at SMA Negeri 2 Padang. The findings indicate that the printed LKPD currently in use is often perceived as monotonous, lacks interactivity, and does not fully support the development of students' critical thinking skills and digital literacy. The static design and repetitive exercises in printed LKPD were found to contribute to reduced student motivation and engagement during the learning process. Teachers expressed challenges in effectively using printed LKPD to address diverse student needs, especially in accommodating different learning styles and encouraging active participation. Similarly, students highlighted the limitations of printed LKPD in providing instant feedback, meaningful practice, and interactive activities that align with their familiarity with digital tools and platforms.

The study also found that students' diverse learning preferences—including visual, auditory, and kinesthetic styles—are better supported through a digital platform like *Live-Worksheets*. Interactive multimedia content, immediate feedback, and collaborative tasks were identified as crucial features that can create a more engaging and effective learning environment. Furthermore, findings revealed that the integration of digital technology in e-LKPD not only meets academic needs but also supports the development of essential 21st-century skills, such as problem-solving, collaboration, and digital literacy. These skills are increasingly critical for preparing students to face future academic and professional challenges. In summary, the results demonstrate a significant need for the development of an innovative

e-LKPD assisted by *Live-Worksheets* as a solution to the limitations of printed LKPD. The findings highlight the importance of designing a digital LKPD that incorporates multimedia exercises, instant feedback mechanisms, and collaborative features to enhance student engagement, accommodate diverse learning styles, and support the development of critical thinking and digital literacy skills.

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