ASSESSING SHS STUDENTS' NEEDS E-WORKSHEET BASED ON DIFFERENTIATED INSTRUCTION

Miftahunajah Aditiya Pratama
Magister Program of Language Education, Faculty of Teacher Training and Education,
Universitas Sriwijaya, Indonesia
Email: miftahunajah.aditiya@gmail.com

Sofendi
Magister Program of Language Education, Faculty of Teacher Training and Education,
Universitas Sriwijaya, Indonesia
Email: sofendi@yahoo.com

Machdalena Vianty
Magister Program of Language Education, Faculty of Teacher Training and Education,
Universitas Sriwijaya, Indonesia
Email: machdalenavianty@unsri.ac.id

Abstract: Education in Indonesia has developed a lot over time. Differentiated learning in the independent curriculum allows teachers to adjust instruction to meet the diverse needs of students. This approach acknowledges that students have varied learning styles, strengths, and interests. This study aimed to uncover the needs of senior high school students for developing differentiated instruction-based e-worksheet in English subjects for 10th Grade students. This study was conducted at MAN 3 Palembang to explore the perspectives of 30 tenth-grade students and their English teacher. To achieve the objectives of this study, a mixed-methods approach was applied, combining both quantitative and qualitative data collection methods. The data were obtained using a questionnaire and semi-structured interviews. Participants of this study were the tenth-grade students and English teacher. The result of the needs analysis showed that: 1) English learning materials with technology integration are limited and need development. 2) Students need differentiated instruction-based e-worksheets for reading that match their abilities. Therefore, this study is also used as the preliminary study to develop a differentiated instruction-based e-worksheet that can be used for English learning.
Keywords: *Independent curriculum; needs analysis; differentiated instruction; e-worksheet; English subject; senior high school.*

INTRODUCTION

The implementation of differentiated instruction is necessary in an independent curriculum for several compelling reasons. According to Gibbs (2023), an independent curriculum typically emphasizes personalized learning paths, student autonomy, and the development of critical thinking and problem-solving skills. Differentiated instruction aligns perfectly with these goals by integrating teaching methods, materials, and activities to meet the diverse needs, interests, abilities, and learning styles of students (Azhari & Zainil, 2024; Fitra, 2022; Tomlinson, 2022). First and foremost, differentiated instruction ensures that the unique needs of each student are met, which is a cornerstone of an independent curriculum. Fitra (2022) figures out that students come with varying backgrounds, skills, and learning preferences, and a one-size-fits-all approach is often ineffective. By

customizing instruction, teachers can provide more accessible and effective learning experiences, allowing all students to thrive regardless of their starting point.

Additionally, an independent curriculum often focuses on fostering a growth mindset and promoting lifelong learning. Differentiated instruction supports this by offering appropriately challenging tasks that encourage students to view challenges as opportunities for growth (Tomlinson & Jarvis, 2023; Wormeli, 2023; Yu et al., 2022). This approach also helps students build resilience and perseverance, essential traits for independent learners. It is also supported by Sharp et al., (2020) that differentiated instruction enhances student engagement by providing a variety of learning activities and materials. When students can choose how they learn best, they are more likely to be motivated and actively participate in their learning

process (Bobi & Ahiavi, 2023; Awofala & Lawani, 2020). This increased engagement can lead to better academic performance and a deeper understanding of the material.

Moreover, Gibbs and McKay (2021) mention that differentiated instruction prepares students for real-world challenges by developing essential skills such as independent work, critical thinking, and adaptability. These skills are crucial for success beyond the classroom and are often a focus of independent curricula. By mimicking the variety and complexity of real-life tasks, differentiated instruction helps students become more adaptable and better prepared for future challenges.

For teachers, implementing differentiated instruction in an independent curriculum can lead to significant professional growth (Tomlinson & Imbeau, 2023; Yu et al., 2022). It requires continuous assessment and adjustment of teaching strategies, making educators more skilled at recognizing and responding to individual student needs. This ongoing professional development is beneficial for teachers and, by extension, their students (Sharp et al, 2020; Estaiteyeh & DeCoito, 2023). Collaboration is also a key component. Padmore and Ali (2024) discover that differentiated instruction often involves collaborative learning activities, where students work together, share ideas, and learn from one another. This fosters a sense of community and improves social skills, which are valuable in both academic and real-world settings. Thus, the implementation of differentiated instruction in an independent curriculum is necessary because it creates a more effective, inclusive, and engaging learning environment. It helps all students reach their potential, prepares them for future challenges, and promotes a lifelong love of learning. By addressing diverse learning needs, enhancing engagement, and developing critical life skills, differentiated instruction is an essential element of a successful independent curriculum.

The landscape of education in Indonesia is continuously evolving, driven by the imperative to cultivate a generation capable of innovation and reform. Rooted in the philosophy of facilitating optimal student capabilities, education is envisioned as a dynamic platform for nurturing diverse cognitive faculties. Indonesia's Ministry of Education and Culture, recognizing the need for transformative approaches, has introduced initiatives such as the Merdeka Belajar Curriculum, emphasizing autonomy and creativity in learning.

Central to this educational paradigm shift is the Pre-Service Teacher Profession Education Program (PPG Prajabatan), designed to instill dedication, professionalism, and lifelong learning in aspiring educators. Within this program, the Differentiated Instruction Course stands out as a pivotal component, equipping future teachers with the skills to address individual student needs effectively. Differentiated instruction, as advocated by scholars like Tomlinson, acknowledges the diverse backgrounds and learning styles of students. Through personalized approaches and varied learning options, educators create inclusive environments conducive to student success. Research corroborates the efficacy of differentiated instruction in improving student outcomes across various subjects and grade levels.

In Indonesia, efforts to integrate differentiated instruction into teaching practices are gaining momentum, evidenced by initiatives like e-worksheet development. These resources, tailored to meet the needs of diverse learners, not only support the Independent Curriculum's goals but also serve as catalysts for inclusive and student-centered learning.

This study focuses on the analysis of students' needs in development of English subject e-worksheets based on differentiated instruction for 10th-grade students at a Madrasah Aliyah Negeri 3 Palembang. By assessing the validity, practicality, and potential effects of these materials, the research aims to contribute to the advancement of inclusive teaching practices within the Indonesian education system.

METHOD

This study employed a mixed-method approach, combining both quantitative and qualitative methods. The quantitative method was carried to analyze data collected from questionnaires, while the qualitative method was employed to interpret and elucidate information gathered from interviews. Conducted at Madrasah Aliyah Negeri (MAN) 3 Palembang, the population of the study comprised 350 10th-grade students across 11 classes and an English teacher. Purposive sampling was employed to select a representative sample, resulting in one class consisting of 31 students and one English teacher.

Data collection involved the administration of questionnaires comprising 25 items to the 10th-grade students and the English teacher. These questionnaire items, adapted from the development research proposed by Tessmer (1999), were validated through expert judgment and

meticulously tailored to align with the study's objectives. The questionnaire items were categorized into Target Situation Analysis (TSA), Deficiency Analysis (needs and wants), and Present Situation Analysis (PSA), following the guidelines proposed by Hutchinson and Waters (1987) for conducting student needs analysis.

Additionally, semi-structured interviews were conducted with the English teacher. These interviews primarily focused on English teaching in Madrasah Aliyah Negeri, the availability of English reading materials, and the potential of developing differentiated instruction-based e-worksheet. This comprehensive approach to data collection aimed to gain a holistic understanding of students' preferences and the potential impact of differentiated learning E-Worksheets for English subjects. By utilizing both quantitative and qualitative methods, the study achieved a well-rounded perspective on the subject matter.

RESULTS AND DISCUSSION
The needs viewed by students
The students' needs were assessed from their own viewpoints. Data collection was conducted to gather students' perspectives on their needs through target situation analysis (TSA), deficiencies analysis, and present situation analysis (PSA). Tables and figures in the article depicted the highest percentage of students' responses to each questionnaire question.

Target Situation Analysis (TSA)
This section examines the needs, general intentions, and expectations of students regarding their English learning. The data collected is presented in Table 1.

Table 1. Analysis of students' perspective on TSA

No.	Statements	Students' View	Percentage
1.	English is crucial for career success, further studies, and communication.	Strongly Agree	60%
2.	English lessons improve my communication skills and motivate me.	Agree	73.3%
3.	I prefer English lessons tailored to my abilities.	Agree	63.3%
4.	My English teacher recognizes each student's unique characteristics.	Agree	60%
5.	Digital tools like e-Worksheets enhance learning effectiveness.	Agree	63.3%

Table 1 presents an analysis of students' perspectives on the target situation analysis (TSA), based on a survey capturing their viewpoints on various aspects of English language education. The table comprises five statements, each accompanied by the corresponding percentage of students who agree with the statement. Notably, 60% of students strongly agree on the importance of English for career success, further studies, and communication, emphasizing the perceived significance of the language in various spheres of life. Furthermore, a significant majority, at 73.3%, agree that English lessons enhance their communication skills and serve as a source of motivation. Similarly, a majority, at 63.3%, express a preference for English lessons tailored to their individual abilities, emphasizing the importance of personalized learning experiences. Additionally, 60% of students agree that their English teacher recognizes each student's unique characteristics, reflecting positively on the teacher's approach to understanding student needs. Finally, a majority, at 63.3%, agree that digital tools like e-Worksheets contribute to enhancing learning effectiveness, indicating a positive attitude towards technology integration in education. Thus, the table provides valuable insights into students' perspectives on various aspects of English language education and learning effectiveness.
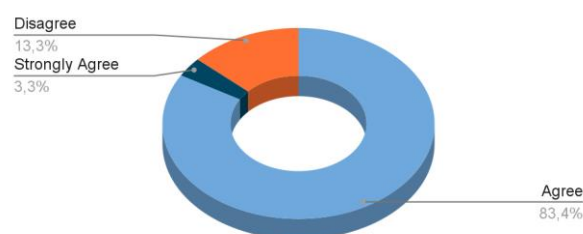

Figure 1. *Differentiated e-worksheets support individual learning needs*

The pie chart illustrates the results of a survey on whether differentiated e-Worksheets support individual learning needs. The majority of respondents, 83.4%, agree that differentiated e-Worksheets are beneficial in addressing their unique learning needs. A smaller segment, 3.3%,

strongly agree with this statement, indicating a high level of satisfaction among a few students. Conversely, 13.3% of respondents strongly disagree, suggesting that this approach does not meet the learning needs of a significant minority. Overall, the chart highlights a predominantly positive reception towards the use of differentiated e-worksheets in supporting individual learning needs, with most students finding them effective.

Deficiency analysis (want, need, and lack analysis)
This section analyzes the student's current wants and needs, as well as deficiencies or gaps in their target situation. Data on students' current desires and needs regarding the topic or input of differentiated learning E-Worksheets for English subjects is depicted in Table 2.

Table 2. *Students' view on DA*

No.	Statements	Students' View	Percentage
1.	Digital learning tools are essential in schools.	Strongly Agree	56.7%
2.	E-Worksheets make English learning more effective and engaging.	Agree	73.3%
3.	E-Worksheets facilitate learning and boost motivation.	Agree	73.3%
4.	I need e-Worksheets tailored to my reading level.	Agree	73.3%
5.	Schools lack digital learning materials like e-Worksheets.	Agree	50%

Table 2 presents students' viewpoints on Deficiency Analysis (DA) based on a survey, encapsulating their opinions on various aspects of digital learning tools, particularly e-Worksheets. The table comprises five statements reflecting differing degrees of agreement among students. A notable 56.7% strongly agree that digital learning tools are indispensable in schools, emphasizing the perceived importance of technology in education. Moreover, a significant majority, at 73.3%, agree that e-worksheets enhance English learning effectiveness and engagement, as well as facilitate learning and boost motivation. Similarly, an equal proportion of students agree that e-Worksheets tailored to their reading levels are necessary.

However, the perception of digital resource availability is more nuanced, with only 50% agreeing that schools lack digital learning materials like e-worksheets. Overall, the table underscores students' positive attitudes towards digital learning tools, particularly e-worksheets, while also highlighting areas where improvement may be warranted in resource availability.
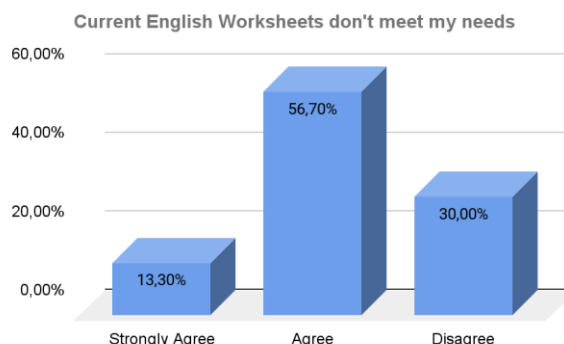

Figure 2. *Current English worksheets do not meet my needs*

The graphic illustrates the results of a survey on whether the current English worksheets meet students' needs. The largest segment, representing 56.7% of respondents, agree that the current English worksheets do not meet their needs, indicating a significant portion of students find these materials inadequate. An additional 13.3% of respondents strongly agree, reinforcing the sentiment that the existing worksheets fall short in addressing their learning requirements. In contrast, 30% of respondents strongly disagree, suggesting that nearly a third of the students feel the current worksheets do meet their needs effectively. This distribution highlights a general dissatisfaction among the majority of students regarding the adequacy of current English worksheets, although a considerable minority finds them sufficient.

Present Situation Analysis (PSA)
This part focused on the existing materials learned and provided, the present students' proficiency in English, climate change knowledge, and Pancasila student profile dimensions knowledge of the students. This present situation analysis (PSA) becomes a crucial factor in developing appropriate differentiated learning E-Worksheets for English subjects that align with the needs and situations faced by the students.

Table 3. *The current english learning need*

No.	Statements	Students' View	Percentage

1.	School English objectives align with the curriculum.	Agree	66.7%
2.	Teachers recognize students' diverse English abilities.	Agree	50%
3.	My English teacher understands students' needs and abilities.	Agree	60%
4.	Teachers provide varied English materials to meet student needs.	Agree	50%
5.	Differentiated learning adapts to students' abilities.	Agree	60%

Table 3 offers insight into the current English learning needs from the perspectives of students, derived from their responses to a survey. The table consists of five statements addressing different facets of English education. The majority of students, at 66.7%, agree that school English objectives align with the curriculum, indicating a perceived coherence between educational goals and the established curriculum. However, only 50% of students agree that teachers recognize the diverse English abilities among students, suggesting a potential area for improvement in addressing varying proficiency levels. Similarly, while 60% of students feel that their English teachers understand their needs and abilities, the same percentage also agrees that differentiated learning, which adapts to individual abilities, is currently implemented. However, only half of the students agree that teachers provide varied English materials to meet student needs, indicating a potential need for more diverse instructional resources. Overall, the table highlights both areas of strength, such as alignment with curriculum objectives and understanding of student needs, and areas for improvement, including recognition of diverse abilities and provision of varied learning material.
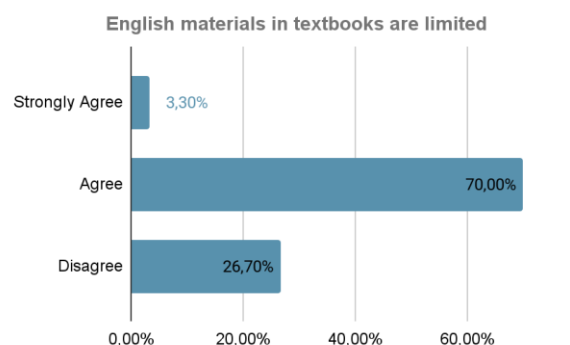

Figure 3. *English materials in textbooks are limited*

The graphic presents the results of a survey on the adequacy of English materials in textbooks. A significant majority, 70% of respondents, agree that the English materials in textbooks are limited, indicating a prevalent concern about the insufficiency of these resources. A smaller segment, 3.3%, strongly agree with this statement, emphasizing a more intense dissatisfaction among a few students regarding the limitations of textbook materials. On the other hand, 26.7% of respondents strongly disagree, suggesting that over a quarter of the students believe the English materials in textbooks are sufficient and meet their learning needs. This distribution highlights a general consensus among the majority of students about the limitations of textbook materials, though a notable minority holds a contrary view.
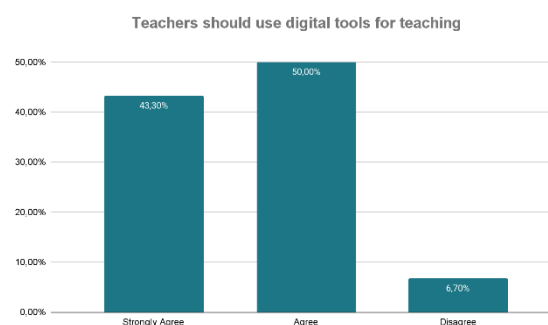

Figure 4. *Teachers should use digital tools for teaching.*

The graphic illustrates the results of a survey on whether teachers should use digital tools for teaching. Half of the respondents, 50%, agree that teachers should incorporate digital tools into their teaching methods, indicating substantial support for the integration of technology in education. Additionally, a significant portion, 43.3%, strongly agree with this sentiment, reflecting a high level of enthusiasm among many students for the use of digital tools in the classroom. Conversely, a small minority, 6.7%, strongly disagree, suggesting that

a few students do not see the value or necessity of digital tools in teaching. Overall, the graphic reveals a strong preference among the majority of students for the inclusion of digital tools in educational practices, with only a small fraction expressing opposition.

Table 4. *The existing material learned and presented*

No.	Statements	Students' View	Percentage
1.	Teachers offer diverse content in teaching.	Agree	53.3%
2.	My teacher provides varied Worksheets.	Disagree	60%
3.	Teachers still use conventional Worksheets.	Agree	63.3%
4.	Textbook Worksheets don't adapt to students' abilities.	Agree	56.7%
5.	Teachers haven't provided differentiated Worksheets.	Agree	70%

Table 4 outlines the existing material learned and presented in English education, reflecting the perspectives of students derived from survey responses. The table includes five statements addressing various aspects of teaching materials diversity and adaptability. While approximately 53.3% of students agree that teachers offer diverse content in their teaching approaches, a contrasting view emerges regarding the provision of varied worksheets, with 60% of students disagreeing with this statement. Interestingly, despite the perceived lack of variety in worksheets, the majority of students, at 63.3%, acknowledge the continued use of conventional worksheets by teachers. Moreover, over half of the students, at 56.7%, agree that textbook worksheets fail to adapt to their abilities. On a positive note, a significant majority of 70% affirm that teachers haven't provided differentiated worksheets, suggesting efforts to tailor materials to individual student needs. Overall, the table offers insights into students' perceptions of the current state of teaching materials in English education, highlighting areas of both agreement and discrepancy regarding diversity and adaptability.
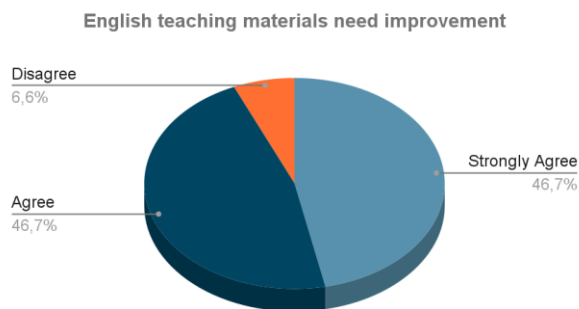

Figure 5. *English teaching materials need improvement*

The pie chart illustrates the results of a survey on whether differentiated e-Worksheets support individual learning needs. The chart shows that 46.7% of respondents agree that differentiated e-Worksheets are beneficial for addressing their unique learning needs. An equal portion, 46.7%, strongly agree, indicating a high level of satisfaction among a significant number of students regarding the effectiveness of these e-Worksheets. Conversely, a small segment, 6.6%, strongly disagree, suggesting that this approach does not meet the learning needs of a minority of students. Overall, the pie chart highlights a predominantly positive reception towards the use of differentiated e-Worksheets, with the majority of students finding them effective in supporting individual learning needs.

The needs viewed by english teacher
Based on the interview conducted with the English teacher of MAN 3 Palembang, the teacher stated that the English learning objectives have already followed the curriculum. The Merdeka (Independent) curriculum is designed to give teachers more flexibility in their teaching methods, encouraging the use of innovative and contextual learning experiences that are relevant to the students' lives and interests. This curriculum aims to make learning more student-centered and applicable to real-world situations.

At this point, the teacher has fulfilled the demand of curriculum in teaching English. In MAN 3 Palembang, the implementation of Independent Curriculum has just started in this academic year, 2023/2024. As stated by Zidan & Qamariah (2023) that Independent Curriculum empowers teachers to explore innovative teaching methods, seamlessly integrate real-world applications, and learning experiences to the needs and interests of their students. Then, English learning material has been directed to be more contextual and relevant. The teacher said:

Currently, MAN 3 Palembang uses the Merdeka curriculum.

Of course, they are very much in line with the demands of the curriculum we use.

Diagnostic tests help the teacher identify each student's starting point, learning preferences, and areas that may need more attention. Non-academic diagnostics provide insights into students' personal backgrounds and learning styles, while academic diagnostics assess their current knowledge and skills.

Okay, at the beginning of the learning process, we know that each student comes with a different background, so initially, I conduct diagnostic tests, both non-academic and academic diagnostics. To understand the students' abilities, I use non-academic diagnostics. I use their learning styles, the methods usually used by their previous teachers, and the system I use for non-academic diagnostics is just a few questions to understand their non-academic background. For academic diagnostics, I use four questions: one question for 10th grade, two questions for below 10th grade, specifically 9th grade second semester, and one question for 9th grade first semester. These three levels are used to measure the students' background and abilities before they enter 10th grade, conducted at the beginning of the semester.

Differentiated learning involves tailoring teaching methods to meet the diverse needs of students. This can include varying the content, process, products (assignments), and learning environments to ensure that all students can engage with and understand the material effectively.

Alhamdulillah, I have used differentiated learning methods where the focus is on the students, not the teacher. This makes their learning experience more engaging.

The steps are, I present the material not directly by its definition but with illustrations related to their daily activities. The material should be related to their activities, making them more familiar and interested in the material. This way, they are more enthusiastic about learning.

Using current and relevant content helps students connect with the material on a personal level. Heterogeneous groups allow students to benefit from diverse perspectives and learning styles within the group. Multimedia resources help address different learning preferences, making the learning experience more dynamic and inclusive.

It depends on the material. For instance, if it's about captions, I look for current, relevant content. I once used content about Palestine, with many captions like "Free Palestine," but still in English. Or I use the Palestinian flag or images like a watermelon. So, they recognize it, and that builds the content according to the material I'm teaching. Sometimes, I also use videos to engage them in the material.

Because our class is heterogeneous in terms of thinking patterns and knowledge levels, I form groups heterogeneously, not homogeneously. This way, students with different learning styles, like visual or kinesthetic, can help each other.

Yes, even though I already know their abilities from the initial diagnostics, I intentionally create heterogeneous groups. In a public school, classes are always heterogeneous.

Yes, one material, one text. For instance, I might use videos, texts, and kinesthetic activities like acting out a drama based on what they've seen.

Differentiated worksheet are customized learning materials designed to meet the varied needs of students. Challenges in implementing these include technology limitations, but they are generally found to be more engaging for students. These materials help make learning more interactive and tailored to individual needs.

Yes, I have.

The main challenge is that students are not allowed to use phones in class, and not all students have laptops. But our school has televisions and touchscreens which help.

Differentiated LKPD is actually easier for students to grasp compared to reading many books or handbooks. They find it more engaging and interesting.

Engaging students requires creativity and a positive teacher attitude, especially during challenging times. Ensuring that learning materials are interesting and relevant is crucial for maintaining student motivation and participation.

If we already know the students' learning styles from the diagnostic tests, it makes it easier to implement in the learning process.

> Learning interest is crucial. Teachers must be creative to keep students interested, especially in challenging time slots. The teacher's attitude also matters; entering the class cheerfully can make a big difference.

> I can't say for sure, but I try to make the LKPD as engaging and relevant as possible. Maybe about 50% of it meets the students' needs.

Integrating technology into LKPD can provide more interactive and personalized learning experiences. Tools like AI can help tailor the content to individual student needs, making learning more efficient and engaging.

> Absolutely, with the advancement of AI and tools like G-Board, integrating technology can greatly support differentiated learning.

The findings from the interview with the English teacher at MAN 3 Palembang provide valuable insights into the implementation and challenges of differentiated instruction within the Merdeka curriculum framework. This discussion will analyze these insights and highlight the necessity and potential benefits of developing electronic Learning Kits (e-worksheet) tailored to differentiated instruction for the English subject. Alignment with Merdeka Curriculum The Merdeka curriculum emphasizes the need for innovative and contextual teaching methods that cater to the diverse needs of students. The teacher's approach of using diagnostic tests to assess students' academic and non-academic backgrounds is crucial in identifying individual learning needs and preferences. This practice aligns well with the curriculum's objectives, ensuring that the teaching strategies are personalized and relevant. Challenges of Traditional LKPD One of the main challenges identified in the use of traditional Learning Kits (worksheet) is the limited access to technological resources, such as smartphones and laptops, which are often restricted in the classroom. Despite these limitations, the teacher noted that differentiated worksheets are more engaging for students compared to traditional textbooks. This engagement is vital for maintaining student interest and motivation, especially in a diverse classroom setting. Potential of e-worksheet Electronic Learning Kits (e-worksheet) offer a promising solution to the challenges posed by traditional worksheets. e-worksheet can incorporate multimedia elements such as videos, interactive texts, and kinesthetic activities, which cater to various learning styles (visual, auditory, and kinesthetic). These features can make the learning experience more dynamic and engaging for students, thus enhancing their understanding and retention of the material. Moreover, an e-worksheet can be designed to include current and relevant content that resonates with students' real-life experiences. For example, using contemporary issues and culturally relevant topics can make learning more relatable and meaningful. The teacher's use of relevant content, such as topics related to Palestine, illustrates how contextual material can increase student engagement and interest. Integration of Technology The integration of advanced technological tools, such as artificial intelligence (AI), can further support differentiated instruction. AI can provide personalized learning experiences by adapting content and feedback to meet individual student needs. This technological integration can help overcome some of the limitations faced in traditional classroom settings, providing more tailored and effective learning opportunities. Need for Development The teacher highlighted a significant need for the development of differentiated electronic worksheet that integrate content with technology. Such development would support the goals of the Merdeka curriculum by offering innovative and contextual learning experiences. While the teacher estimated that about 50% of the current worksheet meets students' needs, there is clearly room for improvement through the adoption of e-worksheet. In conclusion, the discussion reveals a clear need for the development of an e-worksheet for the English subject based on differentiated instruction. These electronic resources can address the challenges of traditional worksheets, provide more engaging and personalized learning experiences, and better align with the objectives of the Merdeka curriculum. By leveraging technology, educators can create more dynamic and effective learning environments that cater to the diverse needs of their students.

Concluding the shared insights, it reveals a comprehensive approach to implementing the Merdeka curriculum at MAN 3 Palembang, with a strong emphasis on differentiated learning to meet diverse student needs. The teacher uses a combination of diagnostic assessments, innovative teaching methods, and relevant content to engage students. Despite facing technological challenges, there is a clear recognition of the potential benefits of integrating advanced tools to support differentiated learning.

For senior high school students engaged in English education, the need for electronic Learning Kits (e-worksheet) based on differentiated instruction is paramount. Similar to elementary students, senior high school students possess distinct cognitive and linguistic abilities that require tailored educational materials to optimize learning outcomes. Acknowledging the advanced language proficiency and critical thinking skills of senior high school students, an e-worksheet should be designed to challenge and engage them effectively.

Senior high school students exhibit advanced cognitive and language skills, necessitating materials that stimulate critical thinking and linguistic proficiency. E-worksheets should be curated to align with the maturity level and academic requirements of senior high school students, ensuring relevance and engagement.

Materials should be intellectually stimulating and foster active participation to enhance comprehension and retention. Incorporation of Multimedia: Integrating diverse multimedia elements, such as videos, interactive activities, and thought-provoking texts, can enrich the learning experience and deepen understanding.

Enhanced Comprehension: Bilingual elements can aid in the comprehension of complex English concepts and encourage inclusivity for students with varying language proficiencies. Promotion of Multilingualism: Encouraging language learning alongside English education aligns with the objective of nurturing multilingual communication skills among students.

Integration with Curriculum Objectives: e-worksheet should align seamlessly with English curriculum objectives, facilitating effective integration into the senior high school curriculum. Collaborative Development: Involving educators, curriculum developers, and language experts ensures that e-worksheet are comprehensive, effective, and aligned with educational goals.

Preparation for Higher Education: e-worksheet should prepare students for advanced English proficiency required in tertiary education and beyond. Cultivation of Global Awareness: Addressing global issues, such as climate change, within the English curriculum fosters awareness and responsibility among students as informed global citizens.

In conclusion, the development of an e-worksheet based on differentiated instruction for senior high school students in English education is essential for promoting advanced language proficiency, critical thinking skills, and global citizenship. By tailoring materials to meet the unique needs of senior high school students and integrating engaging, comprehensive content, an e-worksheet can enhance learning outcomes and prepare students for academic and global success.

CONCLUSION

Based on the result of the study, it can be concluded that developing an e-worksheet for the English subject based on differentiated instruction is essential to enhance learning experiences and meet diverse student needs. By leveraging technology, these electronic learning kits can provide personalized, engaging, and accessible educational resources, addressing the challenges faced with traditional worksheets and supporting the goals of the independent curriculum. However, the study's findings are based on a specific sample of students and English teachers. To enhance the generalizability of the findings, future research could include a more diverse sample of students from various backgrounds and educational levels.

REFERENCES

Adare, A. A., Li, Y., & Gebresilase, B. M. (2023). Assessing Practices and Challenges in Implementing Differentiated Instruction in Mingde Primary School. *Open Journal of Social Sciences*, *11*(2), 79-100.

Awofala, A. O., & Lawani, A. O. (2020). Increasing mathematics achievement of senior secondary school students through differentiated instruction.

Azhari, Z., & Zainil, Y. (2024). Differentiated Teaching and Learning Applied in English Classes of Phase F of Senior High School. *Journal of English Language Teaching*, *13*(1), 360-383.

Azimah, I., & Sujannah, W. D. (2024). The Effect of Differentiated Learning on EFL Students' Reading Skills. *Didaktika: Jurnal Kependidikan*, *13*(1), 937-946.

Bobi, C. B., & Ahiavi, M. A. (2023). Using Differentiated Instruction to Promote Creativity, Critical Thinking and Learning: Perspective of Teachers. *Journal of Education and Practice*, *7*(2), 1-30.

Eikeland, I., & Ohna, S. E. (2022). Differentiation in education: a configurative review. *Nordic Journal of Studies in Educational Policy*, *8*(3), 157-170.

Estaiteyeh, M., & DeCoito, I. (2023). Planning for differentiated instruction: Empowering teacher candidates in STEM education. *Canadian Journal of Science, Mathematics and Technology Education*, *23*(1), 5-26.

Fitra, D. K. (2022). Pembelajaran berdiferensiasi dalam perspektif progresivisme pada mata pelajaran IPA. *Jurnal Filsafat Indonesia*, *5*(3), 250-258.

Gibbs, K. (2023). Voices in practice: Challenges to implementing differentiated instruction by teachers and school leaders in an Australian mainstream secondary school. *The Australian Educational Researcher*, *50*(4), 1217-1232.

Gibbs, K., & McKay, L. (2021). Differentiated teaching practices of Australian mainstream classroom teachers: A systematic review and thematic analysis. *International Journal of Educational Research*, *109*, 101799.

Grecu, Y. V. (2023). Differentiated instruction: Curriculum and resources provide a roadmap to help English teachers meet students' needs. *Teaching and Teacher Education*, *125*, 104064.

Hutchinson, T., & Waters, A. (1987). *English for Specific Purposes: A Learning- centred Approach*. Cambridge University Press.

Irwandani, I., Suyatna, A., Haenilah, E. Y., & Maulina, D. (2024). Readiness of Indonesian pre-service science teachers for society 5.0. *Journal of Education and Learning (EduLearn)*, *18*(2), 391-402.

Jackson, D., Shan, H., & Meek, S. (2022). Enhancing graduates' enterprise capabilities through work-integrated learning in co-working spaces. *Higher Education*, *84*(1), 101-120.

Kong, S. C., & Yang, Y. (2024). A Human-Centred Learning and Teaching Framework Using Generative Artificial Intelligence for Self-Regulated Learning Development through Domain Knowledge Learning in K–12 Settings. *IEEE Transactions on Learning Technologies*.

Kumalasari, D., Subroto, W. T., & Sakti, N. C. (2024). Development of E-LKPD based on learning style differentiation in economics subjects in class XI State High School in Surabaya. *Technium Social Sciences Journal*, *55*, 142-155.

Langelaan, B. N., Gaikhorst, L., Smets, W., & Oostdam, R. J. (2024). Differentiating instruction: Understanding the key elements for successful teacher preparation and development. *Teaching and Teacher Education*, *140*, 104464.

Larios, R. J., & Zetlin, A. (2023). Challenges to preparing teachers to instruct all students in inclusive classrooms. *Teaching and Teacher Education*, *121*, 103945.

Nepal, S., Walker, S., & Dillon-Wallace, J. (2024). How do Australian pre-service teachers understand differentiated instruction and associated concepts of inclusion and diversity?. *International Journal of Inclusive Education*, *28*(2), 109-123.

Ojong, A. S. (2023). Unraveling the Efficacy of Differentiated Instruction in Enhancing Second Language Acquisition: A Comprehensive Review and Future Directions. *International Journal of Linguistics, Literature and Translation*, *6*(6), 75-82.

Padmore, E. A., & Ali, C. A. (2024). Exploring effective differentiated instruction in the teaching and learning of mathematics. *ASEAN Journal for Science Education*, *3*(1), 41-54.

Richey, R. C., & Klein, J. D. (2014). Design and development research. *Handbook of research on educational communications and technology*, 141-150.

Sari, D. E., Purnomo, M. E., & Indrawati, S. (2023). Enhancing Descriptive Material Learning at Public Junior High School through Differentiated Learning and Wizer.me E-Worksheet. *English Review: Journal of English Education*, *11*(3), 865-872.

Sharp, K., Jarvis, J. M., & McMillan, J. M. (2020). Leadership for differentiated instruction: Teachers' engagement with on-site professional learning at an Australian secondary school. *International Journal of Inclusive Education*, *24*(8), 901-920.

Syafitri, R. A. (2020, November). The importance of the student worksheets of electronic (E-LKPD) contextual teaching and learning (CTL) in learning to write description text during pandemic COVID-19. In *The 3rd International Conference on Language, Literature, and Education (ICLLE 2020)* (pp. 284-287). Atlantis Press.

Tessmer, M. (1993). *Planning and Conducting Formative Evaluation: Improving the Quality of Education and Training*. Philadelphia, PA: Kogan Page.

Tirri, K., Eisenschmidt, E., Poom-Valickis, K., & Kuusisto, E. (2021). Current challenges in school leadership in Estonia and Finland: A multiple-case study among exemplary principals. *Education Research International*, *2021*, 1-11.

Tomlinson, C. A. (2022). *Everybody's classroom: differentiating for the shared and unique needs of diverse students*. Teachers College Press.

Tomlinson, C. A., & Imbeau, M. B. (2023). *Leading and managing a differentiated classroom*. Ascd.

Tomlinson, C. A., & Jarvis, J. M. (2023). Differentiation: Making curriculum work for all students through responsive planning & instruction. In *Systems and models for developing programs for the gifted and talented* (pp. 599-628). Routledge.

VanTassel-Baska, J., Hubbard, G. F., & Robbins, J. I. (2021). Differentiation of instruction for gifted learners: Collated evaluative studies of teacher classroom practices. *Handbook of giftedness and talent development in the Asia-Pacific*, 945-979.

Wormeli, R. (2023). *Differentiation: From planning to practice, grades 6-12*. Routledge.

Yu, J., Kreijkes, P., & Salmela-Aro, K. (2022). Students' growth mindset: Relation to teacher beliefs, teaching practices, and school climate. *Learning and Instruction*, *80*, 101616.