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TEACHERS' AND STUDENTS' PERCEPTION TOWARDS DEEP LEARNING PARADIGM WITHIN ICT IN ELT AT SMA N 2 PEMATANGSIANTAR

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Abstract

The rapid integration of Information and Communication Technology (ICT) in education has prompted a paradigm shift in English Language Teaching (ELT), including the implementation of the Deep Learning framework introduced by the Indonesian Ministry of Education in 2024. This study aims to explore teachers' and students' perceptions toward the application of the Deep Learning paradigm within ICT-supported ELT at SMA Negeri 2 Pematangsiantar. A qualitative survey design was employed, involving interviews with two English teachers and questionnaires distributed to 109 eleventh-grade students. The findings reveal that both teachers and students generally hold positive perceptions toward the Deep Learning approach, particularly in the dimensions of mindful, meaningful, and joyful learning. Teachers perceive the paradigm as a refinement rather than a novel concept, although their understanding of its principles varies. Questionnaire results indicate high levels of agreement across the three dimensions: Joyful Learning (87.16%), Meaningful Learning (85.57%), and Mindful Learning (84.59%). However, several challenges emerged, including students' limited metacognitive awareness, low confidence in applying English in real contexts, and passive participation during classroom activities. ICT was perceived as an essential tool that enhances engagement, supports assessment practices, and increases learning motivation, though its pedagogical application remains predominantly surface-level. Overall, the study concludes that the Deep Learning paradigm, when supported by ICT, positively influences learning experiences in ELT and demonstrates potential as an effective instructional approach. Strengthening teacher training and developing ICT-based instructional strategies are recommended to optimize implementation and foster deeper learning outcomes.

Keywords: Deep Learning paradigm, ICT, perception, English Language Teaching, qualitative study

INTRODUCTION

In this globalization era, the technology's expansion spread to many aspects of human life. By the way we communicate, work, and study we can saw it got significance transformation. Miarso (2007) stated that technology is a process to improve additional value. Especially in education, as Maharani et al (2022) investigate about how technology had change teaching and learning process from the conventional to digital teaching and learning. There are many kinds of media that can be use in teaching and learning process. Susanto and Akmal (2019) explain that there are multiple media kinds that can be utilized in the course of education, including digital and manual media. Manual media are similar to the equipment used in classroom and the learning environment, such as whiteboard/blackboard, markers, erasers, and pamphlets. Currently the use of digital media, including computer, smartphone, internet access, digital learning application like DuoLinggo, Cake, Google, YouTube and online website like Kahoot, is often use by teachers to teach in their class nowadays. Implementing technology in teaching and learning in the classroom, can improve learning and enhancing performance, as AECT (2004) stated "Technology for education is the research and ethical method of supporting learning and enhancing performance by developing, implementing, and managing relevant technological processes and resources." The integration of Information and Communication Technology (ICT) into teaching and learning process has become increase significantly. To integrate digital technology effectively, teachers need to be adaptable and can imaginative to use ICT in classroom. International Society for Technology in Education (ISTE, 2017), explicitly emphasize the importance of teachers be more adaptive and innovative. Sahronih et al (2019) in his research find that modern teaching techniques, such as video tutorials has shown promise in improving students' engagement and

achievement. However in reality the implementation of digital technology, especially ICT used in teaching and learning process still below the average criteria (Jendela Kemdikbud, 2024). Many teachers still used conservative ways in teaching in their class. Even though the report said that most of the teachers that used and know about ICT, believe it helps them to teach and deliver curriculum more successfully and freely. The Minister of Primary and Secondary Education, Prof. Dr. Abdul Mu'ti, M.Ed., who was appointed in President Prabowo Subianto's cabinet, implemented a pedagogical reform in 2024 as part of the government's goal to improve the quality of education over the nation. Abdul Mu'ti, who has a solid academic background in Islamic education and a wealth of experience in educational reform through the Muhammadiyah organization, developed the Deep Learning approach to enhance the learning process and make it more comprehensive, meaningful, and student-centered. "Deep Learning is not a curriculum, but a learning approach aimed at deepening the learning experience to foster critical thinking and comprehensive understanding," Abdul Mu'ti said in his speech, which quoted by Kompas (2024). This idea was officially articulated in an academic manuscript titled Pembelajaran Mendalam: Menuju Pendidikan Bermutu untuk Semua (Kemendikdasmen, 2024), which outlines three main principles of this approach: (1) Mindful Learning, which aligns the learning process with students' needs and backgrounds; (2) Meaningful Learning, which encourages students to think critically and participate actively; and (3) Joyful Learning, which seeks to create a fun and motivating learning experience. This concept aligns with the views of Marton and Säljö (1976), who describe Deep Learning as the opposite of surface learning, emphasizing the reflective and analytical integration of new knowledge with prior understanding. The effectiveness of this approach is also supported by that of Khotimah and Abdan (2025), which reported increased student engagement and comprehension in Islamic Religious Education through the Deep Learning method. Similarly, Putri et al. (2022) identified this approach as signaling a paradigm shift toward "education for understanding," which is essential for equipping learners with 21st-century competencies such as collaboration, creativity, and problem-solving.

In Deep Learning approach, it requires students become more active. Teachers, in this approach act as a facilitator that guide them to ask critical question, seek innovative solutions, and connect learning concepts into real-world experiences, in order to students' process of discovery and knowledge construction. In this process, teachers as a facilitator can use ICT to support them in implementing Deep Learning. It can be a powerful tool that providing access to diverse learning resources, facilitating collaboration, and enabling personalized learning. The Minister of Primary and Secondary Education, Abdul Mu'ti hopes that this more humanist Deep Learning approach can help develop 8 dimensions of the graduate profile that are in accordance with future needs, namely faith and piety, citizenship, critical reasoning, creativity, collaboration, independence, health, and communication. As (Fullan et al., 2018) developed a framework that identifies six global competencies essential for deep learning: Collaboration, Communication, Creativity, Critical Thinking, Citizenship, and Character. While the concept continues to evolve, more comprehensive publications emerged around 2018.

Before the implementation of Deep Learning, many paradigms shift in Indonesia education, since 1970 had been introduced approaches Cara Belajar Siswa Aktif (Active Learning Strategies) (CBSA), Pembelajaran Aktif Kreatif dan Menyenangkan (Active, Creative, and Enjoyable Learning) (PAKEM), Pembelajaran Aktif Inovatif Kreatif Efektif dan Menyenangkan (Active, Innovative, Creative, Effective, and Enjoyable Learning) (PAIKEM), and Contextual Teaching and Learning (CTL). However all of those approaches still faced some shortcoming, both in the concept or implementation (Kemendikdasmen, 2025). One of the Deep Learning principles have been implemented in CBSA in 1984, this approach placed students as a subject. This approach in 1994 curriculum stressed in the process and meaningful learning. Next in the PAKEM model integrate joyful learning that had been planned since 2002. However, it has not been fully realized yet, as it lacks legal support, is not backed by comprehensive training, and has received limited support in its implementation in the field. In response these obstacles, the government especially Ministry of Primary and Secondary Education introduced Deep Learning paradigm, as outlined in the Academic Paper "Pembelajaran Mendalam:

Menuju Pendidikan Bermutu untuk Semua" (Deep Learning: Towards Quality Education for All) (Kemendikdasmen, 2025), to enhance learning processes through deeper conceptual understanding, active student engagement, and the development of character and 21st century competencies. Some studies that had been released, shown diverge result on Deep Learning in teaching and learning process. Lubis and Ariansyah (2024), in order to get the data, they use meta-analysis in data analysis. It shown the increase of students' academic achievement up to 27% using Deep Learning compared to conventional learning method. Also, they add that Deep Learning not only improves students' ability to understand the subject matter but also motivates them to study harder. Yusoff and Arifin (2015) in their research of medical students found that strategic and Deep Learning approaches positively influence the perceived educational environment. They also add that Deep Learning has an

indirect positive effect on psychological health, mediated by the educational environment. Furthermore they said that improving the educational environment and promoting Deep Learning among medical students can enhance their psychological well-being during medical training. Jiang (2022) in his research of Chinese college students, shown that the study developed and validated a four-dimension model of deep learning in language education, those are: motivation, engagement, strategy, and directional competence. He found that students' level of deep learning marginally reached the median. Also, the students show more instructional motives, neglected skill-based cognitive strategies, and had a deficiency in language application skills. Beside those studies, Isnaeni et al (2025) make the analysis of readiness for implementing deep learning from educators' perspective. They found that only 60% of the educators that never attended training on deep learning technology or artificial intelligence (AI). 25% of them want more relevant training to improve their understanding in using this technology, and 15% of them mentioned, the training just focused on basic technology such as Microsoft Office, without mentioned about deep learning. This prove that the lack of adequate training can make an impact to the readiness to implement deep learning in madrasahs. Also, they found 15% educators were doubt and opposed deep learning implementation, as it disrupts their traditional learning methods

Based on several previous research, it can be seen that the implementation of Deep Learning can improve students' achievement and outcome. However the readiness of educators to implement this approach is still need an improvement. The previous data is from madrasahs' educators not from all of the school in Indonesia. To make educators ready to implement this approach, educators need relevant training that cover-up what they intend to do. Also, the study from the Chinese college shown that deep learning gives improving to their outcomes. Based on what students' and teachers' perspective above the researcher found that both of the teacher and students have difficulties in using or implementing Deep Learning in class. Due to the lack of their information about Deep Learning, and their struggle in understanding Deep Learning approach. Also, because Deep Learning need the use of ICT in class, it gives challenge to the teachers that have little knowledge about how to operate technology used in class, such as computer, proyector, and how to search appropriate learning materials that relate to what they will study. Besides that, the environment maybe not support on using technology such as electric distribution is not going well. Different to some students that already know the basic of using technology, but few of them that know about how to utilise the technology.

LITERATURE REVIEW

Teaching Paradigm

Teaching paradigm is a philosophical framework or fundamental conceptual pattern that shapes how teachers design the teaching–learning process, select methods, and evaluate classroom instruction.

Deep Learning

Deep learning is an in-depth learning approach that emphasizes understanding, meaning, and connecting information not just rote memorization.

Information and Communication Technology (ICT)

ICT is all technologies used to handle information and assist communication, including hardware, software, networks, and digital services. ICT includes technologies such as computers, the internet, telephones, digital television, and various other smart devices that facilitate the processing, storage, and distribution of information.

English Language Teaching (ELT)

English Language Teaching (ELT) is the process of teaching English to non-native speakers that includes aspects of language skills such as listening, speaking, reading, and writing, as well as linguistic elements such as vocabulary and grammar.

Perception

Generally, perception is a cognitive process that allows person to get, organize, and interpret the stimulus from their environment through their senses, thus forming an understanding or meaning of the world around them.

METHOD

Research Design

This study used qualitative research method with a survey research design. This study is not test hypothesis or seek the improvement of students in treatment particularly, however to explore what is teachers and students' perception about deep learning in learning process with the use of ICT. Qualitative research is an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem (Creswell and Creswell, 2017). This research method appropriate to this study that aims to get rich, contextual, and in-depth understanding phenomena from the participants' perspectives within their natural setting. Survey research involves acquiring information about one or more groups of people, perhaps about their characteristics, opinions, attitudes, or previous experiences, by asking them questions and tabulating their answers (Fraenkel et al. 2012). It involves the careful collection and analysis of multiple sources of qualitative data, such as interviews, observations, and documents, to construct a comprehensive understanding of the case.

Research Subject

Research subject refers to individuals, groups, or objects that become the focus of the researcher's attention in a study (Arikunto, 2010). More, Creswell and Creswell (2017) stated that participants in a research study are individuals who provide data to the researcher in the form of answers to survey questions, responses in interviews, or other forms of interaction. The eleventh's students at SMA N 2 Pematangsiantar with the total of the students are 109 (one hundred and nine), while the teachers that teach English are 2 (two) being chosen as research subject.

Research Setting

This study will place at SMA N 2 Pematangsiantar, which is located in Jl. Patuan Anggi No. 85a, Suka Dame, Kec. Siantar Utara, Kota Pematangsiantar, Sumatera Utara.

RESULTS AND DISCUSSION

The findings of this study are derived from an analysis of interview data with English teachers and questionnaire responses from students at SMA N 2 Pematangsiantar. They provide a comprehensive understanding of the perceptions toward the implementation of the Deep Learning paradigm within ICT-supported English language teaching. The following are the findings based on the analysis.

Interview

The teachers perceived the Deep Learning paradigm as a positive reinforcement of existing pedagogical principles rather than a completely novel concept. One teacher noted, "…deep learning sebenarnya bukan hal yang baru... dulu juga beberapa kurikulum pun sudah menekankannya," indicating a view that Deep Learning integrates and refines familiar ideas like creating an enjoyable learning atmosphere. However, the depth of understanding of its three core principles varied between the teachers. One teacher's perception was predominantly focused on the joyful aspect, stating that the goal is to ensure students "…tetap senang belajar bahasa, dia tidak tertekan, tidak ada stress-nya." This perspective emphasized the affective dimension of learning but showed a more limited grasp of the mindful and meaningful components.

In contrast, the second teacher demonstrated a more analytical and structured understanding, articulating the interconnectedness of the three principles: "dia harus critical thinking di awal, baru baru sampai ditanya dia ada enggak manfaatnya nanti... itulah makanya ada mindfull meaning full baru Joyfull." This teacher highlighted the importance of starting with mindful awareness to foster critical thinking about the purpose of learning, which then leads to finding personal meaning and ultimately results in joyful engagement. Both teachers acknowledged the significant role of ICT in enabling this approach. They reported that students, being part of Generation Z, are naturally engaged by technology, with one teacher observing, "Pasti tertarik, lebih tertarik mereka. Karena kan generasi Gen Z ini kan memang sesuai dengan IT yang mereka kuasai." ICT tools were used not only for engagement but also for practical assessment, as one teacher utilized Google Forms for quizzes where results were immediately projected, making the evaluation process interactive and transparent. Despite the overall positive reception, the teachers also identified key challenges. A recurring theme was students' lack of confidence in using English actively. One teacher explained that students are often passive and "…agak sulit untuk mengungkapkan atau melakukan feedback," while the other pointed out that even when questions are posed in English, responses often come "in Indonesian bahasa. Jadi it depends." This indicates that while the paradigm and ICT tools are in

place, fostering a mindset of active participation and linguistic risk-taking remains a work in progress. Furthermore, the implementation was seen as dependent on the teacher's ability to act as a facilitator and create a supportive environment. One teacher emphasized building personal relationships to eliminate fear, saying "…saya juga berusaha supaya mereka tidak ada rasa takut sama saya," a strategy that underscores the human element crucial to making the paradigm work.

Questionnaire

The quantitative data obtained from 109 students provides a measurable corroboration of the teachers' insights through the interview, revealing the prevalence of positive perceptions across all three dimensions. The percentage of the students' questionnaire across the three dimensions of Deep Learning (Mindful Learning, Meaningful Learning, and Joyful Learning) can be seen below.

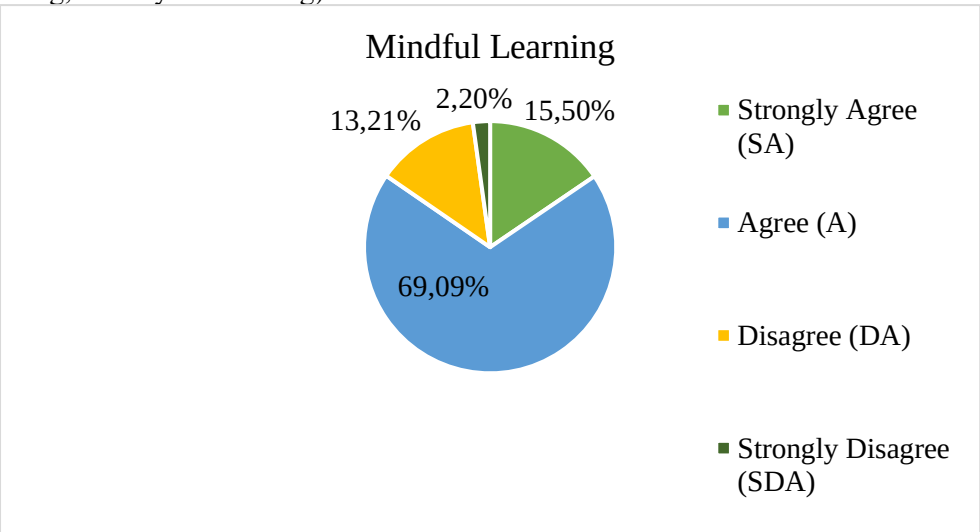

Figure 1 Mindful Learning Results

The majority of students (84.59%), 69.09% of students chose agree and 15.50% of students chose strongly agree, show awareness of their learning goals. However, a critical examination of individual items reveals a significant metacognitive deficit. Statements S7 "I can identify which English learning strategies are most effective for me" and S8 "I can evaluate for myself how well I have understood the lesson material" attracted high disagreement rates. For 13.21% of students chose disagree and 2.20 of students chose strongly disagree. The statement of the teacher also said "…the kids realize, the learners realize that they are basically a bit less confident, their self-confidence isn't there when they want to answer or speak up." This indicates that while students are aware of what to learn, they are less skilled in reflecting on how they learn and assessing their own understanding, an area requiring urgent pedagogical attention.

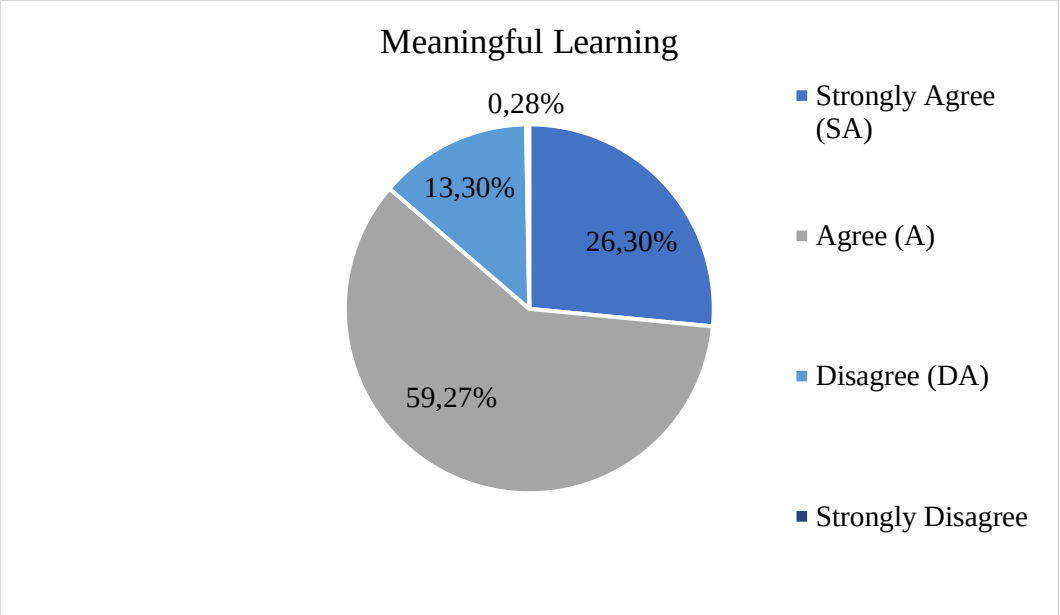

Figure 2 Meaningful Learning Results

This high agreement rate (85.57%), 59.27% of students chose agree and 26.30% of students chose strongly agree, indicates the teachers' success in conveying the material's relevance. The most salient finding, however, is the stark dissonance between recognizing the importance of knowledge and the ability to apply it. While 80.73% Strongly Agreed and 13.78% Agreed that English is relevant for their future (S12), only 45.87% Strongly Agreed and 18.35% Agreed that they felt confident using it in real-world situations (S13). Furthermore, the ability to re-explain material in their own words (S19) received the highest disagreement rate, 29.36% Disagreed and 11.92% Strongly Disagreed. The statement of the teacher also said "…there are those whose progress varies; some are trying, some are just starting, some are in the middle, some are already there. It varies according to the students' abilities. And most of them are still in 10th grade, 11th grade, they are still passive as we said." This signals a gap between superficial recognition and deep, internalized understanding. Students understand why they are learning but feel unprepared to apply that knowledge.

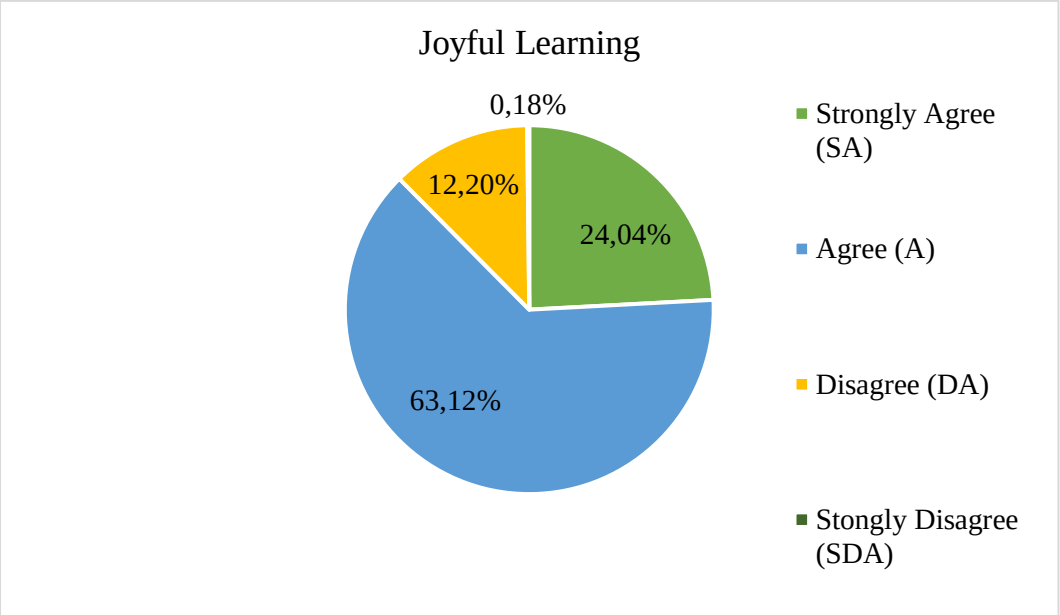

Figure 3 Joyful Learning Results

An enjoyable and motivating learning atmosphere has been successfully created, with 87.16% positive responses, 63.12% of students chose agree and 24.04% of students chose strongly agree. A critical nuance emerges, however, upon analyzing specific items. Despite the high level of enjoyment, a significant confidence disparity persists. For statement S29 "I feel confident to participate in English lessons", only 11.01% Strongly Agreed and 55.96% Agreed. While, 32.11% of students chose Disagreed and 0.92% of students chose Strongly Disagreed,

meaning a total of 32.73% of students lack the confidence to participate actively. The statement of the teacher also said “Even though sometimes they are not yet able to meet our expectations, but from our approach, our personal approach, so they also feel challenged and finally they become interested.” This underscores that enjoyment (joy) does not automatically eradicate language anxiety or the fear of making mistakes.

DISCUSSION

The result of the research conducted using interview and questionnaire showed positive response to the Deep Learning Paradigm within ICT in ELT of grade eleventh high school. This can be seen by the teachers’ interview transcript that had been analyzed. Also the percentage of the students’ questionnaire show that most of the students chose Agree for the 30 (thirty) points statement given to them. Interview findings revealed that teachers perceive the Deep Learning paradigm not as a entirely novel concept, but rather as a reinforcement of existing pedagogical principles. This was exemplified by Teacher 2's statement that "deep learning is actually not something new," indicating that they view it as an integration and refinement of familiar approaches like PAIKEM. However, the depth of their understanding of the three core principles (Mindful, Meaningful, Joyful) varied, with one teacher focusing primarily on the joyful aspect while another demonstrated a grasp of the causal relationships between them. This aligns with the research of Isnaeni et al. (2025), which highlights that teachers' readiness in understanding Deep Learning is a critical success factor. The finding that understanding is uneven, even as teachers attempt implementation, underscores the argument for continuous and in-depth teacher training, as emphasized in the Kemendikbudristek (2025) academic framework.

Shifting to the student perspective, overall responses to the three dimensions of Deep Learning were highly positive, with the highest agreement for Joyful Learning (87.16%), followed by Meaningful Learning (85.57%) and Mindful Learning (84.59%). However, a detailed analysis uncovered critical gaps. Within Mindful Learning, despite an awareness of learning objectives, students exhibited a significant metacognitive deficit in identifying learning strategies and evaluating their own outcomes, a finding consistent with Liu et al. (2022). This suggests the teacher's role as a facilitator in guiding metacognition needs enhancement. In the Meaningful Learning dimension, a dissonance was apparent between recognizing the future relevance of English (94.51%) and the confidence to apply it in real situations (64.22%). Furthermore, the high disagreement rate (41.28%) on the ability to rephrase material indicated learning was still superficial. This supports Jiang's (2022) finding of high instrumental motivation coupled with application skill deficiencies, suggesting a need for more authentically applicative learning experiences beyond contextualization. Regarding Joyful Learning, the created enjoyment did not automatically eradicate language anxiety or build confidence for active participation, reinforcing Khotimah and Abdan's (2025) stance that joy is merely an entry point that must be followed by social and psychological support to build confidence, necessitating the explicit creation of a safe space for linguistic risk-taking.

Finally, both teachers and students agreed that ICT is a highly potential tool for boosting engagement and joyful learning, with teachers noting Generation Z's strong interest and the value of tools like Google Form for transparent assessment. This aligns with Wu (2024), who concluded digital technology significantly enhances deep learning outcomes in blended learning environments. However, this finding also echoes the warning from Rojas and Chiappe (2024) that effectiveness depends on pedagogical design, not just technological availability. Currently, ICT use in this context remains largely focused on engagement and assessment, and is not yet fully leveraged to support mindful and meaningful learning through, for instance, ICT-based collaborative projects or real-world simulations.

CONCLUSION

The study investigated teachers’ and students’ perceptions toward the implementation of the deep learning paradigm in English language teaching at SMA Negeri 2 Pematangsiantar. Drawing from both interview data with English teachers and questionnaire responses from students, the study explored how mindful, meaningful, and joyful learning were experienced in the classroom. The findings reveal that the deep learning paradigm was generally well-received and contributed positively to the teaching and learning process. First, mindful learning emerged as an important aspect of the classroom experience. The majority of students agreed that they were able to stay focused, aware of lesson objectives, and reflective during learning activities. Teachers also emphasized the significance of guiding students to remain conscious of their goals, which helped them to be more engaged in the classroom process. This indicates that mindful practices were successfully embedded in the lessons. Second, meaningful learning was found to be consistently present in the classroom. Students reported that English lessons were relevant to their real-life experiences and prior knowledge. They acknowledged that the content was not only

theoretical but also practical, making it easier for them to connect classroom learning with their daily contexts. Teachers reinforced this by designing lessons that related to students' personal experiences. Third, joyful learning also played a central role in shaping students' perceptions. Students expressed enjoyment and motivation during the learning process, especially when lessons included interactive and engaging activities. Teachers supported this by creating a positive classroom environment and incorporating activities that fostered participation. This confirms that joyful learning enhanced students' enthusiasm toward English lessons. The use of ICT tools in the classroom provided further support for mindful, meaningful, and joyful learning. While ICT was not the sole focus of this study, both teachers and students recognized its role in making lessons more interactive and appealing. ICT helped students maintain concentration, find relevance in materials, and enjoy the learning process.

This study concludes that the application of the deep learning paradigm through mindful, meaningful, and joyful learning has a positive impact on English language teaching at SMA Negeri 2 Pematangsiantar. Both teachers and students benefit from this approach, as it promotes engagement, relevance, and enjoyment. Therefore, the deep learning paradigm can be considered a valuable strategy for enhancing the effectiveness of English teaching in senior high schools.

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