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Teachers Implementation of Deep Learning in ELT: An Activity Theory Perspective

Marcellino Eka Putra[1]
Najmi Laila Sani[2]
Sabrina[3]
Dadan Nugraha[4]
Haryanti[5]
[12345]**Department of English Language Education, UIN Syarif Hidayatullah Jakarta**

Correspondence Author: marcellinoekap@gmail.com

Abstract

The objective of this study is to seek the challenges experienced by English teachers in applying deep learning, focusing on their classroom experiences and perceptions using the activity theory as a framework that focuses on its concepts of contradiction, boundary objects, and boundary crossing. This study used a semi-structure interview to understand the three participants' experiences as teachers in implementing Deep Learning in the classroom practices. Key challenges to their implementation came in the form: limited understanding, workload and time constraints, implementation barrier, limited administrative preparation, curriculum adaptation gap, and government requirement. However, the participants were able to overcome the challenges that arose by treating it as a connecting tool to connect their teaching methods. These findings raise important theoretical and practical issues related to strategies for overcoming challenges encountered in implementing deep learning, as implemented by the participants by institutional support and teachers training, implementation experience, facility support, and fellow teachers support. One of the connections is understanding how teachers manage the challenges they encounter by connecting their various activity systems as objects to overcome the obstacles that occur in the deep learning implementation system they use in the classroom.

Keywords: *activity theory*, *deep learning, ELT, teacher struggle*

Introduction

Contemporary civilization has reached a high level of complexity, with abundant resources and information. How to efficiently utilize this ever-expanding knowledge and invest limited and fragmented time in deep learning represents a new challenge for educators (Eid, 2022). Educators need to master how to efficiently utilize this rapidly expanding knowledge and maximize their scarce and fragmented time to apply it in real-life classroom practice. Specifically, the use of deep learning methods requires teachers to master new technologies, design meaningful activities, and help students think critically when dealing with large amounts of information. Eid (2022) argues that the emergence of big data requires teachers to determine effective ways to connect pedagogy, data, and technology in the implementation of deep learning. Therefore, Sulasmi et al. (2025) argue the need for continuous teacher training and equitable distribution of technological infrastructure. Although deep learning shows promising potential, countries must address these fundamental barriers to successful implementation across industries.

The Minister of Primary and Secondary Education (Mendikdasmen), Abdul Mu'ti stated that deep learning has long been known previously and was first introduced around twenty years ago. Abdul Mu'ti explained that deep learning is not a new curriculum but a concept or learning approach. Furthermore, Abdul Mu'ti described that deep learning rests on three solid pillars of mindful, meaningful, and joyful learning. Therefore, deep learning can be described as an educational approach that emphasizes learning experiences to be aware, pertinent, and enjoyable. It is an approach that aims to ensure students not only memorize or answer examination questions, but they understand concepts to the fullest, relate them to other subjects, and apply them to real life (Syagif, 2025).

As stated by Jiang (2022) deep learning was first defined by Marton and Säljö as the converse of surface learning. They observed that learners employing deep learning strategies were likely to make sense, relate existing knowledge, and be critical in thinking. This approach not only significantly improves students' thinking, emotional, and social interaction skills, but also facilitates the development of critical thinking regarding technological desires and innovations (Riani and Sujarwati, 2025). This knowledge also aligns with the three pillars emphasized by Abdul Mu'ti: mindful, meaningful, and joyful learning.

In practice, mindful learning can facilitate deeper learning experiences, rather than simply following routines or passively memorizing. By engaging mindfulness, students are encouraged to become active learners by exploring different perspectives, questioning information, and connecting the material learned to real-life contexts (Ramadhan, 2025). In today's context of rapid change, immersive learning is crucial to supporting significant transformations in teaching and learning. Teachers play the core role in this process since they employ suitable teaching techniques that allow students to move beyond surface level knowledge and gain more meaningful learning outcomes (Agyeman, 2024). New ways of learning lie at the center of excellent pedagogy, deep learning facilitation, and attainment of transformative education. Teachers are the center of the classroom as the key agent and transmitter of curriculum and innovation (Subiyantoro, 2024).

Deep learning techniques must concentrate on the metacognitive and critical thinking abilities of students, thereby leading to higher comprehension (Colomer et al., 2020). It encourages instructors to reflect on how they can enhance their effectiveness by implementing different methods to help learners achieve better learning results. Upa (2020) stated that instructional strategies are the means by which instructors apply some steps so that the process of learning can be efficient and effective for the purpose of achieving the intended learning outcomes.

Consequently, some of the students lose their learning motivation due to these challenges, fewer learning materials, and limited time and opportunities for practicing. In addition, motivation of the students is also a significant aspect that needs to be encouraged by English teachers such that the students become more involved in the learning process (Jon et al., 2021). Therefore, the adopted pedagogical practice by the instructor plays a significant role in influencing students' learning outcomes and diminishing the range of barriers in English language instruction. In light of this, instructors are called upon to embed the values of deep learning; collaboration, communication, critical thinking, and creativity, into lesson activities (Kemendikbudristek, 2022).

Activity theory (AT) is an interdisciplinary methodological approach to the study of how the human mind develops that is used in a number of specialized fields within the

social sciences of each human being (Levant et al., 2024) . AT has its origins in the sociocultural tradition of Russian psychology and psychologists such as Lev Vygotsky in the 1920s and later in the 1970s by Aleksei Leont'ev (Babapour et al., 2021). This theory has provided significant contributions to the field of education research by demonstrating the way in which Activity Theory can inform educational intervention evaluation (Ilishkina, 2025).

The theory that objectifies the mind and views activity as a response to stimuli differs from activity theory, activity theory is based on the idea that consciousness and activity originate from one and the same, and that the mind develops through activity by interacting with the world and building activities (Leont'ev, 1978). Every individual has needs that drive them to participate in various activities, including interacting with objects in the environment to fulfill those needs. Therefore, activity theory is important for understanding dynamic interactions as it analyzes seven key constituents and highlights the role of teachers in effective pedagogical design (Yang & Kyun, 2022). Therefore, to understand human activity, it is important to understand these objects (Kaptelinin & Nardi, 2009).

A relevant study by Uffen et al. (2022) regarding teacher learning in lesson study (LS) through a cultural historical activity theory lens, this previous research identified the aspects of LS as a learning activity of significance for teacher learning. Activity Theory supports researchers and practitioners to gain insights into the dynamic interactions and conflicts associated with the implementation of Artificial Intelligence (AI)-supported language learning (Yang & Kyun, 2022).

Although previous research addressed the issue using the lens of activity theory, they used this lens to examine the extent to which lesson study can be developed through a cultural-historical lens of activity theory. There still remains a gap in research examining how this lens of activity theory is used to examine teachers' implementation of deep learning in the classroom. To fill this gap, this present study addresses the current hot issue in education: deep learning in classroom learning, from the perspective of Activity Theory.

This research has novelty with new contributions by analyzing the challenges of deep learning implementation through the lens of Activity Theory, so that it can provide a deeper understanding of how Activity Theory can help overcome these challenges. While most studies state how deep learning can be advantageous, there's limited studies on how teachers' struggle in applying it, especially with Activity Theory Lens. This research helps identify what makes it hard for teachers to apply deep learning practices in the classroom. The findings help schools and teacher training centers provide better support and training. Through the identification of the challenges, this study aims to make deep learning easier to adopt in ELT and help English teaching and learning quality improve.

Method

Study Design

This study uses a qualitative case study design to investigate teachers' difficulties in implementing deep learning in English Language Teaching (ELT) in the classroom. The qualitative approach was chosen by the researcher to gain an in-depth understanding of teachers' perceptions, experiences, and challenges in implementing the principles of deep learning in their classrooms (Creswell & Poth, 2018). The case study design chosen by the researcher allows for a focus on a specific educational context to uncover complex factors that influence teacher practice, such as teachers' pedagogical readiness, institutional

support, and curriculum demands (Yin, 2018). This design is suitable and appropriate for investigating the context and nuances of teachers' difficulties in promoting meaningful learning in English language learning.

Sample Population

This research was conducted in South Tangerang, specifically at the Private schools operated by a foundation. This foundation was chosen because it is accessible and the foundation meets the criteria of the research conducted. The primary participants are English teachers from the foundation. To obtain the sample for this study, the researcher used purposive sampling, selecting only English teachers who have experience or are currently teaching English. This method was chosen to ensure that participants are relevant to the researchers' title and objectives, thus providing more meaningful and clearer insights into the challenges teachers face in implementing deep learning in the classroom (Creswell, 2018).

Table 1. Participants' basic profile.

Name	School	Gender	Academic position	Academic year
P1	Private schools operated by a foundation	F	English Teacher	11
P2	Private schools operated by a foundation	M	English Teacher	10
P3	Private schools operated by a foundation	F	English Teacher	21

Data Collection Techniques and Instruments

The research was conducted through semi-structured interviews. The interviews aimed to explore teachers' experiences and practices in greater depth, their beliefs about implementing deep learning, and, in particular, the challenges of implementing deep learning in English language teaching.

Data collection emphasizes the analysis of primary including theoretical frameworks and empirical studies, to understand emerging trends, challenges, and perspectives in the qualitative research tradition (Pandey, 2025).

Data Analysis Techniques

Thematic Analysis (TA) was chosen in this study to analyze the data collected from teacher interviews. Thematic analysis is a qualitative method used to identify and explain patterns of meaning, called themes, across a data set (Braun & Clarke, 2012). This method helps researchers discover recurring ideas, experiences, or issues shared by participants. In this study, Thematic Analysis was used to understand the common challenges and strategies teachers face when attempting to use deep learning in English language teaching. According to Braun and Clarke (2012), TA is flexible and allows researchers to search for both surface meaning (what people directly say) and deeper meaning (the ideas behind what they say). The data was analyzed through the following five steps:

1. Familiarizing with the data by reading and rereading the interview transcripts;

2. Creating initial codes to label important sections of the data;
3. Searching for themes by grouping similar codes;
4. Reviewing the themes to ensure they accurately represent the data;
5. naming and defining themes to clearly explain the meaning of each theme.

Following the approach of Braun and Clarke (2012), this process was conducted carefully and systematically by the researcher to ensure the findings truly represent the explanations provided by teachers and provide clear insights into the challenges they encountered and how they overcame them deep learning in the classroom.

In the other way, researchers have been using Activity theory to determine the contradictions found in collected data. Activity is a relatively stable system, in which the division of labor distinguishes various goal-directed actions and integrates them to achieve a common goal (Engeström et al., 2021). According to Leont'ev (1981) and Engeström (1987), as cited in Sukirman and Kabilan (2023) the structure of Activity Theory consists of six interrelated elements: subject, object, instrument, rule, community, and division of labor. The subject refers to the individual or group that is participating in the activity, while the object refers to the goal or desired outcome that drives the activity. Instruments include the tools or devices used by subjects to achieve the goals. The rules include all the regulation and guidelines that are associated with the activities, while a community is everyone that is involved in the whole context of the implementation of the activity. Finally, the division of labor relates to the distribution of roles and responsibilities among members. The six components function interdependently to achieve the desired outcomes of the activity. This AT framework is illustrated by the triangle diagram below (Figure 1).

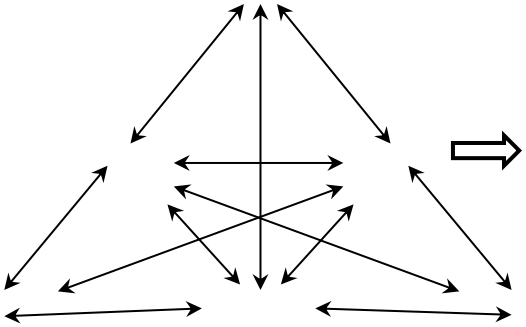

Figure 1. An activity system model (cited from Engeström, 1999)

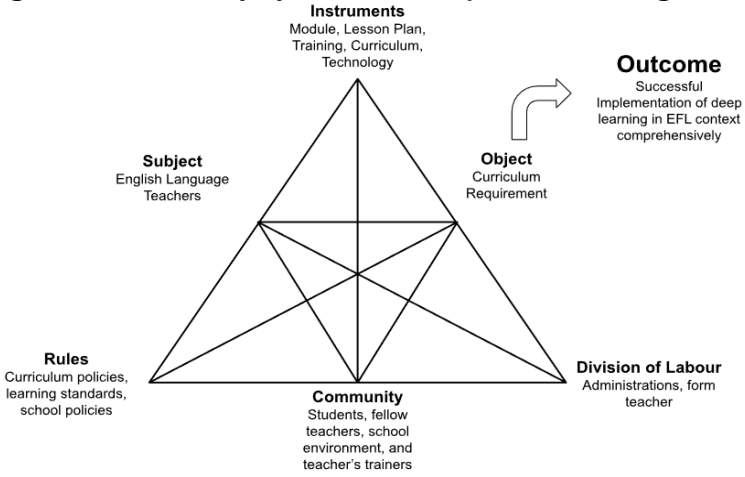

Figure 2. Deep learning activity system

The six parts of Activity Theory help to understand how teachers work when they try to use deep learning in English classes. Each part shows an important element in the teaching process. The subject is the teacher, who has the goal (object) to make students learn deeply, meaningfully, and with joy. The instruments like modules, lesson plans, training, curriculum and technology help teachers to reach that goal. The rules, such as curriculum policies, school policies, and learning standards can guide but also limit what teachers do. The community, consisting of students, fellow teachers, school environment, and teacher trainers can influence the learning process. The division of labor indicates that each individual has a distinct role in the learning process such as government, teachers, school management, and teacher trainers.

When one party fails to support the others, problems or contradictions arise, creating difficulties for teachers. By leveraging these concepts within the activity system of teachers' deep learning implementation, the current AT model, along with its related concepts of boundary objects and boundary crossings, provides a promising analytical perspective for uncovering teachers' experiences and practices in their deep learning teaching activities amidst their diverse activity systems. These concepts were also used by the researchers to develop interview items and analyze the obtained data.According to Engeström (1999) in Perspectives on Activity Theory, all these parties are interconnected and need to collaborate to achieve goals.

Findings

This section presents the findings of the study on teachers' implementation of deep learning in English Language Teaching (ELT) from an Activity Theory perspective. The findings are generated through a systematic coding process of data collected from open-ended questionnaires and semi-structured interviews, aiming to capture teachers' experiences, perceptions, and instructional practices. Through iterative coding and categorization, several sub-themes emerged that reflect the interactions among key components of the activity system, including subject, tools, rules, community, division of labor, and object. The analysis resulted in two overarching themes, namely *boundaries* and *crossing boundaries*, which represent the tensions and enabling conditions within teachers' activity systems.

Coding Sample

Excerpts (Data): Familiarising with data	Identifying Codes Producing, Sorting and Analysing Codes	Sub-themes Activity System) Refining themes	Themes (Activity Theory) Phase 5: Finalising themes
I understand deep learning only when I meet the instructor, but in the future when we want to prepare the lesson plan, I have forgotten (P2)	1. Understand only when meet instructor 2. When prepare lesson plans 3. Have forgotten	Limited of Understanding	Boundaries

Teachers have to prepare learning activity, where time management is a challenge because there are so many and so limited time (P1)	1. Prepare learning activity 2. Time management 3. Limited times	Workload and Time Constraints	
We need to learn, we also have to apply it, even though we haven't fully mastered it yet (P2)	1. Need to learn 2. Have to apply 3. Haven't fully mastered it yet	Implementation Barrier	
Another challenge is that in addition to creating lesson plans, teachers must also prepare learning materials. (P1)	1. Creating lesson plans 2. Prepare learning material	Limitations in Administrative Preparation	
There is training every 2 weeks and routinely from July-December 2025 (P1)	1. Training 2. Every 2 weeks 3. Routine July – December 2025	Institutional Support and Teachers Training	Crossing Boundaries
Every classroom has Wi-Fi and a projector (P3).	1. Every classroom 2. Wi-Fi 3. Projector	Facility Support	
We often discuss or exchange ideas (P1)	1. Discuss 2. Exchange ideas	Fellow Teacher Support	

Boundaries

The theme *boundaries* describe the various challenges teachers face when implementing deep learning in ELT classrooms. These challenges arise not only from teachers' limited understanding of the concept, but also from practical and institutional constraints such as time limitations, workload, administrative demands, curriculum adaptation issues, and government requirements. Viewed through the lens of Activity Theory, these boundaries reflect tensions among different elements of the activity system that influence teachers' classroom practices. The following sub-themes: *limited understanding, time constraints and workloads, implementation barrier, limitation in administrative preparation, curriculum adaptation gap, and government requirement* illustrate how these constraints shape teachers' experiences and often limit the effective implementation of deep learning.

Limited Understanding

Teachers still do not fully understand deeper learning. Many teachers reported that they only see a little of the concept and forget how to make lesson plans with it. Their learning is unstable because they learn all their learning until training time and cannot remember the details after that, therefore teachers are still learning and need more support to learn deep learning.

I also still do not really understand what deep learning is. (P2).

The finding indicates that teachers' limited understanding of deep learning remains a fundamental boundary in its implementation. Although teachers have been introduced to the concept through training, their understanding appears to be partial and

fragmented. Learning about deep learning is often temporary and heavily dependent on formal training sessions, resulting in difficulty recalling and applying the concept independently in lesson planning. This condition suggests that teachers are still in the process of making sense of deep learning and require more continuous guidance and support to develop a stable and practical understanding of the concept.

Time constraints and workloads

Teachers stated that their workload was too much, with several hours of teaching heaped upon them daily and the additional need to create quizzes, powerpoints and other curriculum resources. Consequently, the teachers reported they had not enough time to adequately prepare lessons and study about deep learning; thus, were fatigued due to their internal and externally established workload. Without an abundance of time, teachers reported they cannot effectively learn about/develop deep learning.

I teach for 10 hours and must prepare everything in a short time. (P1)

Time constraints and heavy workloads further intensify the challenges faced by teachers. The findings show that teachers are required to manage extensive teaching hours alongside additional responsibilities such as preparing teaching materials, assessments, and administrative tasks. As a result, teachers experience fatigue and have limited time to study and plan deep learning-oriented lessons. This lack of time not only affects lesson preparation but also reduces teachers' opportunities to meaningfully engage with and develop deep learning practices.

Implementation Barrier

The use of deep learning in the classroom has been cited as a challenge for a number of reasons, including the fact that not all material is suited to deep learning-type activities. While some participants have mentioned that they are still trying to understand the concept of deep learning, the expectation is that they will have to implement it in their respective classrooms. Teachers have also indicated that students prefer practical courses over theoretical ones, thus making it important for teachers to apply methods that will enable English to be taught in interesting and fun ways. These conditions present many barriers for teachers in terms of the application of deep learning strategies.

The challenge is more in the application in the class. (P1)

Besides conceptual understanding and time limitations, teachers also encounter difficulties when applying deep learning in classroom practice. The findings reveal that not all learning materials are considered suitable for deep learning activities, and teachers are still adjusting to translating the concept into practical classroom strategies. In addition, students' preferences for more practical and engaging learning activities require teachers to be creative in their instructional approaches. These conditions create barriers that make the implementation of deep learning more complex and demanding for teachers.

Limitations in Administrative Preparation

Teachers reported that they have difficulty planning lessons that allow students to learn in depth due to the time consumed by administrative tasks. The amount of time required for teachers to spend developing lesson plans, analysing content, and creating learning worksheets is too great and overly complex. Often, the guidance provided by trainers and the guidance provided by the books used for professional development is

inconsistent. Teachers are typically required to take additional time to source or create teaching materials, contributing to their confusion. Thus, the results illustrate that teachers are finding it very difficult to prepare administratively for deep learning lessons.

> *We have not reached that stage yet because CP analysis is long and confusing. (P2).*

Administrative preparation emerges as another significant boundary in implementing deep learning. Teachers report that the process of lesson planning, content analysis, and worksheet development is time-consuming and often confusing. Inconsistent guidance from training sessions and professional development materials further complicates this process. Consequently, teachers are required to spend additional time searching for or creating learning resources, which adds to their workload and makes administrative preparation for deep learning lessons particularly challenging.

Curriculum Adaptation Gap

The curriculum does not reflect the reality of the teaching requirements. While teachers are stating that the RPP has enough detail, the book does not give enough material. Teachers have to find resources and supplements, while often, the information they receive from the trainer is not the same as what is written in the textbook. This creates a situation of confusion and uncertainty about how to implement the deep learning curriculum correctly. There is clearly a significant disconnect between the curriculum that is created and designed and the materials used by the teachers in the classroom.

> *In the RPP everything is complete, but in the book it is not applied. (P3)*

The findings also highlight a gap between curriculum design and classroom implementation. While teachers acknowledge that lesson plans are detailed, the learning materials provided in textbooks are often insufficient to support deep learning practices. Teachers are therefore required to seek additional resources, which are sometimes inconsistent with the information delivered during training. This mismatch creates confusion and uncertainty, making it difficult for teachers to confidently adapt the curriculum to deep learning requirements in real classroom contexts.

Government Requirement

It was found that many teachers felt that the government's demands regarding the implementation of deep learning were quite burdensome, where the government asked for the implementation of deep learning in classroom learning as soon as possible, but the preparation given to teachers was not yet thorough. Teachers felt overwhelmed because deep learning is more time-consuming, where their time is limited and there are other burdens and obligations that must be carried out such as teaching, other activities at school, then still have to learn how to implement deep learning in a limited time and minimal preparation. Teachers stated that they need more space and time to focus more on developing deep learning. As stated by a teacher that

> *I'd ask for government help. If possible, don't overdo it in one month. I'd like to take us somewhere, perhaps to a peak, so we can focus more on the training. (P3)*

Government requirements are perceived as an external pressure that further constrains teachers' implementation of deep learning. Teachers feel that expectations to implement deep learning are imposed rapidly, while preparation and support remain limited. Given their existing teaching responsibilities and workload, teachers experience deep learning as an additional burden rather than a gradual instructional shift. The findings suggest that teachers need more time, space, and structured support to focus on developing deep learning practices without feeling overwhelmed by policy demands.

Crossing Boundaries

On the other hand, the theme *crossing boundaries* highlights how teachers attempt to move beyond these challenges. This theme focuses on the supports and experiences that help teachers implement deep learning more effectively, including institutional support, professional training, teaching experience, adequate facilities, and collaboration with fellow teachers. From an Activity Theory perspective, these factors act as mediating elements that enable teachers to adjust their practices and respond to existing constraints. The sub-themes presented below: *institutional support and teacher training, implementation experience, facility support, teacher support collaboration,* show how support and collaboration play an important role in helping teachers navigate and overcome the boundaries identified earlier.

Institutional Support and Teacher Training

On the one hand, teachers' perceptions of the institution were positive; the institution offered extensive and crucial support that enabled teachers to find solutions to the obstacles posed by various challenges. One example is the foundation's regular training program, which teachers attended to deepen their understanding of Deep Learning. This training began in early July and will continue until December 2025 (P1). This is concerning because even other schools have not received the same attention as the foundation (P1, P3). One teacher said:

> *The school strongly supports the implementation of deep learning. Some schools haven't even received training on it yet. Thankfully, here, it's facilitated, mandatory, and the school is also mandating the development of lesson plans and teaching modules based on deep learning (P1).*

The findings indicate that strong institutional support plays an important role in helping teachers overcome challenges in implementing deep learning. Ongoing training provided by the institution helps teachers deepen their understanding and gain clearer guidance for classroom practice. This support increases teachers' confidence and enables more consistent implementation of deep learning compared to schools that have not received similar facilitation.

Implementation Experience

Another theme emerging from the data discussing coping strategies was implementation experiences. This suggests that past experiences serve as a stepping stone to overcome existing obstacles. Today's students are considered intelligent and much more active, and allowing them to be active is actually easier (P1). Previous teaching experience, such as utilizing existing facilities, is also valuable, as in-depth learning is also important using facilities (P2). The school also created an ongoing program that could be used as an aspect of the implementation experience as stated by (P1):

> *We have an English Day program every Wednesday, where they have to speak entirely in English for one day, to encourage students' motivation to speak English.*

Teachers' implementation experiences function as a practical resource in addressing existing challenges. The findings show that teachers draw on prior teaching experiences, school programs, and students' active learning characteristics to support deep learning practices. These experiences help teachers adapt instructional strategies and reduce uncertainty in classroom implementation.

Facility Support

Another aspect of crossing boundaries is the technology that supports the implementation of deep learning. Teachers can easily find teaching materials from the internet and other supporting facilities such as projectors and audio (P1, P2, P3). Not only teachers but also students can benefit from finding learning resources online, making it easier to create active learning (P1). The use of technology can also be tailored to the material presented, thus helping to support learning (P2).

> *This school has supporting facilities, there is an in-focus, audio, free wi-fi for students to search, so it is easy to make learning active because they can actively search for information themselves, such as being asked to search for this topic and then discuss it.*

Facility support particularly access to technology, contributes to the successful implementation of deep learning. The availability of digital resources and classroom facilities enables teachers to design more interactive learning activities and encourages students' active participation. These facilities help create learning environments that support student-centered and in-depth learning.

Teachers Support Collaboration

This tends to be effective in addressing the aforementioned contradictions in Deep Learning implementation. Another important point is the support provided between teachers. Discussions and the exchange of ideas between teachers are one of the intersections found (P1). Teachers are still in the process of learning to understand Deep Learning and often discuss when there are any confusions (P2).

> *There's definitely an exchange of ideas between teachers. Because we're all still learning, we sometimes get confused, wondering what this means. We still have discussions like that. (P2)*

Teacher collaboration emerges as a key factor in crossing implementation boundaries. The findings reveal that teachers regularly discuss and share ideas to clarify their understanding of deep learning. Such collaboration provides professional support and helps teachers collectively address challenges during the implementation process.

Discussion

This discussion section aims to interpret the findings on teachers' implementation of deep learning in ELT by connecting them with Activity Theory and relevant previous studies. Rather than merely restating the results, this section explores how the identified themes and sub-themes reflect teachers' responses to instructional demands, institutional contexts, and policy expectations. The discussion is organized according to the two main themes: *boundaries* and *crossing boundaries*, to examine how constraints

and enabling factors interact within teachers' activity systems. Each sub-theme is discussed in relation to existing literature to provide a deeper understanding of how deep learning is negotiated and enacted in classroom practice.

Boundaries

Limited of Understanding

From an Activity Theory perspective, this contradiction emerges when teachers' understanding of deep learning does not align with the tools they are expected to use, the learning goals they must achieve, and the rules that guide their teaching practice.

The finding above indicates that teachers need more time and support to build a stronger understanding of deep learning. The data illustrates that teachers have positive attitudes about using deep learning but low skill and confidence for the use of deep learning. (Riani & Sujarwati, 2025) explain that teachers need sufficient amounts of training and resources to be able to effectively teach deep learning. This supports this finding that although teachers are willing to learn, their knowledge is not sufficiently strong.

Time Constraints and Workloads

Evidence gathered here suggests that due to time constraints/problems associated with preparation, teachers experience many barriers to effective application of deep learning. Within the activity system, tension appears when teachers' heavy workloads and limited time interfere with their ability to focus on deep learning as the central learning goal. (Isnayanti et al., 2025) also stated that it is important for teachers to receive assistance, training, and enough time to adequately prepare for deep learning. Thus, based upon both articles, the evidence noted supports the claims made above.

Implementation Barrier

To this study's findings, it becomes apparent that deep learning will require a systematic planning process along with content that supports this methodology. This contradiction becomes visible in the activity system when teachers struggle to apply deep learning to students while institutional rules and expected learning outcomes remain rigid. (Ekizer & Yıldırım, 2023) The article also discusses how learning can be linked to skills such as interactive communication, problem-solving and "real-world" activities. This provides additional evidence that the inability of teachers to match lesson content, student interests, or the level of teacher preparedness with the needs of deep learning may be impeding their progress.

Limitations in Administrative Preparation

The results indicate that teachers require clearer guidelines and simplified administrative tools. In terms of Activity Theory, conflict arises when teachers are required to plan deep learning lessons but the supporting tools, task distribution, and institutional rules do not sufficiently support the intended learning goals. (Babapour et al., 2020) explain that when the documents, policies, and directions provided to teachers are either inconsistent or confusing, teachers will experience breakdowns in their use of these tools . Therefore, the notion of activity theory suggests that a lack of clear tools results in teachers experiencing "breakdowns", which create barriers to the preparation of learning lessons that support in-depth learning. This statement aligns with the experiences of teachers as the length and complexity of documents, along with

inconsistent advice regarding their development, are all barriers to teachers in the development of in-depth learning planning.

Curriculum Adaptation Gap

This information indicates a need for educators to have a better-organized and more-connected curriculum for deep learning purposes. The author of Article D indicates that the success of deep learning is dependent on the relationship between the curriculum, resources, and teaching materials. The author also states that teachers struggle with the large goals of many curriculum documents and the inability of the curriculum documents to furnish the precise details and/or content. The experiences of the educators correspond with the experiences of the teachers that the educators are seeing a very sound plan with the RPP, but are not seeing enough information/resources in the textbook.

Government Requirement

The research results show that teachers find the government's demands for the immediate implementation of deep learning quite burdensome. Although this policy aims to improve the quality of more meaningful learning, teachers feel that the time and support provided are inadequate. They must learn the concepts and practices of deep learning amidst their busy workloads, such as teaching, administrative tasks, and other school activities. We need more time and focus. For example, the authorities instructed the development of deep learning lesson plans to be as they are now, requiring focus and not being distracted by other matters (P2). This leaves them overwhelmed because implementing deep learning requires time, understanding, and thorough preparation. As one teacher expressed, "I'd ask for government help. If possible, don't overdo it in one month... so we can focus more on the training" (P3).

This finding aligns with Kurniawan and Ramli (2023), who stated that top-down curriculum reforms in Indonesia are often not accompanied by adequate training, resulting in stress and confusion for teachers. This is also supported by other research, which confirms that implementing deep learning requires strong and ongoing system support. Fullan (2020) emphasized that profound pedagogical change can only be achieved if teachers receive sufficient mentoring, exploration time, and collaborative space. Therefore, government demands need to be accompanied by realistic scheduling and ongoing professional support to ensure teachers are truly prepared to implement deep learning in practice. These findings suggest that the success of the policy depends not only on regulations but also on the government's ability to provide a learning ecosystem that allows teachers to develop without overburdening.

Crossing Boundaries

Institutional Support and Teacher Training

Implementing and applying deep learning to create appropriate learning is indeed challenging, but the support provided to teachers by the foundation has resulted in significant benefits (P1, P2, P3). This suggests that these benefits require extra effort, not just from the teacher, but from the foundation and the trainers provided to support teachers' understanding of deep learning. This coping strategy reflects boundary crossing in the activity system, where institutional support and professional training help realign roles and practices toward shared learning goals.

One of the demands felt by teachers is the obligation to create lesson plans (RPP) adapted to the deep learning model, as stated by P1, "and schools are also required to

develop lesson plans and teaching modules based on deep learning." This was also felt by P2 and P3, but this contradiction can be overcome by involving trainers to help develop understanding directly during regular training.

Related to the activity theory perspective, the strategies mentioned above play a promising role in foundations pushing the boundaries of deep learning implementation. In this regard, educational management is one component responsible for educational quality, particularly foundations that oversee private schools (Sumarni, 2018).

However, despite the benefits of implementing this strategy, it's also important to note that teachers still find it difficult to absorb the education they receive from training due to the demands placed on them, even though their education is incomplete, regarding deep learning. Successful implementation requires adjustment, preparation, and time management.

Implementation Experience

Interestingly, these routine activities are very supportive and beneficial for teachers in increasing student communication motivation. This program requires students to speak entirely in English, which helps them become accustomed to using English (P1). Taslim et al. (2022) state that learning about conversation or communication is learning about the contextual use of language within the context of other languages. Therefore, the role of teachers and other school staff is crucial in motivating students to speak English both inside and outside the school environment. This statement aligns perfectly with the foundation's program to motivate students. Through repeated classroom practice, teachers gradually reduce activity-system tensions by adjusting their use of teaching tools and responding to classroom interaction.

Habit-building is also achieved by utilizing active students, especially since today's students tend to be more silent if learning is solely lecture-based; students prefer active learning (P1). Teachers often utilize existing facilities for learning, and with active learning, students are more engaged and willing to participate actively in learning (P2). Therefore, student participation ensures that learning proceeds according to the teacher's lesson plan (Rosmita et al., 2022). From the boundaries found, it turns out that the role of the foundation and students can be a crossing of boundaries for the contradictions found.

Facility Support

The tools provided by this foundation help teachers create engaging, visual, and learner-centered learning experiences, aligned with deep learning principles such as student inquiry and exploration. The foundation's facilities are easily accessible (P3). As previously mentioned, technology is a tool, providing benefits that transcend boundaries. Thus, the use of technology enables teachers to connect traditional teaching methods with new, more in-depth and meaningful approaches and can help adapt deep learning. Within the activity system, improved access to facilities and resources helps ease contradictions and supports more effective deep learning practices.

Technology provides teachers with adaptive and imaginative ways to create active learning and also address training gaps caused by limited teaching time. As Dila et al. (2024) noted, tools that support student learning activities will make the learning process more enjoyable and effective in achieving learning objectives. Therefore, the facilities provided by the foundation are beneficial and support teachers in carrying out their role in implementing in-depth learning.

Teachers Support Collaboration

Collaboration between teachers significantly assists in gaining understanding, as they gain insights into deep learning. This collaboration significantly helps reduce confusion and enhance understanding and provide helpful ideas among teachers, as teachers are perceived as academics who require understanding beyond those they receive direct education through training. Collaboration among teachers functions as a boundary-crossing practice that helps reduce contradictions by sharing knowledge, experience, and support within the activity system.

This can also enrich the source of ideas derived from various contexts and the understanding of each teacher, who actively discusses and exchanges ideas (P1). This can positively attract teachers' attention because it allows them to help each other across boundaries. Therefore, teachers can develop their competencies and learn from their colleagues how to apply the knowledge gained in practice during collaboration (Musa et al., 2023).

Conclusion

The implementation of deep learning in ELT by teachers was explored through the perspective of Activity Theory, and the results revealed several contradictions in the activity system that hindered this. Using the Activity Theory framework, this study found that the implementation of deep learning is faced with several boundaries, the results showed that teachers showed a limited conceptual understanding of deep learning and were still in the early stages of recognizing and adapting to the principles of deep learning despite still participating in training sessions until the end of 2025. Teachers have demonstrated limited understanding of deep learning and are still in early stages of recognizing and applying its principles, despite expectations that they will be involved in ongoing training to the end of the year 2025.

This disconnect between teacher concepts and teacher training resources (pedagogical depth and curriculum documents) indicates that pedagogical depth is lagging behind the development of teacher training and resources, thus preventing teachers from designing and implementing deep learning experiences. The existence of institutional and workload contradictions can be seen in the fact that many teachers have heavy administrative tasks, limited time, and complex teaching methods that make it very difficult for them to develop inquiry-based learning experiences that are an essential component of deep learning.

Additionally, there are additional challenges related to student involvement (e.g., lack of motivation, limited reading skills, minimal English exposure), which heighten the contradictions found within the activity system. Nevertheless, examples of significant signs of emerging or expansive learning were found through the use of creative technological tools by some teachers to creatively engage students, and collaborative efforts among teachers to attempt to increase student motivation.

From the perspective of Activity Theory, researchers found that it is clear that while the implementation of deep learning is progressing, it is still at an early phase and far from being fully developed. As such, in order for deep learning to progress from simply being an activity-focused adherence to deep learning theory to actually becoming deep learning pedagogically, there must be greater alignment among the activities and resources in the activity system, most notably in the areas of teacher training on the principles of deep learning (through either professional development or assistance from experienced colleagues), reduction in the extent to which workload barriers inhibit teacher development, and increasing the level of student preparedness for deep learning. Thus, this study shows that Activity Theory can be an effective framework for understanding

how teachers implement deep learning, because awareness and activity are interrelated and develop through interactions with the world.

Suggestions

This research has limited context because it was only conducted within the private schools operated by a foundation and has not covered other schools, either at the high school level in a wider area or other levels of education such as junior high or elementary school. Therefore, future research is recommended to expand the scope to schools within a single city or several districts, and compare the implementation of deep learning across different levels of education. This approach allows for a more comprehensive understanding of variations in teacher readiness and structural challenges across contexts, allowing for stronger generalizability of the research findings.

In addition to broadening the scope of research, it is also important to explore the implementation practices of deep learning through direct classroom observations to see how tensions within the activity system emerge in everyday practice. Future research could also examine factors such as school leadership, organizational culture, and the role of professional learning communities in strengthening teacher preparedness. By integrating these dimensions, deep learning implementation efforts have the potential to be more effective, targeted, and aligned with teacher needs and the evolving dynamics of English language learning.

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