



Pesantren as a Prototype of Education with a Deep Learning Approach

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ABSTRACT

The discourse on the deep learning approach in education, initiated by the Minister of Education and Culture at the end of 2024, suggests that *pesantren*, with their unique patterns, have implemented this approach within their teaching traditions. This research aims to demonstrate that *Pesantren Puncak Darussalam* has applied the deep learning approach in its educational practices. The study employs a qualitative approach using a case study method at Islamic Education Puncak Darussalam in Poto'an Dajah, Palengaan, Pamekasan. The research sources include primary data obtained from interviews with *ustadz* and students, as well as secondary data that supports the primary data, which consists of documentation and relevant literature. Data collection involved interviews, observations, and documentation, while data analysis was conducted through data condensation, presentation, and conclusion drawing. The main finding indicates that *Pesantren Puncak Darussalam* shares a similar learning process pattern with the deep learning approach, reflected in the pillars of meaningful learning, mindful learning, and joyful learning. This is evidenced by critical, interactive, reflective, and enjoyable learning experiences using traditional methods such as *sorogan*, *bandongan*, and *ikhtisyaf*. It is hoped that this research will serve as a scholarly narrative demonstrating the superiority of *pesantren* as a prototype for the deep learning approach.

Keywords: *Pesantren*, Education, Approach, Deep Learning.

ABSTRAK

Adanya wacana pendekatan *deep learning* dalam pembelajaran yang digagas oleh Menteri Pendidikan Dasar dan Menengah (*mendikdasmen*) di penghujung akhir 2024, *pesantren* dengan pola ke-khasannya telah menerapkan pendekatan tersebut dengan tradisi pengajaran didalamnya. Penelitian ini bertujuan untuk menunjukkan bahwa *pesantren Puncak Darussalam* telah menerapkan pendekatan *deep learning* dalam pembelajaran. Penelitian ini menggunakan pendekatan kualitatif dengan jenis penelitian studi kasus di Pendidikan Islam Puncak Darussalam Poto'an Dajah Palengaan Pamekasan. Terdapat dua sumber data dalam penelitian ini, yaitu sumber data primer yang didapatkan dari hasil wawancara dengan para *ustadz* beserta santri dan sumber data sekunder dalam penelitian ini adalah data pendukung terhadap data utama, baik berupa dokumentasi ataupun literature terkait. Proses pengumpulan data diperoleh dari hasil wawancara, observasi dan dokumentasi. Analisis data dilakukan dengan cara kondensasi data, penyajian data dan penarikan kesimpulan. Temuan utama dalam penelitian ini bahwa *pesantren Puncak Darussalam* mempunyai pola yang sama dalam proses belajar mengajar dengan pendekatan *deep learning*, baik dari pilar *meaningful learning*, *mindful learning* dan *joyful learning*, ini dibuktikan dengan pembelajaran kritis, interaktif, refleksi dan menyenangkan dengan melalui metode tradisional *sorogan*, *bandongan* dan *ikhtisyafnya*. Diharapkan penelitian ini akan menjadi narasi keilmuan yang menunjukkan keunggulan *pesantren* sebagai protipe dalam pendekatan *deep learning*.

Kata Kunci: *Pesantren*, Pendidikan, Pendekatan, Deep Learning.

INTRODUCTION

Recently, Indonesia was shocked by the discourse on the proposed deep learning approach by Abdul Mu'ti, the Minister of Basic and Secondary Education (Mendikdasmen). He stated that this deep learning approach could serve as a method to deepen knowledge and apply it in everyday life (Mu'ti, 2024). Although this approach is still a proposal and currently being studied, many researchers have responded by attempting to represent this approach within the education world. Deep learning itself is a form of learning (deep learning) and is an antonym of surface learning (Nugraha & Hasanah, 2021). Thus, this approach demands high-level thinking from students to acquire, understand, analyze facts, cognitively process their knowledge, and learn based on experience. To ensure that the deep learning approach shares similarities with artificial intelligence (AI) procedures, it involves algorithms similar to the human brain, often called artificial neural networks (Rochmawati et al., 2021), which can learn from experiences obtained (Diponegoro et al., 2021). Consequently, it can process data, solve problems, and perform specific tasks.

As a learning approach, deep learning is actually showing how *pesantren* (Islamic boarding schools) embody its principles. *Pesantren* facilitate learning patterns that require *santri* (students) to actively engage in understanding, delving into, and mastering the materials studied. *Pesantren* have an educational system similar to deep learning, which is called similar because their educational goal is to form *santri* who understand Islamic sciences. Islamic education processes can foster critical and in-depth thinking because it is easy for *santri* to relate their personal experiences with what they learn. Continuous and integrated learning processes (theory and experience) can trigger profound understanding (Adriana, 2021). Therefore, it shows that *pesantren* has already implemented the deep learning approach in its educational system. Contextualization of the *pesantren*-based deep learning approach involves linking concepts/theories with real-life experiences of *santri*, enabling them to internalize materials and think deeply about what they learn.

Pesantren are recorded as institutions with an important role in nation-building; their existence has increased up to a global level (Nuraeni, 2021). *Pesantren* have also carried out the national education mission as outlined in Law No. 2 of 1989: "to enlighten the nation as well as to develop successors who are knowledgeable, skilled, physically and spiritually healthy, well-formed in personality, responsible in social and national matters" (Undang-Undang RI, 1989). Then, in 2019, the government issued a new bill concerning *pesantren*, marking a new chapter for *pesantren*. This is described in Law No. 2 of 2019, in Article 1 paragraph 2, which states that *pesantren* education is an institution that develops curriculum based on *pesantren* characteristics, using classical Islamic texts or religious sciences (*Dirasah Islamiyah*) with the *muallimin* educational pattern (Undang-Undang Republik Indonesia Nomor 18 Tahun 2019 Tentang *Pesantren*, 2019). The law shows that *pesantren* have full autonomy over their internal systems. Deep learning can be applied to *pesantren* because of their definitional and practical similarities. Implementing the deep learning model can be an alternative and solution to address issues often found in traditional education, which tends to focus solely on cognitive aspects while paying less attention to emotional and social development during learning (Suwandi et al., 2024). Therefore, it is crucial for every *pesantren*

ustadz (teacher) to find the most effective way to implement this model and explore it within *pesantren* education.

The Puncak Darussalam Islamic boarding school is a *pesantren* located in Pamekasan Regency. It is led by *Kiai* Abd Hannan Tibyan, who serves as the caretaker and head of the foundation. The educational system in this *pesantren* still maintains traditional *pesantren* practices, such as sorogan and bandongan methods. However, a distinctive feature of this *pesantren* is the Iktisyaf method developed to help *santri* learn to read the classical Islamic texts (Darussalam, 2022). The methods used in Puncak Darussalam reflect efforts to deepen *pesantren* sciences, and these methods illustrate how the deep learning approach, characterized by enhancing students' understanding of their studies, can be relevant here. Therefore, it is important to examine the *pesantren* education system and its relation to the three pillars of the deep learning approach.

Many researchers have studied the deep learning approach, such as Putri (2024), who examined the application of deep learning methods to analyze sentiment in online learning; Suwandi et al. (2024), who investigated educational innovations using deep learning; Nugraha & Hasanah (2021), who explored character formation and leadership using deep learning; Yolanda & Fauziah (2024), who studied problem-solving skills such as sharing tasks and jumping tasks using the case method through deep learning; Amin et al. (2024), who predicted personality traits based on MBTI theory using deep learning and reinforcement learning; Goodfellow et al. (2016), who reviewed theories of deep learning; and Htwe et al. (2024), who examined IoT security using machine learning methods with feature correlation.

Overall, previous research mainly focuses on the application of deep learning in general education aspects, often analyzing its integration with AI technology assistance. However, specific studies about the deep learning approach within *pesantren* education have not yet been conducted. Therefore, this research aims to analyze and demonstrate that *pesantren* can be considered a prototype of education with a deep learning approach. It is hoped that this research can serve as an alternative to advance *pesantren* education, enabling it to adapt to modern developments by creating meaningful and profound learning experiences through the deep learning approach in *pesantren* teaching and learning processes.

RESEARCH METHOD

The study of *pesantren* as a prototype of deep learning education is conducted through field research. In this study, the researcher goes to the actual location to observe and describe events, behaviors, or social situations using words, including opinions and attitudes gathered from the field (Kusumastuti & Khoiron, 2019; Naruwu, 2023). Qualitative research itself is a method used to obtain data through qualitative means (Moleong, 2017). The type of research in this study is a case study approach, which involves exploring issues with detailed boundaries and collecting in-depth data from various sources (Murdiyanto, 2020). The specific focus of the study is Pondok *Pesantren* Puncak Darussalam Poto'an Dajah Pamekasan. The researcher will analyze the learning system implemented at Puncak Darussalam *Pesantren*, which actually depicts deep and meaningful learning, consistent with the deep learning approach.

The researcher determines who the data sources will be in this study. Data sources are subjects from whom data is obtained, whether they are humans or objects, according to the location where the research is conducted (Rahmadi, 2011). This study collects data from two sources: primary and secondary data sources. The primary data sources include 1) educators (*ustadz*) and 2) students (*santri*) who are studying. These three are the main subjects from whom information will be requested in accordance with the study being examined. Secondary data in this study include any supporting data that reinforce the primary sources, thereby strengthening the data obtained from the selected sources.

The data collection process in this study uses two methods. The first method is interviews, which involve directly asking informants questions related to the research topic. The second method is observation, conducted through visual and sensory perceptions during the observation process—such as sight, hearing, and feelings (Fiantika et al., 2022). The researcher will directly engage with informants (*kiai*, educators, and *santri*) by asking pre-prepared questions. Additionally, the researcher will observe the education process at Puncak Darussalam *Pesantren* to ensure the accuracy of the data with the actual conditions in the field.

After collecting data, the next stage is data analysis. The procedures for data analysis in this study include data condensation, data display, and data verification. Data condensation involves summarizing the data so that the researcher can find the core data relevant to the topic. Data display involves organizing and presenting the data related to the core that was condensed in the previous stage. The final stage is drawing conclusions and data verification, which involves comparing the consistency between the data obtained and the underlying meaning within the basic concepts of the research (Sahir, 2021).

RESULTS AND DISCUSSION

Modernization of *Pesantren* and Religious Realities

A strong educational system with an Islamic nuance is called a *pesantren*. From an etymological perspective, the term “pondok *pesantren*” consists of two words: “*pondok*” and “*pesantren*.” The word “*pondok*” derives from the Arabic “*funduq*,” which means dormitory, asylum, or hotel (Nasution, 2020). The term “*pesantren*” itself comes from the word “*santri*,” with the prefix “*pe*” and suffix “*an*,” which becomes “*pesantrian*,” meaning a place for *santri* (students) to reside (Maimun, 2018). This is because in *pesantren* there are resident *santri*, who need a living place during their studies. Meanwhile, the terminological definition of *pesantren* is an Islamic educational institution where the *kiai* (leader) is the main figure and the mosque is the center (Z. Syarif, 2018). There are various terms used to refer to *pesantren*; in Java, Sunda, and Madura regions, it is called “*pondok pesantren*,” in Aceh, *pesantren* are called “*Dayah*,” “*Rangkung*,” or “*Meunasah*,” while in Minangkabau, it is called “*Surau*” (Athoillah & Wulan, 2019). *Pesantren* has existed as an institution that continues to teach Islamic studies and spread Islamic law (Hamdani, 2022). This aligns with the mission of *pesantren*: to preserve Islamic values by developing a *santri*’s intelligence through Islamic knowledge (*tafaqquh fiddin*). Additionally, *pesantren* also plays a crucial role in changing *santri* behavior toward a better character through the *pesantren* environment.

In the Madurese context, *pesantren* has a traditionalist typology, both in teaching methods and practices (Hannan, 2022). Madurese *pesantren* adhere to the *Ablus Sunnah wal*

Jamaah, and their practices follow Sunni standards. This faith has been adopted fanatically, marked by four phenomena: First, the increasing number of *pesantren*. Second, the growing number of mosques and religious buildings. Third, the increase in religious rituals. Fourth, the widespread acceptance of Nahdlatul Ulama (NU) organizations (Hodari, 2016). These depict the religious realities that have persisted up to now, in terms of system, tradition, and social structure in Madura society (Syarif & Hannan, 2020). The *kiai*, as *pesantren* leaders, share a theological outlook similar to that of NU groups, because historically NU's founding was closely linked to the efforts of prominent *kiai*, such as *Kiai Kholil Bangkalan*, a teacher of *Kiai Hasyim Asy'ari* (NU's founder), along with other *kiai*. For the Madurese community, NU is viewed as an organization that can preserve Madurese traditions, making the respect for NU very strong (Hamdani et al., 2024). In summary, *pesantren*, *kiai*, and NU serve as pioneers of Sunni Islam as a theology that maintains the socio-cultural religious life in Madura.

In Madura, based on observations, *kiai* are the most essential element because they serve not only as leaders within the *pesantren* environment but also as main figures in the wider community. Internally, *kiai* are alternatives for shaping pious and virtuous children (Prastiwi, 2015), as one of Madura's social emphases is on religious knowledge and morality ("tengka"). The society believes that after studying at *pesantren*, students not only master Islamic sciences but also uphold ethical values within the Madurese community. Externally, *kiai* act as community leaders in religious spiritual activities such as leading "kolam," "tablilan," and other religious events. The Madurese society holds *kiai* in high regard, and their positions are inseparable from social structure. Whatever the *kiai*'s wishes are, society will support them fully, sometimes even without question (Jannah, 2019; Prastiwi, 2015). This strong fanaticism toward *kiai* stems from the deep religious conviction of Madurese people, making *kiai* key figures in community knowledge and religious guidance.

In development, despite many modernization efforts that alter the *pesantren* system, fundamental changes can be seen in the institution's structure (Alim, 2016). These changes are not in the form of weaknesses but as adaptations to face contemporary challenges. Currently, *pesantren* carry two responsibilities: religious education and general education. This applies particularly to modern *pesantren* under the supervision and regulation of the Ministry of Religion. The modernization of *pesantren* institutions now offers formal education that includes worldly sciences, structured into levels such as kindergarten, elementary, junior high, senior high, and even higher education, typically run by foundations led by a *kiai*. The modernization of *pesantren* institutions at Puncak Darussalam Poto'an Dajah has also followed this trend. Currently, the *pesantren* has established formal educational programs like MTs (Madrasah Tsanawiyah) and MA (Madrasah Aliyah) as part of its educational offerings. The vision of *Kiai Abdul Hannan Tibyan* emphasizes that "students must possess multi-skills and a fighting spirit to build a harmonious, religious, and balanced world." The *pesantren*'s philosophy hinges on two pillars: *ulul albab* (people with knowledge and wisdom) and SQ (spiritual quotient), IQ (intellectual quotient), along with the synergy of faith and knowledge as foundational principles (Darussalam, 2022).

The *pesantren*'s system emphasizes a process of nurturing and monitoring *santri*'s development comprehensively—covering skills, knowledge, and religious practices. This

responsibility is undertaken by the management to ensure holistic growth, representing a tangible effort in the sustainability and improvement of *pesantren* education (Solichin, 2018). The modern *pesantren* at Puncak Darussalam also offers flagship programs such as the International Islamic Class Program (IICP), which is internationally oriented and teaches in English and Arabic. This program aims to produce graduates with qualities such as faith and piety toward Allah, an Islamic and noble character, honesty and independence, technological skills and social awareness, and broad Islamic knowledge and international-level competence (Syahidah, 2021).

The Face of Deep Learning Approach in *Pesantren*

Deep learning is an instructional approach based on profound understanding. This approach not only involves memorizing or recognizing facts quickly (Hariyanti, 2024) but also engages the brain in high-level thinking activities such as analyzing, synthesizing, and evaluating (Hendrianty et al., 2024). This approach leads to effectiveness and efficiency in education in Indonesia, including in Islamic educational institutions like *pesantren*. *Pesantren* provides space for students to learn deeply based on the education implemented within the institution. It serves as an alternative to observe and experience the deep learning approach because, despite its traditional methods, *pesantren's* educational approach can foster deep understanding.

With all its creativity, *pesantren* can lead to meaningful and profound learning, especially with religious-based teaching materials. These often include classical texts and religious discussions, which become attractions and motivations for *santri* to deepen their religious knowledge. Collaboration between *ustadz* (teachers) and *santri* (students) as learners makes *pesantren's* education significantly directed toward exploring religious knowledge, even if it employs classical methods. The collaboration in learning can generate different perspectives (Mulyani et al., 2023). Success in learning is not only determined by the *ustadz's* understanding of the material but also by how well the teaching process is adjusted and mastered—this is an added value for *pesantren* in achieving its learning goals.

Deep learning in *pesantren* cannot be simply viewed from technological completeness or available facilities. From a pedagogical perspective, deep learning is more about how the learning pattern is applied through this approach. The fundamental concept of this approach does not emphasize technology as the main measurement or face of the approach. Profound and meaningful learning in *pesantren* also appears in activities like problem-solving known as *bahtsul masa'il*. This activity involves interactive discussions between *santri* and *ustadz* to analyze, deepen understanding, and debate specific issues (Hindun et al., 2024). Even simple learning activities within *pesantren* can foster participation from other *santri*, enriching the learning process.

The integration of scientific knowledge in *pesantren* education adds value by linking *pesantren* education with the deep learning approach. The realization of the concept known to *santri* naturally forms through their experiences. *Santri*, with their good memory, can easily relate fundamental evidences and principles to the issues or concepts they want to resolve. This connection between concepts encourages other *santri* to present ideas and principles, creating a mindful reflection on the material learned earlier. This demonstrates that one prototype of *pesantren* education is based on the deep learning approach, and it proves that

the face of deep learning education is already present and practiced within the Puncak Darussalam institution.

Teaching Traditions in *Pesantren* with the Deep Learning Approach

Pesantren institutions cultivate knowledge deeply, with all their tools and systems, *pesantren* have a distinctive nuance compared to outside educational traditions (Shiddiq, 2015). This is because their scientific focus is entirely directed toward Islamic teachings using methods that involve studying ancient texts, making their knowledge tradition different from other forms of education that emphasize general schooling. However, it should be noted that *pesantren* do not oppose general education; instead, modernization within *pesantren* has led to multi-disciplinary learning, including formal general education under the guidance of *kiai*. Currently, *pesantren* aim to produce graduates who are of high quality, such as those who can memorize the Quran, speak Arabic or English (Sabil & Diantoro, 2021). The embodiment of these goals can be seen in Pondok *Pesantren* Puncak Darussalam, a traditional *pesantren* that employs classical methods like *sorogan* and *bandongan*. Notably, this *pesantren* is known for its *ikhtisyaf* method of juz first (2006) and juz second (2007), taught over two years by *Kiai* Abdul Hannan Tibyan to students and teachers to master reading the classical Islamic texts (Darussalam, 2022). The deep learning approach in *pesantren* already interacts with its traditional methods, which serve as pillars for this approach.

Firstly, meaningful learning is a foundation in shaping students to think critically and emphasizes applicable and effective knowledge. It plays a role as an approach to build deep thinking through interactive processes, aimed at developing skills in critiquing concepts, creative thinking, problem-solving, and memory (Diputera et al., 2024). Its goal is to create relevant, practical, and profound learning, not merely memorization (Hariyanti, 2024). This pillar reflects an effort to increase awareness during the learning process by encouraging thoughtful engagement, whether through offering ideas, questioning, or clarifying concepts learned. This is already represented by the *pesantren*'s use of *bandongan*, *sorogan*, and *ikhtisyaf* methods, as confirmed in field interviews with Puncak Darussalam management, who stated:

“This pesantren uses bandongan, sorogan, and ikhtisyaf methods to teach. With these methods, santri just need to translate the texts they study, and after that, I or the ustadz provide explanations about the meaning of the texts. Santri can ask questions and participate actively in the learning, sometimes depending on real facts or questions that arise from the mismatch between what they know and real-life conditions.”

The *pesantren* methods embody the face of meaningful learning in the deep learning approach, requiring *santri* to understand the material profoundly and meaningfully. The key point isn't just translating or asking questions; it's how the learning results enable *santri* to genuinely comprehend the material. Thus, within *pesantren* methods, there are always Q&A sessions that push *santri* to think critically about the material, even questioning whether the concepts in everyday life align with or contradict the theories in classical texts. This is the essence of deep and meaningful learning, representing the first pillar of deep learning—meaningful learning—in *pesantren* education. According to Diputera et al. (2024), meaningful learning involves more than skillful thinking; it also relates to applicable knowledge, emphasizing that students should think critically through interactive activities to understand

the true meaning of concepts. Nugraha & Hasanah (2021) add that developing higher-order thinking requires cultivating independent abilities, where cognitive understanding starts with concepts as fundamental steps, stimulated through theories, and ended with practical applications in a hierarchical and logical manner. This way, individuals not only acquire knowledge but also learn to apply it in daily life. Simply put, deep thinking in learning—even with *bandongan* methods—represents the core of mindful learning, which carries profound and meaningful significance. Regarding deep learning, Syarif (2023), citing Abdul Aziz, states that there are three general features of studying classical texts: First, the learning process begins with detailed and deep explanations to avoid misunderstandings. Second, each discussion in the texts is explained continuously based on the material. Third, during the explanation or commentary (*syarah*), evidence and references are also provided.

Second, mindful learning as an approach that does not only focus momentarily, but also involves deep emotional, intellectual, and social engagement. This approach makes students active participants through critical information processing and reflection, not merely accepting (Diputera et al., 2024). The focus and approach are to connect experience with the material being studied; this is what reflection means. Reflection on daily experiences becomes an important part of encouraging authentic understanding among students (Gufron & Suryahadikusumah, 2024). The pillar of mindful learning in education will motivate students' enthusiasm for learning when they are able to involve themselves actively, indicating that they have some awareness within themselves, both in terms of cognition and their life experiences. The process of linking personal experience with learning becomes an attraction for students to become more active and engaged in learning. Puncak Darussalam *Pesantren* is an institution that often brings experiential learning for *santri*. Because in the *pesantren* world, it generally teaches about laws in the daily life of *santri*, so it is easy for *santri* to explore phenomena they experience themselves by relating it to the material they are studying.

Based on interviews conducted with the management of Puncak Darussalam *Pesantren*, it was stated:

“Santri in their learning are inseparable from social phenomena occurring in their environment. Sometimes they ask questions about issues that seem unreasonable in their minds. We as teachers feel happy, even if the questions are sometimes illogical, because it shows that santri can reflect on their own experiences.”

The face of Puncak Darussalam *Pesantren* in the pillar of mindful learning is very clear, seen from many *santri* who relate the substance of their learning to social phenomena around them. The involvement of *santri* in learning becomes the starting point for others to also reflect on similar phenomena they encounter. Not only in the reflection process, but mindful learning in *pesantren* can also enhance the overall learning experience. This pillar can be simplified with goals such as awareness in learning, stress management, and increased knowledge flexibility (Pratama et al., 2024). Along the same line, Hariyanti (2024) states that mindful learning teaches students to be truly present mentally and emotionally, paying close attention while providing new ideas and insights, which helps individuals relax, reduce stress, and deepen their understanding of concepts. Authentic learning approaches also enable students to solve problems based on the studied topics, which helps maintain what they

know and the skills they have learned, and allows them to explore strategies around them (Baskaran & Abdullah, 2022).

Third, the face of *pesantren* education is related to the pillar of joyful learning. Since *Pesantren* Puncak Darussalam has modern facilities that allow *santri* to learn comfortably, this method is an alternative to create an engaging and pressure-free learning environment where students can genuinely feel at ease. “Joyful” here expresses happiness during learning activities. According to Wicaksono (2020), “joyful” means expressing happiness in participating in learning. This approach can be an alternative to create an atmosphere free from tension and coercion, so that students genuinely enjoy the learning process. According to Betty (2023), joyful learning occurs when there is a good relationship between *ustadz* and *santri*—*ustadz* act as partners in learning, and even teachers can learn from their students. Diputera et al. (2024) notes that enjoyable learning is not only about student involvement, but also about making the learning meaningful and memorable. In *pesantren*, this joyful learning has already been implemented to create a comfortable learning experience for *santri*. Even though the learning involves classical texts, *pesantren* has its own special methods that *ustadz* employ, so *santri* can enjoy the process of learning in the *pesantren*.

Based on interviews with *santri* at Pondok *Pesantren* Puncak Darussalam Poto'an Dajah, they said:

“In addition to aiming for satisfying results, the ustadz here always pays attention to the learning process. One characteristic of creating joyful learning is that ustadz often gives space for joking with santri, because it's important to implement this so learning doesn't become tense. Even though we study using texts, behind that, it becomes a joy for santri during learning, especially when discussing fiqh or other texts that students like.”

The learning system at Puncak Darussalam doesn't just transfer knowledge; it also creates a pleasant and enjoyable learning climate, even with simple methods. This means that learning can boost the students' enthusiasm to continue studying. Joyful learning shows a significant impact, evidenced by the high engagement of *santri* during learning moments. Students gain a lot of knowledge motivated by happiness in learning. With various branches of knowledge taught at Puncak Darussalam, *santri* are allowed to choose and deepen their interest in specific disciplines through interactive processes.

CONCLUSION

Pesantren education with its distinctive scientific character and teaching methods has already implemented a deep learning approach in its educational process. Education based on Islamic sciences and Islamic law has made *pesantren* a multifunctional institution that contributes to the development of learning, including the deep learning approach which, although still in the process of study, has begun to be applied within *pesantren* education. It is hoped that future researchers will be able to study more deeply the implementation of deep learning after this approach has been officially released and widely applied in education in Indonesia, focusing on *pesantren* institutions.

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