

## PEDAGOGICAL AND CYBERGOGY ORIENTATION ON ARTIFICIAL INTELLIGENT ERA FOR ENGLISH SUBJECT IN ISLAMIC BOARDING SCHOOL

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### Abstract

This study aimed to explore the optimal and efficient pedagogical and cybergogy transformation for both teachers and students in the era of artificial intelligence (AI) in English subjects at Madrasah Aliyah of Darussalam Modern Islamic Boarding School, Kepahiang, Bengkulu since the use of AI in English subject at Islamic boarding schools has been notably inadequate due to many primary concerns. The restricted technological infrastructure includes inadequate internet connectivity and insufficient access to AI gear and software. By examining the dynamics within the school, the study seeks to empower students to enhance their critical thinking, reflection, creativity, and productivity in the digital-based education era. This study used a qualitative descriptive approach, the researchers collected data through visual observation and interviews with the English teachers and students. In analyzing the data, the researchers used the interactive model of triangulation data that developed by Miles and Hubermann. The study's findings reveal several key elements for the effective implementation of pedagogical and cybergogy transformations. First, customization of learning is essential. With AI, teachers can personalize instructional materials and methods to meet individual students' needs, skill levels, and learning styles. Interactive technologies are also critical, as they increase student engagement and foster collaborative online learning. AI technology provides quick feedback and automates assessments, streamlining the evaluation process. Additionally, AI can be used to source and deliver authentic educational materials, such as news articles, podcasts, or videos, aligned with students' competence levels. Beyond improving language proficiency, AI helps develop students' critical thinking, creativity, and problem-solving skills. To fully leverage AI, teachers must also enhance their digital competencies, enabling them to integrate AI effectively into their teaching and guide students in using these technologies responsibly and ethically.

**Keywords:** Artificial Intelligence Era, English Subjects, Islamic Boarding School, Pedagogical and Cybergogy Orientation

### INTRODUCTION

English has emerged as an indispensable component in the contemporary age of globalization. Being a global language, it is integral to several domains of life, such as corporate communication, higher education, information accessibility, worldwide entertainment, and technological advancement (Radchenko et al., 2024). Hence, it is imperative for students and the general public to acquire proficiency in English as a fundamental skill to effectively address the challenges of contemporary society. This includes incorporating technology into the teaching process to leverage the benefits and possibilities presented by the era of artificial intelligence (Y. Zhang, 2024). English is of paramount importance in enabling worldwide communication, particularly in the realm of commerce and employment. The majority of national and international commercial transactions, negotiations, and exchanges of ideas are

carried out in the English language (Rajprasit et al., 2022). Proficient English language abilities provide individuals with a distinct edge in a highly interconnected global business environment (Li et al., 2023).

In Addition, in a time where knowledge is the ultimate source of influence, English is the crucial tool for initiating access. The majority of scientific literature, research journals, and higher education resources are accessible in the English language. Proficient command of this language enables students to avail themselves of worldwide information resources, enhance their research abilities, and actively engage in the international scientific community (Rhekhililit & Lerdpaisalwong, 2019). English serves as the primary language of teaching at numerous prestigious universities worldwide. Proficiency in this language enables students to participate in international study programs, cooperate with peer students from many nations, and acquire a wide range of learning opportunities (Cianflone, 2014).

An extensive amount of worldwide popular culture is frequently communicated using the English language, whether in films, music, or social media. Proficient command of this language enables pupils to fully appreciate and comprehend cultural contributions from many regions of the globe. Moreover, English serves to underpin cultural variety and foster harmony among the global society (Ruane, 2021). English serves as the primary language of programming and documentation in the technology sector, which plays a crucial role in driving innovation. A comprehensive grasp of the language is crucial for participating in the advancement of state-of-the-art technology, cooperating on worldwide initiatives, and comprehending groundbreaking trends on a global scale.

According to preliminary observation that conducted by researchers in July 2023 at Pondok Pesantren Modern Darussalam, Kepahiang, Bengkulu, the current teaching methods for teaching English at the Madrasah Aliyah level strictly rely on traditional techniques, namely repetition. This approach yields suboptimal education and level of knowledge of the taught content, thereby limiting students' capacity for critical thinking. The approach in issue is a standard manner in which English teachers do not impart knowledge, but rather emphasizing repetition. Students' cognitive faculties are compelled to commit information to memory and are not trained to engage in critical analysis of their learning. Traditional pedagogical approaches identify the instructor as the possessor of knowledge or authority. Students are often regarded as passive recipients of knowledge, whereas professors are seen as providers of knowledge, leading to students potentially lacking critical thinking skills (Mursyidah & Muhammad, 2023).

Another weakness of conventional methods is in the context of pedagogy, where the knowledge provided is also standardized where the process is usually outlined in textbooks and the material is only the same (Z. Wang, 2013). The teaching method is only about listening, taking notes and memorizing texts. When it comes to assessment, it is usually only through exams with multiple choice questions. Therefore, students do not have the freedom to express their thoughts regarding the questions given, and the teachers do not have other assessment methods (Z. Wang, 2013). Meanwhile, in the world of education, apart from boarding school institutions, teachers and students at several levels of education have made technology and digital literacy, as well as artificial intelligence as literacy in the world of education (Ninaus & Sailer, 2022)

Technological literacy and digital literacy are essential skills for everyone, including learners (Ungureanu & Pittman, 2024). In the current era, technology has become an integral part of life, including in the world of teachers (Z. J. Zhang, 2014). Therefore, technological literacy and digital literacy need to be taught to students from an early age. Technological literacy is the ability to understand and use technology effectively. Technological literacy includes the ability to use hardware and software, as well as the ability to think critically and

creatively in using technology. Digital literacy is the ability to understand and use information obtained from digital media. Digital literacy includes the ability to access, evaluate and use information from digital media. Technological literacy and digital literacy are important for learners to have in the world of teachers in the current era because they have a lot of advantages (Ayu Rizki Septiana & Moh. Hanafi, 2022), such as the proficiency in technology and digital literacy can enhance learners' learning efficiency, facilitates the development of critical and creative thinking abilities in learners, and enhance the readiness of learners to join the workforce.

Furthermore, teachers and students must attain a high level of proficiency in numerous strategies to enhance technological and digital literacy in the field of education for the advancement of technology and learning approaches in the 21<sup>st</sup> century (Jamila Sharipovna, 2023). These strategies include: Firstly, curriculum development involves the need to incorporate technical and digital literacy into the teacher's curriculum as integral components of instructional practices. The incorporation of specialized subjects or modules on technological and digital literacy, or the integration of these subjects into existing subjects, can facilitate the achievement of this objective. Furthermore, it is imperative to create educational resources that are specifically tailored to enhance students' technology literacy and digital literacy (Ruane, 2021). Learning materials encompass textbooks, modules, and other form of educational media that incorporate technology. Thirdly, the evolution of learning methodologies that must be adapted to be compatible with the requirements of technical literacy and digital literacy. Exploratory learning approaches encompass project-based learning, problem-based learning, and simulation-based learning. Lastly, the enhancement of teacher competence. It is imperative that teachers possess the necessary skills and knowledge to effectively instruct technology literacy and digital literacy. The teacher competencies that require development encompass pedagogical capability, personality proficiency, social proficiency, and professional proficiency (Ghory & Ghafory, 2021).

Hence, in a time when the Merdeka Curriculum has been adopted in nearly all educational institutions in Indonesia (Ghory & Ghafory, 2021) including Senior High Schools in Kepahiang Regency, and where students belonging to Generation Z and alpha are well-acquainted with technology as a learning tool, it is imperative to employ constructivism teaching approaches and media that foster students' enthusiasm for learning and provide them with enriching daily experiences (Jamila Sharipovna, 2023). Constructivism approaches and media highlight the dynamic role of learning experiences and activities in shaping the learning process. This will motivate teachers to employ a knowledge transfer methodology, sometimes known as experiential learning, in order to cultivate in pupils the qualities of critical thinking, reflection, creativity, and productivity (Astuti et al., 2024).

In this era of digitization, technology and social media have a crucial part in the process of English language acquisition for students (Z. J. Zhang, 2014). Primarily, technology facilitates convenient availability of diverse educational materials, including mobile applications, internet platforms, and instructional websites. Students have access to a diverse range of educational resources, including instructional videos and interactive quiz applications. The incorporation of technology media as educational resources is crucial for enhancing English language proficiency (Ghory & Ghafory, 2021). Students have the opportunity to participate in virtual communities that are specifically dedicated to the acquisition of English language skills, such as discussion groups on services like Facebook or Youtube. Active engagement with native speakers and other learners can enhance proficiency in hearing, speaking, and writing.

Furthermore, technology enables students to engage in online classes or course distance learning in Madrasah Aliyah (Wardani et al., 2023). This provides individuals with the freedom

to tailor their study time to suit their own requirements. The utilization of video conferencing platforms, online discussion forums, and other collaborative applications facilitates the interaction and sharing of learning experiences among students. The incorporation of technology and social media enhances the dynamism, interactivity, and adaptability of the English learning process to reflect the unique learning styles of students. In Madrasah Aliyah at Islamic Boarding school (Halim et al., 2024). Furthermore, it provides students with the chance to participate in genuine and meaningful English material, therefore facilitating their comprehension of the practical use of language in daily situations.

In contemporary times, digital technology has assumed great significance in many spheres of life, including the realm of education. Nadiem Makarim, the Minister of Education, Culture, Research and Technology of the Republic of Indonesia, stated during an appearance on a talk program that technology mostly facilitates In order to facilitate this transition, it is imperative that instructors receive necessary training in digital literacy to enable them to adjust to the evolving contemporary society (Indarta et al., 2022). The framework has four fundamental elements: proficiency in utilizing digital services, ethical considerations in digital environments, digital security, and digital governance.

The primary domain of digital literacy competences commonly linked to the proficiency in using digital technology is digital skills. These skills encompass both operational and technical abilities that enable interactions with digital media. Digital competencies encompass proficiency in utilizing appropriate hardware and software, adeptness in conducting information searches and efficiently navigating search engines, proficiency in digital communication and collaboration, and proficiency in using digital tools and software (Marín & Castañeda, 2023).

The capacity of teachers to employ digital resources, such as developing instructional modules using diverse web applications, along with several other digital deployments that enhance the efficiency and effectiveness of instructors' work. In due course, teachers will have the capacity to streamline formerly challenging jobs, expedite the work process, and minimize expenses and time (Jamila Sharipovna, 2023). The contemporary youth are insatiably thirsty for quality material. It appears that instructors should transcend their role as mere influencers. In contemporary times, the role of a teacher extends beyond the act of imparting knowledge to encompass the creation of innovative material that can be likened to that of a YouTuber or content creator. The proficiency of teachers in utilizing diverse digital platforms will greatly facilitate the initiation of education in the contemporary period, characterized by innovation and creativity (Adisti et al., 2022).

The concept of digital ethics underscores the need of employing digital media for ethical purposes. This encompasses comprehending the rights related to privacy and data security, as well as showing respect for the copyright and intellectual property of all individuals (Becker et al., 2023). Key components of digital ethics include: ethical consciousness of the consequences of online activities on oneself and others; recognition of the need of truthfully and impartially sharing information. A cultural practice of utilizing digital media or staying abreast with digital advancements. Minister Nadiem Makarim emphasized that technology plays a pivotal role and that the progressive integration of digital activities in schools will provide greater effectiveness. An individual must possess the capacity to comprehend, interpret, acquaint, analyze, and develop a deep understanding of national ideology, Pancasila principles, and Unity in Diversity in order to succeed in digital adaption and safety (Wasehudin et al., 2023).

Digital safety refers to the ability to use digital media safely and responsibly. It includes an understanding of the dangers associated with using digital technology and how to protect oneself from online threats (Martin et al., 2023). Some aspects of digital safety are: the ability

to recognize and avoid digital safety threats such as malware and phishing, an understanding of how to interact with strangers online and limit personal information shared, awareness of the importance of managing time and consumption patterns. Digital media culture, digital safety, digital ethics, and digital skills are digital tools. Digital literacy includes not only the ability to use digital technology, but also an understanding of the culture, ethics and safety of interaction with digital media (Muhajirin & Pratama Yusuf, 2023).

Furthermore, the notion of "digital culture" pertains to the manner in which technology and the internet influence interpersonal communication. Social psychology includes the study of behavior, cognition, and communication within society (Li et al., 2023). Widespread practice of digital life can transform it into a cultural phenomenon. Contemporary digital technology is pervasive in many aspects of our everyday existence, including education, social interactions, information retrieval, social engagement, and transactions. The utilization of emerging technology to enhance our oral health is imperative, since our integration with the digital realm is indispensable for exerting control over various aspects of our lives and mitigating the adverse effects of this digital culture. Digital culture in education encompasses several aspects, including digital infrastructure, online learning platforms, schooling during the COVID-19 epidemic, and intergenerational cooperation. With the objective of enhancing the quality of education and facilitating learning in Indonesia, these components are designed (Alawi et al., 2022). In addition, the Government of Indonesia has implemented various initiatives to improve digital culture in schools (Kurnia et al., 2021). For example, the nationwide digital literacy campaign This program seeks to establish a secure digital literacy environment for the Indonesian population. Additionally, the government has implemented online learning as one of its measures to assist students and teachers in adjusting to the covid-19 epidemic. Educational institutions ought to adopt a mixed learning approach. Within the framework of these endeavors, the Indonesian government employs a cooperative methodology and persists in creatively enhancing the digital culture in educational institutions, facilitating the adjustment of students and teachers to contemporary demands, and elevating the standard of education in Indonesia.

The researchers' data indicated that the limited application of artificial intelligence (AI) and technology in English instruction at Islamic boarding schools is attributable to numerous interconnected variables (Asosiasi Penyelenggara Jasa Internet Indonesia (APJII), 2020). A primary factor is the constrained technological infrastructure. According to data from the Indonesian Internet Service Providers Association (APJII), internet penetration in rural regions, where most Islamic boarding schools are situated, remains inadequate, with merely 52% of these locations possessing sufficient internet connection. This situation hinders the utilization of AI and internet-based technology in the educational process. A survey conducted by the Centre for Education and Culture Policy Research (Puslitjakdikbud) revealed that approximately 60% of boarding schools encounter restricted access to technological devices, including computers and tablets, which are essential for the deployment of AI-based educational technologies (Kebudayaan, 2019). The insufficient digital literacy of educators becomes a significant impediment. A 2020 study conducted by the Ministry of Religious Affairs indicated that the majority of educators in Islamic boarding schools lack specialized training in the application of AI and technology in education, with over 70% expressing a sense of unpreparedness to incorporate modern technology into their teaching methodologies (RI, 2020). Moreover, boarding schools frequently operate under constrained budgets, hindering their ability to invest in modern technology and AI-driven applications. This situation is aggravated by the deficiency of skilled personnel in the domain of educational technology. These problems contribute to boarding schools' inadequate adoption of AI and technology in

English language instruction, thereby impairing students' competitiveness in the global digital landscape.

Based on the aforementioned explanation, we posit that the adoption of technological media as learning materials and media (cybergogy) in the new era of education in Indonesia presents both a challenge and an opportunity that every teacher must be aware of and confront in the era of Merdeka Curriculum. The prevailing difficulty is in the necessity to alter the mindset and learning culture within educational institutions. The potential outcomes include the development of more optimal and productive learning processes, together with the cultivation of high-caliber pupils who are prepared to confront the obstacles of the digital age. Therefore, the researchers are motivated to carry out studies on the optimal and efficient pedagogical and cybergogical changes for teachers and students in the age of artificial intelligence in English subjects at Madrasah Aliyah of Pondok Pesantren Modern Darussalam, Kepahiang, Bengkulu in order to enable students to develop their greater critical thinking, reflection, creativity, and productivity in the current digital-based education era.

## **METHOD**

### **Research Design**

The research design used in this study is a qualitative approach with a descriptive qualitative method of the phenomenon of activities in each program at the institution in an effort to improve the quality of teaching English in artificial intelligent era in Madrasah Aliyah of Islamic boarding school in Kepahiang Regency, Bengkulu, Indonesia (Mirhosseini & Pearson, 2024). The selection of this location was based on the researcher's interest and consideration of learning circumstances of English education in Islamic boarding school in digital era.

### **Respondents**

The respondents of this study were English teacher and students who involved in educational process of English subject in Madrasah Aliyah of Islamic boarding school in Kepahiang Regency, Bengkulu, Indonesia.

### **Data Collection Techniques**

The data collection techniques used in this study are in accordance with the needs for data collection, the techniques used are; observation, interviews and documentation studies (Mirhosseini, 2020). Observations in this study were carried out by researchers to see the natural activities carried out by research respondents and the interview was done to the English teacher and students at Madrasah Aliyah of Islamic boarding school in Kepahiang Regency, Bengkulu, Indonesia. Interviews allow us to gather information directly from the respondents. This information can be rich in detail and provide insights that might not be accessible through other methods.

### **Data Analysis Techniques**

In analyzing the data, the researchers used interactive model developed by Miles and Hubermann through the use of data triangulation techniques namely: data reduction, data display, and drawing conclusions (Sumiran et al., 2022).

During the data reduction process, researchers condense the acquired data by summarising, selecting key elements, emphasising significant aspects, and identifying themes and patterns. Consequently, the condensed data will ultimately yield a more lucid representation, facilitate subsequent data gathering for researchers, and enable efficient retrieval if required. Subsequently, in the data presentation, following data reduction, the

researcher must convey the facts through various explanatory formats or alternative representations. This seeks to render the acquired data more organised and comprehensible. Ultimately, in the conclusion phase, researchers validate and formulate findings. In this exercise, preliminary assumptions or conclusions that are likely to be provisional will be amended if they do not align with the conditions and occurrences seen in the field. If the hypothesis aligns with the field conditions, it can be accepted and incorporated into a report constructed deductively, moving from general to specific facts.

## **FINDINGS**

The results of this study illustrated how the ideal and effective pedagogy and cybergogy transformation orientation for teachers and students in the era of artificial intelligence in English subjects at Madrasah Aliyah, Darussalam modern Islamic boarding school, Kepahiang, Bengkulu based on observation, interviews with the respondents and documentation, so that students will be able to become more critical, reflective, inventive and productive students in the current digital-based education era.

### **Orientation of Traditional Pedagogy Transformation Towards Cybergogy in Islamic Boarding Schools**

Cybergogy has an important role in the world of artificial intelligence in the education system in Indonesia. There are several reasons why cybergogy is very important to be applied in English education and teaching in Indonesia, namely: Cybergogy can improve students' ability to think critically, communicate, and collaborate. This strategy allows students to develop critical thinking, analysis, and synthesis skills through the use of technology (Satria et al., 2024). It also improves students' ability to adapt to change and develop effective problem-solving skills, and assists students in developing self-directed learning skills and access a wider range of information and learning resources and choose how to learn according to their needs. It also helps students in developing effective communication skills through discussion and collaboration with teachers or friends (Jamila Sharipovna, 2023).

In addition, cybergogy can also help students in developing creative thinking skills. By using technology, students can develop effective creative thinking skills through the use of simulations and game-based learning, adapt to change and develop effective problem-solving skills (Jie & Sunze, 2023). In general, cybergogy has an important role in improving students' abilities in various aspects, including critical thinking, communication, collaboration, problem-solving, self-directed learning, and adaptability where it can assist students in developing the skills necessary to adapt to change and develop effective skills in various situations. In addition, cybergogy has an important role in enhancing student engagement and facilitating access to diverse learning resources in English language learning. This strategy allows students to develop critical thinking, analysis, and synthesis skills through the use of technology, where cybergogy has an important role in increasing student engagement and facilitating access to diverse learning resources in English language learning (Chandra et al., 2024). This strategy enables students to develop critical thinking, analysis and synthesis skills through the use of technology, as well as facilitating access to diverse learning resources and developing effective communication skills.

### **Teachers' Adaptation to Cybergogy Approach and Integration of Technology into the English Classroom**

Teacher adaptability in education refers to the ability of teachers to adjust to the various changes and developments that occur in the field of education. It is a dynamic and

ongoing process in which teachers continuously update their knowledge, skills and approaches to ensure that they remain relevant and effective in their roles. Even in the process implementing technology in teaching and learning process within Merdeka curriculum in Indonesian schools, such as limitation of internet access and rural area (Chandra et al., 2024), teachers need to constantly update their understanding of the new curriculum, attend trainings, and participate in teacher communities to exchange information and best practices. In addition, in this digital era, the use of technology in learning is becoming increasingly important. Teachers are required to integrate various digital tools and online learning platforms into their teaching process to improve student engagement and understanding.

Adaptation also involves implementing modern learning methods that are more interactive and participatory (Chandra et al., 2024). In this case, the teachers need to adopt approaches such as project-based and collaborative learning, which suit the needs of students in the 21st century. In addition, developing effective communication skills with the younger generation is crucial to building better relationships with students. Flexibility in dealing with unexpected situations is also an important part of teacher adaptation. As seen during the COVID-19 pandemic, teachers need to be able to adapt quickly to sudden changes, such as switching to online learning (Halim et al., 2024). This shows the importance of continuous professional competence improvement for teachers in order to meet the needs of diverse students, including those with special needs. Collaboration with other stakeholders in the education community, such as peers and parents, is also integral to this adaptation process. Therefore, awareness of global and local issues is also important in teachers' adaptation. They need to understand and integrate contemporary issues into their teaching to prepare students for real-world challenges. Most importantly, teachers need to develop a mindset that is open to change and ready to continue learning and developing throughout their career.

### **The Impact of Artificial Intelligence on the Teaching and Learning Process in English Subjects**

The integration of artificial intelligence (AI) into English learning platforms in Indonesia has brought significant changes in teaching methods and student learning experiences (Huang, 2024). Based on available information, some of the ways AI is integrated into English learning in Indonesia include: personalization of learning where AI enables learning platforms to tailor learning materials and activities to the needs, ability levels, and learning styles of individual students (Saa, 2024). For example, apps like Duolingo and Babbel use AI algorithms to analyze student performance and present content that best suits their progress. This helps create a more effective and efficient learning path for each individual. In addition, there is real-time feedback where one of the main advantages of AI integration is its ability to provide instant feedback to students. Platforms like Grammarly and UpScore AI use AI technology to analyze student writing and provide corrections and improvement suggestions instantly (Ma & Wang, 2024). This allows students to learn from their mistakes quickly and improve their writing skills more effectively.

In terms of interactive conversation exercises, AI is also being leveraged to create a more realistic and interactive conversation experience. Apps like Sivi (formerly known as Speakify) use AI to simulate conversations with native English speakers and the students can practice speaking in various situations and receive feedback on their pronunciation and grammar (L. Wang & Yu, 2024). This helps boost students' confidence in communicating using English. In automated assessment processes, AI is used to



automate the assessment process, especially for computer-based tests. For example, in IELTS test preparation, platforms like Upscore AI can score a student's essay and provide an approximate score along with detailed feedback. This helps students understand their strengths and weaknesses and prepare better for the actual test. When it comes to access to authentic materials, AI helps in the selection and presentation of authentic learning materials that match the proficiency level of students (L. Wang & Yu, 2024). Platforms such as Newsela use AI to adapt news articles to different reading levels, allowing students to access real-world content that matches their abilities. In addition to helping students, AI also supports teachers in administrative tasks. For example, AI can assist in scheduling, tracking student progress, and even in the creation of personalized lesson plans.

In order to make learning English less of a tedious activity, there is a lot of gamification of English learning, with many English learning platforms in Indonesia integrating gamification elements powered by AI (Rintaningrum, 2023). The apps such as Duolingo and Memrise use AI to create fun and motivating learning experiences, with reward systems and challenges tailored to individual student progress. While the integration of AI in English language learning in Indonesia brings many benefits, there are also challenges that need to be addressed. Unequal access to technology and the internet in different regions of Indonesia may create gaps in the utilization of AI-based platforms. In addition, there are concerns about data privacy and security of students' personal information that need to be addressed carefully.

### **Technology-based Teaching Approaches in English Language Teaching**

Technology-based teaching approaches can significantly improve English language learning in schools through various innovative and effective ways. Personalization of learning is one of the key advantages of a technology-based approach and by utilizing artificial intelligence (AI), learning platforms can customize teaching materials and methods according to each student's needs, ability level and learning style (Avelino & Ismail, 2022). This allows each student to learn at a pace that suits their abilities, focus on areas that need improvement, and optimize their learning process.

Enhanced interactivity is also an important aspect of technology-based English learning. Apps and digital platforms provide various interactive activities such as educational games, conversation simulations, and interactive exercises that can increase student engagement and make the learning process more interesting (Albatti, 2023). For example, apps like Duolingo and Babbel use gamification elements to motivate students to learn English.

Access to wider and more authentic learning resources is also an advantage of a technology-based approach. Students can access a variety of online learning materials, including videos, podcasts, news articles and other content in English (Rintaningrum, 2023). This helps expose students to authentic and contextualized use of English, enhancing their understanding of language use in real situations. In addition, flexibility in learning is also an advantage of the technology-based approach. Students can access learning materials anytime and anywhere, allowing them to study outside of school hours and revisit materials as needed. However, it is important to note that technology-based approaches should be implemented with caution and balance. The role of teachers remains important in facilitating learning, providing emotional support and ensuring effective and responsible use of technology (Avelino & Ismail, 2022).

## **DISCUSSION**

Today, with the advent of Artificial Intelligence (AI), teachers are exploring innovative ways to enhance language learning through technology (Qiao & Zhao, 2023). By integrating cybergogy into the curriculum, students have access to personalized learning experiences that meet their individual needs and learning styles. This not only increases student engagement and motivation, but also prepares them for a future where technology plays a vital role in communication and language acquisition (Chandra et al., 2024). By embracing this change, teachers in Indonesia have paved the way for a more dynamic and effective approach to teaching and learning English in the AI age. Besides, through the teachers' adaptation to cybergogy approach and integration of technology into the english classroom, teachers can ensure that the learning process remains relevant, effective and able to prepare students to face future challenges (Wardani et al., 2023). This adaptation allows teachers to continue to provide quality and meaningful learning experiences for their students, while maintaining the quality of teaching materials in various learning conditions, both online and offline. Teachers' adaptation to the cybergogy approach in the era of artificial intelligence (AI) in English language teaching involves several important aspects such as understanding and applying cybergogy. As explained in some previous discussions, cybergogy is a learning approach that combines traditional learning principles with digital technology to create a more interactive, engaging and affordable learning experience (Satria et al., 2024). In the context of English language teaching, teachers need to understand and apply the concept of cybergogy which focuses on using virtual learning environments for learners' cognitive, emotional and social development.

In another hand, the integration of AI into English learning platforms in Indonesia has opened up new opportunities to improve learning effectiveness and efficiency. With personalization, real-time feedback, and access to authentic materials, students can develop their English skills in a more interactive and engaging way. However, it is important to ensure that the use of AI in education remains centered on students' needs and supported by a strong pedagogical approach. In addition, it is also necessary to consider the issue of technology access which may not be evenly distributed in all areas. By effectively integrating technology in English language teaching, schools can create a learning environment that is more dynamic, interactive and relevant to the needs of students in this digital age, thereby improving the overall effectiveness of English language learning.

## CONCLUSION

Based on the findings and discussion above, it can be concluded that the ideal and effective transformation orientation of pedagogy and cybergogy for teachers and students in the era of artificial intelligence (AI) in English subjects at Madrasah Aliyah involves several important aspects. First, personalization of learning is key. By utilizing AI, teachers can customize teaching materials and methods according to each student's needs, ability level, and learning style. AI-based learning applications can be used to provide a personalized learning experience, allowing students to learn at their own pace and focus on areas that need improvement. Secondly, the integration of interactive technologies is essential to increase student engagement. AI-based applications will allow teachers to create learning systems that students can access through their mobile devices, increasing participation and motivation in English learning. Thirdly, online collaborative learning becomes an important component in this transformation, instant feedback and automatic assessment become easier with the help of AI. Teachers could utilize AI to select and present authentic materials such as news articles, podcasts, or videos that match students' proficiency levels. This helps expose students to real, contextualized uses of English. In addition, the development of 21st century skills should be integrated in English learning where the use of AI technology is not only to improve language

skills, but also to develop students' critical thinking, creativity, and problem-solving abilities. Finally, the role of the teacher shifts to that of a facilitator and guide. Teachers must develop their own digital skills to effectively utilize AI technologies in teaching. They also need to assist students in using technology responsibly and ethically.

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