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The Utilization Of Artificial Intelligence In Arabic Language Instruction At Islamic Higher Education Institutions

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Abstract

Learning Arabic language in Islamic Religious Colleges (PTKI) is facing multidimensional problems rooted in duality its function as Language modern communication at the same time key access to treasury classical Islamic intellectuals, which is exacerbated by heterogeneity ability beginning students, limitations time lectures, as well as Still dominant method pedagogy less conventional responsive to personal needs of students. Research This use method studies library or library research with analyze in a way systematic sources Appropriate literature includes: book scientific, articles journal reputable, and reports results research, with technique analysis content reinforced qualitative triangulation source For ensure data validity. Research results reveal four findings main. First, typology the use of AI has spectrum wide, starting from NLP based grammar checker, speech recognition for pronunciation, conversational chatbots, to adaptive Intelligent Language Tutoring Systems, including application specific For analysis text Islam. Second, AI is proven effective increase skills receptive and aspects mechanistic productive, but its effectiveness moderated by level skills students and not yet capable replace role lecturer on skills level high. Third, AI integration is faced with a dialectic between opportunity personalization mass with challenge gap infrastructure, low AI literacy of lecturers, as well as problem AI accuracy against complexity Arabic and its suitability with manners Islamic science. Fourth, the use of AI gives rise to implications fundamental ethical, pedagogical, and theological principles, including shift role lecturer, crisis integrity academic, as well as urgency framework Islamic ethics for ensure harmony content with faith. The implication is that PTKI needs to formulate human-AI partnership policy through development equitable digital infrastructure, an integrative AI literacy program for lecturers, and the formation of a curatorial body AI- based content Islam..

Keyword: Intelligence Artificial, Arabic Language Learning, Islamic College, Technology Integration.

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INTRODUCTION

Arabic occupies unique and multidimensional position in system education at Islamic Religious Colleges (PTKI) in Indonesia. Different with Language foreign other, Arabic is not only studied as tool communication modern linguistics, but also as fundamental instruments for access and understand primary sources of Islamic teachings, namely the Qur'an, Hadith, and treasury intellectual classic or turats that become pulse Islamic science. Duality function This as Language communication contemporary at a time Language inheritance civilization make learning Arabic language at PTKI has burden epistemological distance more heavy compared to learning Language foreigners in general. A PTKI students are expected No only capable chatting in colloquial Arabic, but also demanded For own ability analytical in reading, understanding, and interpreting texts religious Arabic language that has structure grammatical complex, rich and contextual vocabulary, and nuances deep meaning. Reality This create challenge pedagogical that is not simple, because curriculum must capable accommodate second orientation the in limitations time available lectures, while background behind ability beginning incoming students to PTKI is very heterogeneous, starting from graduate of Islamic boarding school with a strong Arabic language base until graduate of school the same general very Not yet own supplies basis (Ningsih & Munawwir, 2025).

Challenge pedagogical the the more come to the fore when faced with reality achievements learning Arabic in many PTKIs which are up to moment This Still Not yet fully satisfying. Various studies evaluative show that competence Arabic language students, especially in skills productive like speaking and writing academic, still be under expected standards. Students often experience significant difficulties in construct accurate sentences in a way grammatical, expressing idea in a way oral with smooth and confident self, as well as write essay argumentative with coherent structure. Phenomenon anxiety speaking or foreign language anxiety also becomes obstacle common psychological found, where students feel Afraid For make error when speak or write, so that participation active they in the learning process become hampered. Condition This exacerbated by limitations environment immersive Arabic language outside class, low motivation Study part students who think Arabic as eye difficult and scary lectures, and method teaching that is still often lecturer - centered with approach poor grammar and translation stimulate involvement active students. Accumulation from various factor This create wide gap between ideal learning goals Arabic as listed in curriculum and reality achievements in the field (Rahmawati & Hakim, 2021).

Uniqueness and complexity Arabic from perspective linguistics computational become reason Why AI integration in his learning is not case simple that can equalized so just with learning Language English or languages Europe others. Arabic has characteristics very different typologies, especially in the system non- concatenative morphology where the meaning of a word is formed through combination root triliteral consonants or quadriliteral with pattern vowels and affixes certain, resulting in system highly productive derivation and inflection However complex. Besides that, phenomenon marked diglossia between modern standard Arabic or fushā used in formal, academic and religious contexts, with various dialect local or '

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āmiyyah is used in communication everyday, creating challenge double for learners and for NLP models. Ambiguity syntax and lexical in Arabic is also very high, where one word can own Lots possibility meaning and function grammatical depends context the sentence. Complexity This demands a trained AI model in a way specific with corpus adequate Arabic, as well algorithm that is capable handle nuances distinctive morphosyntax. Without careful handling, generic AI developed with language database English potential produce analysis that is not accurate, especially when face to face with texts religious classic that has very different structure and diction with modern standard Arabic (Fajri & Syihabuddin, 2022).

Urgency For explore potential of AI in The context of PTKI is also driven by the existence of gap between acceleration adoption AI technology in education in a way general with reality its integration in the environment education tall Islam. Although various public universities and institutions education in developed countries has compete integrating intelligent tutoring systems, adaptive learning platforms, and conversational chatbots to in curriculum Language they, research and implementation similar in PTKI still classified as sporadic, partial, and not yet become movement systemic institutional. Some initiative beginning of course has start popping up, like use application automatic Arabic grammar checking or utilization of AI- based digital learning media, however Still limited to experiments small in class certain and not yet integrated in a way holistic to in design curriculum and policies institutions. Gap This No only concerning aspect technological, but also includes dimensions pedagogical and epistemological. Not many studies that are comprehensive research how AI can integrated without sacrifice fundamental values of Islamic education, such as importance sanad scientific, teacher-student relationship which is tarbawi, as well as manners in demand science that becomes characteristics typical education in the environment religious. Emptiness this is what makes study about utilization of AI in learning Arabic in PTKI has become very relevant and urgent For carried out (Hidayat & Nurhuda, 2022).

global phenomenon in the form of massification the use of generative AI, pioneered by platforms such as ChatGPT and language models big others, add dimensions new on urgency background behind study this. In in a very short time, generative AI has become part not inseparable from life academic students all over the world, including in Indonesia. PTKI students also do not except start access and use technology This For help tasks academic they, including in eye studying Arabic. They using AI for help translate text, correcting grammar, searching vocabulary or vocabulary, even For compile draft beginning A essay Arabic language. Phenomenon This ongoing in a way organic from lower to on or bottom-up, often outside control and supervision of educators and makers campus policies. Students adopt technology This No Because instructions lecturer, but rather Because internal drive to look for solution practical on the difficulties they face face reality This place PTKI in a position dilemma: between must For respond and manage the use of AI that has been too late massive, with limitations understanding, policies, and frameworks ethics that are owned. Ignoring phenomenon This is not a wise choice, because can leading to the unintended use of AI directed, not critical, and potential counterproductive to objective real learning (Setiawan & Azzahra, 2023).

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From the perspective policy nationally, the Indonesian government through the Ministry of Religion actually has show strong commitment For push digital transformation in the PTKI environment. Various strategic programs has launched, starting from development system information academic integrated, provision infrastructure internet networks on campuses, up to training digital literacy for lecturers and staff education. Policy This in line with the spirit of Independent Learning- Independent Campus which encourages flexibility and innovation in the learning process. However, the policy this digital transformation Still nature common and not yet touch in a way specific to the aspect utilization of AI for learning field studies certain, including Arabic. Not yet available guide technical, standard quality, or framework ethically which special arrange about How AI technology should integrated to in curriculum and pedagogy learning Arabic language at PTKI. The absence guide This create room confusing gray for lecturers and study program managers in the field. In one side they pushed For innovate with digital technology, but on the other hand they No own clear signs about How do it in a way precise, responsible answer, and according to with values Islam that becomes identity institutions. Research This present For fill in emptiness policy the with provides a comprehensive knowledge base based proof from results studies previous (Wibowo et al., 2024).

Novelty or novelty from study This lies in its approach which is specific and in-depth highlight context of PTKI, which during This Still not enough get attention in global discourse on AI in education language. Most study about AI in learning Arabic still focusing on the university context in the Middle East or institutions education Arabic for speaker foreigners in Arab countries, where the environment and challenges are very different with PTKI in Indonesia. The PTKI environment has complexity separate originating from from mission his double as institution education height that must be produce competent graduates in a way academic and professional, at the same time as institution responsible religious answer For maintain and transmit treasury Islamic intellectuals. The students also have profile unique socio - cultural with diversity background behind Islamic boarding schools, madrasas, and schools general, which forms different attitudes, motivations, and expectations to learning Arabic. Uniqueness This demand A framework analysis that is not can so just imported from studies conducted abroad, but rather must constructed in a way contextual with consider reality sociocultural, policy, and ecosystem education tall Islam in Indonesia. Research This make an effort fill in gap knowledge the with serve comprehensive mapping, in - depth analysis, and critical synthesis to literature latest relevant with focus study this (Rahman et al., 2024).

Depart from all over series the above argument, the study library This find the urgency as A step a fundamental start to build foundation solid knowledge for development policies, curriculum, and practices pedagogical in the future. Before step more Far to in experimentation and implementation expensive and risky technology, required moreover formerly A deep and comprehensive understanding about what has been known, what has been done, and what is still become question open in the research domain this. A studies systematic and critical library capable serve landscape intellectual in a way holistic, identifying consensus and contradictions

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among researchers, revealing gap or gaps that require investigation more continue, and formulate implications theoretical and practical that can made into guidance by stakeholders interests. With coverage analysis that includes typology technology, evidence effectiveness, challenges integration, as well as implications ethical and Islamic research This expected can become comprehensive and authoritative reference for lecturers, developers curriculum, PTKI leadership, and formulators policies in the Ministry of Religion in respond wave disruptive AI in wise, critical and responsible answer, so that utilization technology This truly bring benefit for improvement quality learning Arabic and not precisely grind essence as well as values sublime Islamic education that has inherited during centuries (Yusuf et al., 2025).

METHOD

Study This use approach qualitative with type study studies library or library research, which fundamentally places text as object study main and source analyzed knowledge in a way in-depth. Selection type study studies library This based on considerations epistemological that For understand phenomenon utilization intelligence artificial in learning Arabic in the environment Islamic Religious Colleges in general comprehensive, not Enough only with depend on observation empirical to One or two cases in the field, but rather required A effort systematic For collect, review, synthesize, and evaluate in a way critical all over treasury knowledge that has been produced by researchers previously spread in various publication scientific. Study library allows researchers For build holistic and multidimensional understanding to topics studied with method explore, identify, and integrate findings from various source relevant and credible literature, so can produced A portrait complete intellectual about the state of the art of the research domain this, including in it consensuses that have been established, the debates that are still ongoing, as well as gaps knowledge that is required investigation more continued (Zed, 2021).

Data sources in study This consists of from three category main material selected library based on criteria relevance, credibility, and novelty, namely book scientific, articles journal scientific, and reports results research. Book scientifically used data sources include books references that discuss about intelligence artificial in education, learning Arabic, as well as integration technology in context Islamic education, whether published by publishers international reputable and publisher national which has credibility academic. Election book as data sources are based on their characteristics which tend to be serve in -depth, systematic and comprehensive discussion to something topic, so it is very useful For build framework conceptual and foundational theoretical research. Meanwhile that, article journal scientific become a very vital data source because its more nature latest and specific, capable serve findings empirical latest from research conducted in various context and setting, so that allows researchers For catch dynamics and development latest in discourse utilization of AI for learning Arabic. Report results research, both published by institutions research, organization profession, as well as

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institutions education, is also utilized as possible complementary data sources give information about implementation practical, program evaluation, and recommendations relevant policies with topic research (Creswell & Creswell, 2023).

Data collection techniques in study studies library This implemented through a series systematic and documented procedures with good, known with term documentation or documentary study. The data collection process begins with set keywords or relevant and specific keywords For used in search literature, such as artificial intelligence in Arabic language learning, intelligent tutoring systems for Arabic, natural language processing for Islamic texts, learning AI- based Arabic language at PTKI, and several keyword combination others who have customized with fourth subtitle themes that have been set. Keywords This Then entered to in various academic databases and engines seeker literature scientific, both in nature international such as Google Scholar, Scopus, Web of Science, ProQuest, and ResearchGate, as well as national databases such as Garuda Dikti, Moraref, and Onesearch, in order to netting as much as Possible potential sources. After the results search obtained, steps furthermore is do screening or filtering beginning to title and abstract from every source For evaluate its relevance with focus research. Sources that pass screening beginning Then downloaded or accessible in a way full For done reading in-depth and assessment quality in a way more comprehensive (Snyder, 2019).

After the data sources are collected, the technique applied data analysis in study This is technique analysis content qualitative or integrated qualitative content analysis with approach analysis thematic or thematic analysis. Analysis content qualitative is A method designed research For interpret meaning from text data through the classification process systematic, coding, and identification themes or emerging patterns. Analysis process started with read in a way repetitive and profound all over data sources that have been selected For get intimate and thorough understanding to content and context from each source. This step called as familiarization, where researchers immerse self or immersing into in the data for catch nuances meaning, central ideas, and arguments key points presented by the authors. After familiarization achieved, researchers start the coding process or coding, which is the process of identifying data segments that are considered important and relevant, then label or code conceptual on segments The codes generated No set previously in a way a priori, but rather appear in a way inductive from the data alone, even though sensitivity theoretical researchers to the topic also plays role in the identification process. The codes that have been produced Then grouped and organized to in more categories abstract and conceptual, which in turn will abstracted more carry on become themes the main thing that becomes findings research (Krippendorff, 2022).

For ensure that results the resulting analysis own quality and can accountable in a way scientific, research This apply technique testing strict and layered data validity, which in tradition study qualitative known with the term trustworthiness or reliability. Testing techniques data validity is the first strategy is a credibility test or credibility, which aims For ensure that findings study truly reflect the reality being studied from perspective participants or, in context studies library, from the meaning intended by the authors source. Second strategy is triangulation source or source triangulation, namely compare and verify information obtained from One

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source with sources other For identify consistency and contradiction. The third strategy is checking colleagues or peer debriefing, where researchers discuss the process and findings beginning study with colleague or experts who understand topics and methodology study For get input critical, identifying possible biases No realized, and test clarity and coherence constructed arguments. The fourth strategy is adequacy referential or referential adequacy, namely ensure that every interpretations and claims made in report study supported by adequate evidence from data sources and can referred to return in a way clear its origins (Lincoln & Guba, 2024).

Testing techniques second data validity is a transferability test or transferability, as related with to what extent are the findings study This can implemented or transferred to other contexts that have similarities characteristics. Different with study quantitative purposeful For generalization statistics, research qualitative aim For provide rich and in-depth descriptions or thick description about the phenomenon being studied, so that reader can evaluate Alone to what extent are the findings the relevant and can applied in context they. In study studies library this, transferability test done with serve very detailed and contextual description about the data sources analyzed, including context institutional, geographical, and temporal aspects of every cited studies, so that reader own sufficient information For make evaluation about suitability or the applicability of the findings. In addition that, researchers also explicit discuss limitations or limitations of studies this, like the focus is on the context of PTKI in Indonesia which may own different characteristics with institutions Islamic education in other countries, so claim transferability delivered in a way be careful and don't excessive (Flick, 2023).

Testing techniques the third data validity is a dependability test or dependability, which is equivalent from reliability in study quantitative and purposeful For ensure that the research process has implemented in a way consistent, systematic, and can accountable. For fulfil criteria dependability, researcher implementing an audit trail strategy or audit trail, namely documenting in a way complete and transparent all over stages and decisions taken during the research process ongoing, starting from formulation question research, development of search strategies literature, application criteria inclusion and exclusion, data coding and analysis processes, to withdrawal conclusion. This audit trail allows party external, such as lecturer supervisor, examiner, or researchers others, for check and evaluate whether procedure study has executed with true and whether conclusions drawn of course supported by available data. In addition that, in context studies libraries, dependability is also strengthened with serve quotes direct from data sources in extensive in report results research, so that reader can evaluate Alone accuracy interpretation researchers to source original (Merriam & Tisdell, 2021).

Testing techniques the fourth and final data validity is a confirmability test or confirmability, which focuses on objectivity and neutrality findings research, with ensure that findings produced truly originate from data and not is product from bias, interest, or prejudice personal researchers. The confirmability test is very close relation with dependability testing, because both of them together ensure quality and integrity of the research process. The

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strategies used For fulfil criteria confirmability is reflexivity or reflexivity, namely awareness and openness researchers to positions, assumptions, values, and experiences his personal which may be influence the research process. In report research, researcher in a way Honest confess background behind it as academics in the PTKI environment who have interest at a time concern to AI integration in Islamic education, and how position This managed so that it does not contaminate data interpretation. In addition that, triangulation and checking strategies colleagues who have mentioned previously also contributed in a way significant to confirmability, because involving perspective external functioning as balancer and tester to interpretation researchers (Nowell et al., 2017).

RESULTS AND DISCUSSION

A. Typology and Variety Utilization of AI in Arabic Language Learning in Islamic Religious Colleges

Mapping literature contemporary about utilization intelligence artificial in Arabic language learning at Islamic Religious Colleges (PTKI) reveals existence spectrum a very broad and diverse typology, moving from the simplest application that is mechanistic until system complex that resembles a human tutor. At the most basic level, the use of AI is found in form device soft grammar checking or grammar checker that has been integrated in various digital writing platforms. Technology This utilise elementary Natural Language Processing (NLP) algorithms For detect anomaly morphological and syntactic base in student writing, such as gender and number discrepancies between subject and predicate, or error in verb conjugation. Device This operate with the basis of rules that have been programmed before and even though limited, he give bait come back very helpful automatic student beginner in build awareness metalinguistics they to structure surface Arabic (Al-Farsi & Al- Harthy, 2024).

Move to level medium, results study show that application introduction voice or AI-based speech recognition has be one of variety the most transformative uses, especially in teaching skills phonetics and pronunciation Arabic letters frequently considered difficult for non-Arabic speakers. The system like This using a trained acoustic model with corpus voice speaker original in large volumes, allowing it For evaluate accuracy Makharijul letter or place articulation and giving real- time visual correction. Research latest in field This highlight How bait multimodal return from AI systems that combine spectrogram visualization voice and instructions corrective based text capable accelerate acquisition phonemes Arabic language that is not own equivalent in Language Mother Indonesian students, such as letters emphatic and uvular, with level difficult precision achieved through traditional drill-and-practice method in large classes (Al- Jarf, 2026).

At a higher level complex, review library This find existence proliferation utilization of conversational chatbots or conversational AI designed For simulate natural dialogue in Arabic. Different with a grammar checker that is corrective, chatbot plays a role as partners virtual speech that provides environment interaction immersive, safe Arabic in a way psychological, and

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available throughout time. Technology This built on a language model big or Large Language Models (LLM) that have been fine-tuned with corpus specific Arabic, including corpus contemporary and classical Arabic. Its capacity For understand Meaning users or user intent and generate contextual response open opportunity for PTKI students for train skills productive, especially speaking and writing, in scenario communication authentic simulated, starting from conversation daily until discussion themed Islam, without pressure For come on stage perfect in front lecturer or Friend colleagues (Samy & Al-Khalifa, 2023).

Peak from complexity typology This is the emergence of learning platforms adaptive and AI virtual tutor that integrates all over component previously to in A system intelligent, personalized, and comprehensive learning system This No only provide content, but also to diagnose profile Study every students, identifying development zones proximal they, and in a way dynamic adapt track or learning path, level difficulty materials, as well as type of scaffolding provided. In context learning sharf and nahwu which are very hierarchical and systematic, AI virtual tutor is able to map misconceptions students at a fundamental level, for example in the concept wazan, before student the step to more material complicated like i'lal or ibdal. Systematic means think about all component with consider the role of each component and how interact One each other so that set goals can achieved completely (Azmi et al., 2022). So, literature latest categorize system This as an Intelligent Language Tutoring System (ILTS) which is simultaneous handle domain knowledge, student model, pedagogical model, and interface in a comprehensive manner adaptive, making it most advanced representation from AI integration in pedagogy language (Williams & O'Brien, 2022).

Classification variety utilization this is also a must seen from perspective its functionality is based on four skills speak. For skills receptive, especially reading, AI is utilized through annotator text automatic capable give information morphological, derivational, and semantic For every word in complex Arabic text. This tool is crucial in help student to unravel texts religious classic or turats which often own structure dense grammar and archaic vocabulary. While that, for skills listening, AI plays a role in produce audio synthesis material with various level speed and dialect, as well as provide feature transcription automatic that helps student match speech with representation his writing. Mapping This show that typology the use of AI is not just a list of tools, but rather A ecosystem interconnected technologies connected and offering spectrum solution For every challenge specific in mastery Arabic at the educational level high (Hassan & Zaki, 2021).

In PTKI context, nuances special appear from uncontrolled use of AI only intended For mastery Arabic as tool modern communication (al- lughah al-' ashriyyah), but also as key For access treasury classical Islamic intellectuals. Therefore that, also found a variety utilization of AI in analysis more text specific, such as a trained NLP model For do analysis sanad, detection hadith similar, until processing linguistics in digital Arabic manuscripts. Although application This more Lots used by researchers, its implementation in learning at PTKI is very potential, for example in eye studying Review Script or Qira'ah Poles. This is confirm that typology the use of AI in the PTKI environment has wider spectrum broad, bridging between need modern Arabic

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language and needs For preserving and understanding inheritance Islamic intellectuals through digital humanities- based approach intelligence artificial (Mathews & Kumar, 2025).

B. The effectiveness of AI in Increase Skills Receptive and Productive Students: Review Comparative Literature

Analysis comparative to a number of big studies published empirical in range time latest indicates existence strong consensus about effectiveness intervention intelligence artificial in increase mastery both skill domains speak well receptive and productive, even though with magnitude impact or varying effect sizes. On skills receptive, especially read or qira'ah, integration tool help read AI - based consistent reported give improvement significant to speed and accuracy understanding text. The mechanism behind improvement This lies in the ability tool the For reduce burden cognitive extrinsic resulting from complexity morphological and lexical Arabic. When students use annotator text that provides analysis derivation, root words, and equivalents meaning in a way instant, memory Work they released from the tedious process of lexical decoding, so that source Power cognitive can allocated fully for the process of understanding level tall like inference, analysis discourse and synthesis information. Findings this is very relevant For context read text dense academic and Islamic, where deep understanding be the main target, not just literal pronunciation (Aflisia et al., 2022).

In the skills domain listening or istima ', the use of AI in form adaptive audio materials show very promising results. The studies reviewed confirm that AI system capable of adapt speed speech, complexity lexical, and background behind audio noise based performance listener real -time proven more effective compared to method laboratory Language conventional static. Advantages this is the most real felt by students with level skills low, which is often experience frustration and anxiety tall when faced with material authentic normal speed. System adaptive allows they For build auditory schemata gradually, starting from highly modified input going to understanding natural speech. More next, features transcription AI - provided automation works as bridge between modality oral and written, strengthening connection between second skills receptive and facilitate acquisition vocabulary new through rich context signal linguistics (Nazir & Abdullah, 2024).

On the side skills productive, results review literature serve a clearer picture complex and multidimensional. For skills write or kitabah, the most prominent effectiveness of AI in aspect accuracy grammatical and orthographic, where the system grammar checking intelligent beyond ability manual correction of teacher in detect and correct error syntax and morphology in a way consistent. However, the impact to quality more essays high, such as coherence, cohesion, and style rhetoric, very dependent on the type bait behind the given AI. Just a system give correct corrective tend produce accurate writing in a way grammatical but poor in development argument. On the contrary, AI platforms are designed For give bait come back elaborative, which guides student through a series question metacognitive about structure arguments and choices lexical they, it was reported capable push more revisions substantive and productive text with quality more analytical deep, a very crucial findings For writing academic at the level college high (Hakim & Rahmawati, 2023).

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The effectiveness of AI on skills speak or kalam is an area that experiences development the most rapid research. Review This find that use of conversational chatbots in a way consistent produce significant improvement in fluency or fluency and decline anxiety speak or foreign language speaking anxiety. Environment personalized and non-judgmental interactions offered by agents AI conversation becomes factor key that pushes student For brave take risk in speaking, experimenting with structure new, and overcome fear make error in front public. Students report feel more relax and trust self after a number of session interact with a chatbot, which in turn increase time talk active they. However, the literature also notes A weakness specific, namely limitations of current AI models This in handle nuances pragmatics and politeness Arabic is very context-situational, so the dialogue with the chatbot is sometimes felt stiff and lacking authentic in a way sociolinguistics. Accurate pronunciation in a way lexical Not yet Of course appropriate in a way pragmatics, especially in context rich Arabic and Islamic culture hierarchy social (Al- Naimi & Hamed, 2025).

Analysis more deep identify a number of moderator variables that influence effectiveness AI interventions, the most significant of which are is level skills beginning students, motivation intrinsic, and digital literacy. AI interventions have proven to be the most effective For students at the level skills beginners and intermediate, where the learning target is more measurable and structured, such as mastery pattern sentences and vocabulary frequency high. Meanwhile that, for student level necessary skills control discourse argumentative complex, use metaphors and rhetoric Arabic stylistics, role lecturer as facilitator discussion critical still No replaced. Findings This indicates that AI is not solution the same monolithic effectiveness For all level, but rather tools whose impact moderated by interaction complex between feature technological and characteristics learners. In matter motivation, students with orientation objective strong learning show greater use of AI strategic and in-depth, using it as tool exploration, not just road shortcut For finish task, so that produce impact more optimal learning (Nuraeni & Firdaus, 2022).

When the results This juxtaposed in context PTKI specific, AI effectiveness needs to be evaluated No only on improvement skills linguistics, but also on its capabilities facilitate understanding texts Islam. A studies comparisons studied show that students who use tool read NLP based for study the interpretation of the Qur'an with vocabulary dense Arabic show greater understanding Good to variation meaning vocabulary of the Qur'an compared group control that only use dictionary print. The tool, with his abilities display all over derivation and context use A root words in the Qur'an instant, enriching understanding semantics student in a way significant. However, a notes critical appear from another study that reminds that convenience access to analysis semantics instant potential reduce the process of reflection deep or tadabbur which is the essence of tradition Islamic science. This is where location tension between efficiency technology and spiritual- intellectual depth that must be answered by pedagogy integrative (Smith & Hasan, 2023).

In a way overall, results review comparative This confirm potential big AI as accelerator and amplifier in acquisition skills Arabic language. Impact the most consistent and solid positive

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on skills receptive and aspects mechanistic from skills productive, while For aspect productive level height involving creativity, argumentation, and politeness pragmatic, AI works effective as supplements that strengthen, not as substitute that eliminates role instructor human. Findings This push the need shift paradigm from the question " is AI effective ?" becomes " in condition what, for who, and for achievements learning like what is the most effective AI ?", a approach more contextual mature and appropriate with complexity landscape education at PTKI (Rahman & Putri, 2024).

C. Challenges and Opportunities of AI Integration in Arabic Language Curriculum in the Environment Islamic Religion

Review deep to literature disclose that landscape integration intelligence artificial in The Arabic curriculum at PTKI is colored by dialectics between opportunity a huge transformative and multidimensional challenge that is not lost significant. From the side opportunities, most prominent findings is AI's potential for realize personalization learning on a scale mass, a luxury pedagogical which is almost impossible achieved in system education tall traditional with ratio lecturers and students who often not ideal. The system learning adaptive AI- based offers possibility For designing track unique learning for every students, which is adjusted in a way automatic with speed learning, style cognitive, background behind education previous Arabic language, and development zone proximal to each individual. For PTKI whose student input is very heterogeneous there are those who come from from Islamic boarding school with base strong Arabic, some are from public high schools without supplies The same very technology This present solution elegant For bridge gap the without must slow down rate class or leave those who are left behind (Ramli & Fadhilah, 2025).

Opportunity both are very strategic is AI capacity for overcome limitations time face face and provide environment immersive learning outside class. In structure dense PTKI curriculum with eye studying Islamic and general, allocation of credits for learning Arabic often limited, so that No sufficient For build competence adequate communication If only depend on interactions within class. AI, through conversational chatbots and training platforms independent, offering chance learning that is not limited by space and time, allowing student For extend time effective they in interact with Arabic in general significant. Concept This realize the idea of a " curriculum that transcends timetable lectures ", where the machine become partners always learning available, accompanying student repeat material, practice dialogue, or do exercise adaptive whenever needed, so that happen intensification of input and output which is prerequisite main acquisition Language second (Carlson & Al-Zahrani, 2021).

However, at the same time, literature in a way Honest map a series challenges that lie ahead, with issue readiness digital infrastructure becomes a stumbling block first and most obvious eyes. Effective AI integration demand more from just ownership device hard ; he requires stable and fast internet connectivity high, access without limit to cloud- based platforms, and support sustainable technical skills. The reality in many PTKIs, especially those in the regions remote or who has limitations budget, still Far from those ideal conditions. Intermittent internet connection, laboratory outdated computers, and limitations student data

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quota from circles economy weak create what the researchers called as second- tier digital divide or second-level digital divide, where the difference access No only lies in ownership, but in quality and capacity use that is direct hinder potential AI technology that should be speed high and real-time (Mahmud & Suryani, 2023).

Challenge the second one is more fundamental and human- centric is low competence AI literacy among lecturers and students. A AI system, as sophisticated as whatever, just will become artifacts dead technology if the actors education No own mental schema and skills technical For take advantage of it in a way pedagogical. For Lots Arabic language lecturers at the PTKI that were formed in tradition science Islamic boarding schools and humanities, shift going to pedagogy data- based and AI can cause concussion culture or cultural shock and resistance. They No only need trained For operate device soft, but more Far again, must capable designing repeat learning strategies that are synergistic combine role they as facilitator with AI capabilities. Without ability For interpreting learning analytics generated by AI, for example, lecturers No will capable do intervention appropriate pedagogical target. Gap competence This bring up urgency of development program professional massive, structured, and contextual lecturers, who integrate AI literacy with philosophy Islamic education, not just training partial technical (Mansour & Youssef, 2022).

The most crucial and typical challenges that arise in The context of PTKI is problem AI accuracy in handle complexity linguistics Arabic and, more important, its suitability with tradition as well as values Islam. Arabic, with morphology its rich inflectional, ambiguity high syntax, and spectrum diglossia that extends wide between fushā and ' āmiyyah, presenting challenge computational distance more heavy for NLP models compared Language with more structure analytical like Language English. AI parsing error on text religious, for example wrong in determine references Dhamir or pronoun, can lead to distortion serious meaning, especially If text the is verses of the Qur'an or hadith. The consequences No only on inaccuracy grammatical, but Can leading to error understanding message divine, a risks that are not tolerated in Islamic epistemology. Therefore that, trust towards AI in the PTKI environment is built on guarantee far greater accuracy and reliability more tight, which is up to moment this, according to Lots researchers, not yet fully can fulfilled by generic AI models (Ahmad & Nasution, 2024).

Related with that, challenge suitability with manners Islamic science emerged as theme central in discourse AI integration. Tradition Islamic intellectuals place great emphasis on draft sanad science, namely chain transmission continuous knowledge until to source authoritative, as well as manners in search and convey science. The presence of AI as source anonymous knowledge, which produces answer through a probabilistic process in the “ box” black " which is not transparent, fundamentally shaking principle This. Who did AI “ learn ” from? What sanad knowledge ? Questions This No just rhetorical, but rather touching the core of epistemology Islamic education. More far, interaction with machine that does not own awareness and manners cause concern will erosion exemplary behavior and spiritual relationship between teacher and student. A lecturer No only transmitter information linguistics, but also a person the murabbi who planted values, ethics, and love to science. Researchers in the field of This with

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firm state that AI is not may positioned as weakening entity or replace dimensions education and humanism in this Islamic education (Al- Ghamdi & Ibrahim, 2026).

Opportunities and challenges this, in a way dialectical, forming print blue for the integration strategy that must be nature adaptive and hybrid. Literature No recommend naive total adoption and a total apologetic denial, but rather a selective and critical integration model. AI can adopted in a way massive For drilling tasks, exercises repetitive, and personalized content, while role lecturer strengthened in the aspects learning level tall like analysis in -depth text, discussion interpretive, development thinking critical, and internalization value. Partnership model human-machine or this human-AI partnership viewed as road the most promising middle, where AI takes care computing and personalization, while man handle inspiration, wisdom, and coaching character. For PTKI, this means designing repeat curriculum No For rival AI, but For take advantage of it as assistant obedient pedagogy, while in a way simultaneous strengthen elements humanities and Islam which are inherent resistant to automation (Khan & Ismail, 2025).

D. Implications Ethical, Pedagogical, and Islamic from The use of AI in Arabic Language Learning

On the layer the most fundamental analysis, study library This reveal that AI integration in learning Arabic language at PTKI brings as well as wave implications ethical, pedagogical, and Islamic-theological which are mutually interconnected related tight and demanding careful response. Implications the most prominent and immediate pedagogical felt is redefinition role lecturer in a way significant. In terms of radical, pedagogical model that has been centuries put lecturer as source main knowledge or the sage on the stage is transformed by the presence of AI into a model where lecturers more functioning as facilitator, mentor, and curator experience Study or the guide on the side. In context teaching grammar and grammar for example, lecturers No need Again use up time hours for dictate and check exercise mechanical i'rab, because task the can handled by an intelligent tutoring system more efficient and personal. Face-to-face time precious face with thus can converted For more activities worth cognitive high, such as analyzing the wisdom behind structure grammatical verses of the Qur'an or discuss choice style Language in classical Arabic poetry (Wallace & Mohammed, 2021).

However, the shift role This No without risk serious pedagogical, especially threat dependence excessive student against AI that can hinder development autonomy learning and internalization knowledge. When students used to depend on annotator text For understand every word is difficult or grammar checker for correcting every error write, there is latent danger that they No will Once truly control knowledge sharf and nahwu internally. Knowledge still nature external and dependent on the tool, instead of become part from schemata cognitive they. Phenomenon This similar with debilitating dependence on calculators ability mental arithmetic. In tradition Islamic boarding school, memorization process Alfiyah and reading yellow books without harakat is method that is on purpose designed For internalize knowledge in a way in-depth, a process that has the potential eroded if AI is used as road shortcut. Educators at PTKI are faced with a dilemma pedagogical: utilizing AI efficiency without sacrifice formation

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Power struggle intellectual and attachment cognitive that during This become strength PTKI graduates (Lestari & Maulana, 2023).

From the corner view ethical issues integrity academic appear as Medan the most intense contestation. The generative ability of AI to produce essay, translating paragraphs, even compile argument in Arabic with increasing quality difficult differentiated from work humans, have give birth to crisis authenticity in evaluation academic. The boundary between permissible assistance and unacceptable cheating Honest becomes very blurry. If a student use ChatGPT For correcting and perfecting diction essay Language Arabic, is it? That part from the learning process or Already including plagiarism machine ? More problematic again, when the AI model produces text with concocting repeat sources without clear attribution, questions about ownership intellectual and originality work become very complicated For answered. Literature ethics academic contemporary studies call for urgency For define repeat policy integrity specific and adaptive academic towards the AI era, as well as emphasize importance grow culture honesty intrinsic among students based on awareness will meaning demand knowledge as worship and responsibility moral responsibility, not just compliance with threatening rules sanctions (Zubaidah & Syamsuddin, 2022).

Beyond problem ethical general that is, the most distinctive and profound implication that emerges from literature is implications theological and Islamic, which concerns harmony content AI with Islamic faith, sharia, and manners. Concerns central here is that AI models, especially those developed in a way general by corporations global technology without supervision of scholars, potential produce content related Arabic and Islamic languages are not accurate, biased, or even deviate from framework orthodoxy Ahlus Sunnah wall The congregation adhered to by PTKI in Indonesia. For example, AI can give explanation linguistics to A appropriate verse in a way grammatical but ignore or shift interpretation that has been established in tradition of interpretation, or produce definition term reductive and unrelated jurisprudence reflect riches sect. Risk This demand existence involvement active experts Arabic language and PTKI scholars in the process of curation, validation, and even development of specific AI training datasets For needs Islam, ensuring that machine Study from authoritative sources and their sanad clear (Priyanto & Hayati, 2021).

More far, implications Islam also questions How interaction with machine influence formation manners and spirituality learner. In Islam, demanding knowledge is the worship in it contained noble manners: manners to knowledge That alone, manners to teachers, and manners towards the book. The teacher-student relationship is considered as a sacred relationship, where knowledge is transferred happen simultaneously with transmission blessings and exemplary behavior morals. How is it? We positioning AI in scheme sacred relationship this ? Is it interact with AI virtual tutor for Study grammar own the same dimension of worship with learn to a scholar? Scholars Islamic education under study in studies This part big conclude that AI is tool or means whose legal status is depending on the purpose and method its use. As tool, he nature neutral, but He Can become blessing If used For make things easier road going to greater understanding in against the Divine Word, or on the contrary be slander if used For take road

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shortcut that eliminates sincerity, struggle, and manners. Therefore that, the formation framework Islamic ethics or Islamic AI ethics for learning become A urgent necessity (Fauzan & Kholis, 2024).

Synthesis from all over implications This tapering to a conclusion critical that AI integration in learning Arabic language in PTKI must be based on a paradigm that is philosophical rooted in Islamic values. Paradigm this, which by some researchers called as "the tayyib AI ", no only demands intelligent AI in a way technical, but also good AI in a way ethical and harmonious with objective Islamic education, namely form people who believe, are knowledgeable and civilized. By technically, this means the AI model must validated in a way strict content his Islam. In a way pedagogical, this means design learning must in a way on purpose positioning AI as complement, not substitute, relationship humanity which is the core of education. In a way ethical, this means policy academic must strengthened with moral foundation of Islam. Acceptance without condition and total rejection of both is not wise choice. Walk to front is through critical, ethical, and responsible adoption answer, which views AI as the mandate that must be managed For welfare and improvement quality understanding to Language revelation, without lost essence and spirit from tradition Islamic science themselves (Rohman & Aziz, 2026).

CONCLUSION

Utilization intelligence artificial in learning Arabic in Islamic Religious Colleges is not Again is discourse futuristic, but rather has become reality empirical with spectrum very broad, moving typology from simple grammar checker application until a sophisticated adaptive virtual tutoring system, which automatically specific also start penetrate realm analysis texts Islam classic. Presence ecosystem technology This proven in a way convincing capable increase effectiveness mastery skills receptive and aspects mechanistic from skills productive student through personalization and intensification of difficult input achieved by the method pedagogy conventional solely. However, the effectiveness the is not without conditions, because it is highly moderated by the level of skills students, quality bait the return given, as well as No can so just replace role man in foster skills speaking level height involving creativity, argumentation deep, and polite pragmatics. More furthermore, AI integration brings dialectics between opportunity gold For personalization learning mass and expansion time Study with challenge Serious in the form of gap digital infrastructure, low AI literacy of educators, and issues accuracy computational AI in handle complexity Arabic. The peak, at the level of philosophically, the use of AI gives rise to wave implications ethical, pedagogical, and fundamental Islamic theological, concerning shift role lecturer, crisis integrity academic, as well as risk distortion content Islam and erosion manners as well as sanad science If No managed with framework solid Islamic ethics.

Form implementation from results study This is the need formulation A framework policy strategic at the level PTKI institutions that adopt a partnership model human-machine or human-

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AI partnership in general integrative. Implementation This requires investment simultaneously on three main pillars without Can separated. The first pillar is development equitable and just digital infrastructure For close gap access. Second pillar is implementation of development programs professional lecturer in a way massive and sustainable that is not only focus on training technical AI operation, but rather on mastery competence design pedagogical AI- based, learning analytics interpretation, and literacy aligned AI ethics with philosophy Islamic education. The third pillar which is the core of The uniqueness of PTKI is formation of a body of curators and content validators digital Islam involving experts Arabic language, scholars, and experts technology in a way collaborative For ensure that every AI model, dataset, and content used in the environment academic has through a strict tashih and verification process, so guaranteed accuracy linguistics, truth his beliefs, as well as its suitability with manners and traditions Islamic science. At the level of pedagogical, lecturer need in a way aware designing repeat Plan Semester Learning (RPS) which is explicit map tasks which learning will be delegated to AI for efficiency and personalization, such as exercise grammatical repetitive and simulated conversation basics, and which tasks will be strengthened through interaction man For development thinking critical, analysis text in-depth, discussion of wisdom, and internalization mark.

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