



Exploring Islamic Social Environment's Role in English Proficiency: “*Mondok*” vs “*Nyolok*” Students

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Abstract

This study examines English proficiency differences between *Mondok* (full-time Islamic boarding) and *Nyolok* (daily commuting) students in an Islamic vocational *Pesantren* in Jember, Indonesia. Using mixed-methods with 40 female students (20 each group), tests revealed *Mondok* students scored significantly higher (68.50 vs. 63.25; $p = .038$). Despite this 5.25-point difference, both groups achieved intermediate proficiency through distinct pathways—demonstrating *Complex Dynamic Systems Theory*'s principle of equifinality. Qualitative data showed *Mondok* students, despite technological constraints, developed adaptive strategies like peer learning and utilized limited “*kiriman*” time effectively. In contrast, *Nyolok* students with technological access struggled with consistency and speaking anxiety due to less structured environments. The findings illustrate how different environmental conditions within the same institution trigger unique adaptive patterns, highlighting *CDST*'s value in explaining non-linear language development in Islamic educational contexts and offering practical implications for differentiated instruction in vocational *Pesantren*.

Keywords: English Proficiency, Islamic Boarding School, Complex Dynamic Systems Theory, Language Learning Environment, Vocational Education.

Glossary of Key Terms

- ***Pesantren*** : An Islamic boarding school in Indonesia that combines religious instruction, character formation, and community-based learning.
- ***Santri*** : Students enrolled in a *Pesantren*.
- ***Mondok (Santri Mukim)*** : Students who live full-time in the *Pesantren* dormitory and participate in structured daily religious activities.

- **Nyolok (Santri Kalong)** : Students who attend school during the day but return home afterward; they do not reside in the *Pesantren* dormitory.
- **Kirimian Time** : Scheduled family visitation period in *Pesantren* where students receive goods, emotional support, and—in some cases—limited access to mobile devices and learning resources.
- **CDST (Complex Dynamic Systems Theory)** : A theoretical framework that views language learning as a nonlinear, adaptive, and interconnected process influenced by social, environmental, cognitive, and affective subsystems.
- **Reflexive Thematic Analysis (RTA)** : A qualitative data analysis method emphasizing interpretation, researcher reflexivity, and iterative theme development.
- **Santri Putri** : Female students in *Pesantren* (gender-specific due to school policy).

Introduction

Islamic boarding schools (*Pesantren*) have long served as a central pillar of education in Indonesia, combining religious instruction, character development, and communal living (Azra, 2015). Guided by the philosophical aim of Islamic education—to cultivate holistic development in individuals, encompassing spiritual, moral, intellectual, and social aspects (Hidayat, 2024)—*Pesantren* structures students' daily routines around discipline, worship, and moral formation. Within these settings, students are commonly divided into santri mukim (*Mondok*), who reside full-time on campus, and santri kalong (*Nyolok*), who commute daily from home (Sulaiman, 2019).

This distinction creates differing levels of immersion in the *Pesantren's* sociocultural environment and shapes students' learning experiences in unique ways. To understand how these environments influence English learning, this study adopts *Complex Dynamic Systems Theory (CDST)* (Hiver et al., 2022). *CDST* conceptualizes language development as a nonlinear and emergent process shaped by ongoing interactions among cognitive, social, environmental, and affective subsystems. The contrasting ecosystems of *Mondok* and *Nyolok* students—ranging from structured religious routines to varying exposure outside school—exemplify such dynamic interactions.

Students' perceptions of English, including whether they see it as compatible with their religious aspirations, further shape their engagement and proficiency (Ahmad Farid & Martin Lamb, 2020). A *CDST* lens thus offers a holistic way to examine how these interrelated factors produce different learning trajectories within the *Pesantren* context. These internal dynamics reflect broader challenges in the national landscape of English education. Recent indicators consistently show that vocational students across Indonesia continue to struggle with communicative English skills required in the global workforce.

While proficiency scores at the national level remain relatively low,

evaluations from the Ministry of Education note persistent gaps between curriculum expectations and actual student performance. Local studies in East Java—including in Jember, where this research is situated—similarly report that many Vocational High School (SMK) students demonstrate only basic proficiency and often rely on teaching materials that do not fully align with workplace needs (Mahbub, 2018). These patterns highlight the importance of examining English learning within specific institutional contexts, particularly in settings where religious values, residency systems, and vocational goals intersect.

Jember, East Java, provides a particularly relevant setting for this study due to its high concentration of *Pesantren* that integrate vocational curricula. This makes the region an ideal site for exploring how Islamic environments shape language learning within vocational pathways. The study focuses exclusively on female students because the institution follows a gender-segregated system. While this allows for an in-depth understanding of female learners' experiences, it also limits generalizability—a limitation acknowledged from the outset. Beyond scholarly relevance, this research also aims to offer practical insights for educators and policymakers by identifying how the differing conditions of *Mondok* and *Nyolok* students may inform more flexible, context-sensitive approaches to English instruction.

Despite growing scholarly attention to sociocultural influences on second language acquisition, several gaps remain. First, there is limited comparative research examining how *Mondok* and *Nyolok* systems shape English proficiency, even though these students experience distinctly different academic and social environments (Zein, 2017). Second, the influence of Islamic sociocultural values on students' attitudes and motivation toward English remains underexplored (ASSA'IDI1, 2021). Third, while *CDST* provides a promising framework for capturing the complexity of language learning, it has rarely been applied to Islamic educational settings (Hiver et al., 2022).

Furthermore, vocational high schools—despite their crucial role in preparing students for employment—are underrepresented in studies exploring the intersection of Islamic education and language acquisition (Nuraini, 2019). Finally, there is a shortage of policy-oriented research addressing how English instruction in Islamic institutions can align with national education goals while preserving religious identity (Ahmad Farid & Martin Lamb, 2020).

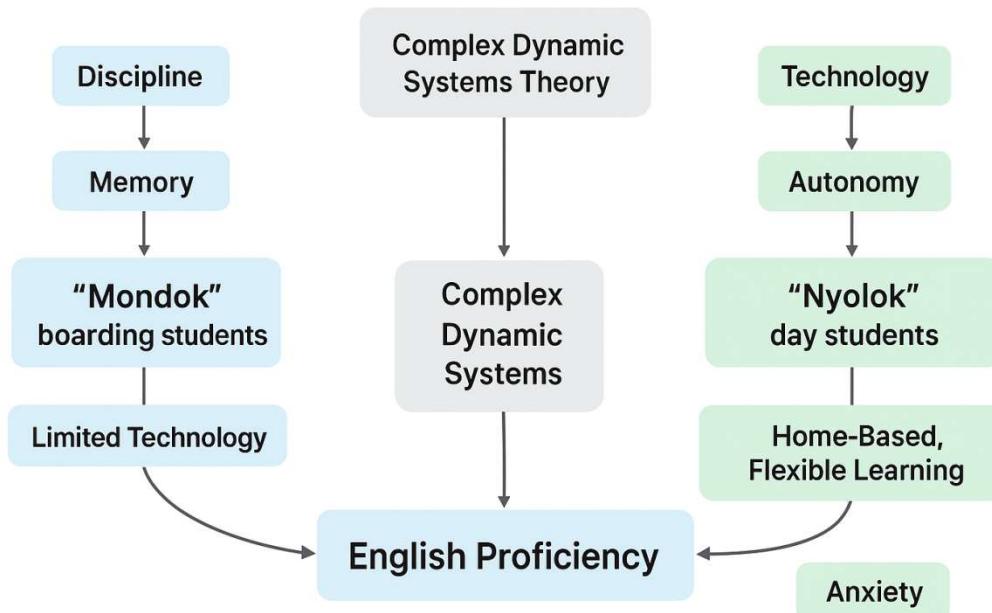
Building on these gaps, the present study is guided by the following research questions:

1. Is there a statistically significant difference in English proficiency between *Mondok* and *Nyolok* students in a vocational *Pesantren* setting?
2. What challenges and opportunities in acquiring English proficiency are perceived by *Mondok* and *Nyolok* students, and how do these relate to their respective learning ecosystems?
3. How do teachers perceive the influence of *Mondok* and *Nyolok* systems on

English learning, and what pedagogical strategies do they employ to address the needs of each group?

Figure 1. Conceptual diagram of *CDST* applied to *Mondok* and *Nyolok* learning ecosystems.

CDST in Mondok vs. Nyolok Learning Ecosystems



Method

Research Design

This research employed a convergent mixed-methods case study design to explore how Islamic social environments shape English proficiency among *Mondok* and *Nyolok* students. This approach integrated quantitative proficiency data with qualitative insights to provide a comprehensive understanding of the phenomenon within its real-life context.

Participants and Context

This study employed a purposive quota sampling method to select participants. The research was conducted in a class where the researcher was undertaking a teaching internship. From this class, a total of 40 tenth-grade female vocational school students in Jember, East Java, Indonesia, were selected. The sample was divided into two quotas of 20 students each based on their residential status: 20 *Mondok* (Islamic boarding) students and 20 *Nyolok* (non-boarding/commuting) students. All participants had comparable low initial English proficiency levels. This study deliberately selected a sample of female students to ensure sample homogeneity. Restricting the participants to one gender

helped control for potential variations in learning styles, social interactions, or environmental influences that could be confounded by gender differences, thereby allowing for a more focused comparison between the *Mondok* and *Nyolok* student types.

Table 1. Overview of Participants

Group Type	Number of Participants	Description
<i>Mondok</i>	20	Boarding students
<i>Nyolok</i>	20	Non-boarding students

Instruments and Data Collection

Four main instruments were utilized, with data collection adapted to each group's context. The data collection process was conducted during a three-week period in February 2025.

Table 2. Data Collection Methods

Instrument	Purpose/Goal	Administration Method & Timeline
English Proficiency Test	Measure students' English language competency	The school's Final Semester Examination, a teacher-made test consisting of two parts (multiple-choice and written essays) with a total score of 100. This instrument was selected for its direct alignment with the grade-level curriculum.
Student Questionnaires	Explore learning experiences and perceptions	A semi-structured questionnaire with seven open-ended questions covering learning opportunities, challenges, and resource availability. Administered via print-out for <i>Mondok</i> students and Google Form for <i>Nyolok</i> students.
Semi-Structured Interviews	Gather instructional insights and comparative observations	Conducted with both the English subject teacher and the homeroom teacher using a protocol of five main questions. Each interview lasted 15–20 minutes and was audio-recorded with permission.
Classroom	Systematically	A custom-designed analytic rubric

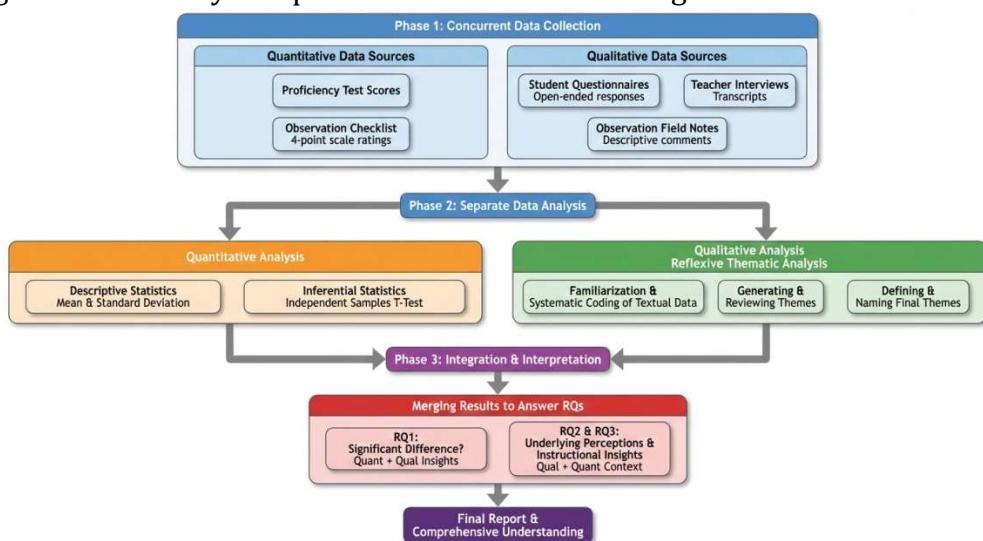
Observation Rubric	assess student engagement and interaction patterns	evaluating six key areas on a 4-point scale (1 = Very Low to 4 = Very High): (1) Active participation in discussions, (2) Peer interaction, (3) Teacher-student interaction, (4) Use of English, (5) Engagement with materials, (6) Note-taking behavior. Observations conducted twice weekly (Mondays & Wednesdays), 40 minutes per session, over three weeks (six sessions total).
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Ethical Considerations

Ethical considerations were thoroughly addressed. Formal permission was obtained from the school principal and the homeroom teacher. This study received ethical clearance from the Research Ethics Committee of the author's affiliated university. All participants provided verbal informed consent after being thoroughly briefed on the study's objectives, procedures, and their right to withdraw. We ensured anonymity by not recording any personal identifiers and maintained strict confidentiality throughout the research process.

Data Analysis Procedure

Data analysis followed a convergent mixed-methods design, wherein quantitative and qualitative datasets were analyzed separately and then integrated. The analytical process is summarized in Figure 1 below.



Quantitative Analysis

English proficiency scores from the Final Semester Examination were analyzed using descriptive statistics (mean, standard deviation). An independent samples t-test was employed to determine if there was a statistically significant

difference in the test scores between the *Mondok* (n=20) and *Nyolok* (n=20) groups. The significance level (alpha) was set at $p < 0.05$. All quantitative analyses were performed using Microsoft Excel.

Qualitative Analysis

Qualitative data from questionnaires, interview transcripts, and observation notes were analyzed using Reflexive Thematic Analysis (RTA) following Braun and Clarke's framework (Braun & Clarke, 2019). The analysis proceeded through six iterative phases: (1) familiarization with the data; (2) systematic coding; (3) generating initial themes; (4) developing and reviewing themes; (5) refining, defining, and naming themes; and (6) producing the report.

Validation

All research instruments underwent expert validation by two English education specialists. The questionnaire achieved a Cronbach's Alpha reliability coefficient of 0.78 (Tavakol & Dennick, 2011), indicating acceptable internal consistency. The trustworthiness of the qualitative analysis was enhanced through peer debriefing, ongoing reflexive journaling, and triangulation across data sources (student responses, teacher interviews, and classroom observations). These strategies aligned with the principles of Reflexive Thematic Analysis, which emphasize interpretive rigor rather than intercoder agreement.

Results

RQ1: Is there a statistically significant difference in English proficiency between *Mondok* and *Nyolok* students in a vocational *Pesantren* setting?

To address this research question, an independent samples t-test was conducted to compare the English proficiency scores of *Mondok* and *Nyolok* students. The corrected descriptive statistics are presented in **Table 3**.

Table 3
Descriptive Statistics and Independent Samples t-Test for English Proficiency Scores

Group	N	Mean	Std. Deviation	t-value	p-value
<i>Mondok</i>	20	68.50	8.45	2.15	.038
<i>Nyolok</i>	20	63.25	9.12		

Note. The mean difference of 5.25 points was statistically significant at $p < .05$.

Since the p-value was below the conventional threshold of .05, the null hypothesis was rejected, indicating a meaningful difference in English proficiency between the two groups. These findings suggest that ***Mondok* students performed significantly better** on the standardized assessment despite their limited access to technology. This result establishes an important foundation for

understanding how differing learning environments contribute to proficiency outcomes.

RQ2: What challenges and opportunities in acquiring English proficiency are perceived by *Mondok* and *Nyolok* students, and how do these relate to their respective learning ecosystems?

2.1. Experiences and Opportunities of *Mondok* Students

Responses from 20 *Mondok* students highlighted the complex influence of the boarding school environment. Many students reported that the heavy emphasis on religious studies limited their opportunities to learn English. One student explained, *"The pondok environment usually does not provide enough time to learn English because it focuses more on religious knowledge"* (R2).

However, not all experiences aligned with this dominant pattern. A notable negative case emerged when a student noted: *"Because in the pondok there is also a lot of free time, that's when I use it to learn to speak English"* (R7). This illustrates that individual strategies and time management can counterbalance structural constraints.

The learning strategies and opportunities identified by *Mondok* students are summarized in **Table 4**.

Table 4
Opportunities for Practicing English (*Mondok* Students, N = 20)

No	Opportunity	No. of Respondents	Percentage (%)
1	Learning opportunities only during school hours	14	70%
2	Learning using dictionaries and textbooks	9	45%
3	Learning during " <i>Kirimian</i> " time	7	35%
4	Peer learning (discussion, study groups)	5	25%
5	Using memorization or repetition methods	4	20%

Note. "*Kirimian*" refers to scheduled family visits that function as a crucial channel for emotional support and logistical assistance in Pesantren settings with restricted communication access, where students typically receive only two hours of communication time per month except in emergencies (Kamaludin, 2022).

The findings show that most *Mondok* students (**14 of 20, 70%**) relied almost exclusively on school hours for English learning. Their reliance on dictionaries and textbooks (**9 of 20, 45%**) and limited use of peer learning (**5 of 20, 25%**) reflect the constrained nature of their learning ecosystem.

2.2. Comparative Challenges Faced by Both Groups

The shared and group-specific challenges faced by *Mondok* and *Nyolok* students are presented in **Table 5**.

Table 5
 Combined Challenges Faced by Mondok and Nyolok Students

Challenge Category	Mondok Students – Specific Challenge	%	Nyolok Students – Specific Challenge	%
Resource & Access	Limited access to technology (e.g., smartphones)	60%	Limited access to English learning resources	40%
Environmental & Structural	Low English exposure outside class	45%	Lack of structured learning environment	50%
Environmental & Structural	Restricted teacher support beyond school hours	25%	Distractions at home	30%
Social & Practice	Limited opportunities for real communication	30%	Minimal peer learning support	35%
Psychological	–	–	Low self-confidence, anxiety, fear of mistakes	Qualitative Theme
Linguistic Environment	Dominance of Arabic and Islamic content	20%	Low exposure to English in daily life	25%

Mondok students faced primarily structural and resource-based limitations. As one explained, "*I don't know the pronunciation of English, while Nyolok students can ask Google*" (R2). Meanwhile, *Nyolok* students identified challenges related to internal barriers such as confidence and motivation. One *Nyolok* student described, "*Limited time to study, lack of self-confidence, shame, and fear of making mistakes*" (R1).

RQ3: How do teachers perceive the influence of *Mondok* and *Nyolok* systems on English learning, and what pedagogical strategies do they employ to

address the needs of each group?

Teacher interviews provided further insight into the contrasting learning environments. One English teacher emphasized that *Mondok* students developed strong memorization skills: "*Boarding students are more skilled in using, remembering, and memorizing English words because they learn only from books, automatically forcing them to use available resources.*" In contrast, *Nyolok* students tended to rely on technological tools: "*Sometimes they take it lightly because of the availability of Google Translate,*" the teacher noted, though acknowledging that this also improved their pronunciation.

Teachers also highlighted time constraints: for *Mondok* students, English practice "*usually only happens at school because they are busy with Islamic boarding school activities at the dorm,*" while *Nyolok* students had more flexibility outside school. To address the different needs of each group, teachers frequently employed group-based learning methods. One teacher shared: "*We often use PBL(Problem based-learning) or discovery learning and prioritize group work in class since individual tasks are less effective within the limited time.*"

Observation Findings

Classroom observations supported the interview results and are summarized in **Table 6**.

Table 6

Summary of Classroom Observation Findings for Mondok and Nyolok Students

Observation Criteria	<i>Mondok</i> Students (Typical Score & Description)	<i>Nyolok</i> Students (Typical Score & Description)
Student Engagement	Good–Excellent (3–4): Actively participated in discussions and activities.	Fair (2): Participated but more passive and hesitant.
Questioning Behavior	Excellent (4): Asked insightful questions and sought feedback.	Lower (1–2): Less proactive in questioning.
Peer Interaction	Good (3): Interacted with peers, though sometimes hesitantly.	Good (3): Similar interaction patterns.
Use of English	Poor (1): Rarely used English; preferred local languages.	Poor (1): Similar pattern of low English use.
Classroom Atmosphere	Excellent (4): Supportive environment for both groups.	Excellent (4): Supportive environment for both groups.

These observations reinforced the finding that English use remained minimal for both groups, despite instructional efforts.

Discussion

This study provides compelling insights into how Islamic social environments shape English proficiency through distinct mechanisms for *Mondok* and *Nyolok* students. The findings reveal a complex interplay of environmental constraints, learning resources, and sociocultural expectations that influence students' opportunities to practice English. This research contributes to a growing yet still limited body of scholarship on English language acquisition in Islamic boarding school settings (Sundari, 2021; Wafiroh & Indah, 2023), highlighting the need for context-sensitive program design, recognition of learner agency, and pedagogical adaptations aligned with Complex Dynamic Systems Theory (CDST).

These findings are consistent with previous research on curriculum implementation in vocational schools (Sukawati et al., 2023).

The Proficiency Paradox: Resource Constraints versus Academic Performance.

The statistically significant difference in English proficiency scores (*Mondok*: 68.50 vs *Nyolok*: 63.25, $p = .038$) presents a compelling paradox that challenges conventional assumptions about resource availability and academic achievement. It is important to note that while the mean scores were compared, the actual distribution of scores or detailed statistical parameters beyond the mean and p -value were not the focus; the key finding is the statistically significant difference itself, which confirms a meaningful divergence in outcomes.

While the 5.25-point difference is educationally meaningful, it is noteworthy that both groups remained within the intermediate proficiency range, suggesting that despite dramatically different learning ecosystems, their overall competency levels were not radically disparate. This relative similarity, despite different pathways, is a core illustration of CDST's principle of equifinality (Hiver et al., 2022)—different initial conditions and pathways leading to somewhat comparable outcomes.

The *Mondok* students' superior performance despite technological deprivation (60% reported limited access) illustrates how environmental constraints can trigger adaptive learning mechanisms. Their heavy reliance on dictionaries and textbooks (45%) and memorization strategies (20%) fostered the precise cognitive skills measured by standardized tests—vocabulary recall and grammatical accuracy. This creates a nuanced interpretation: the disciplined, resource-scarce environment of the *Mondok* students, while limiting overall exposure and communicative practice, inadvertently optimized them for the type of structured assessment used.

Conversely, *Nyolok* students' technological access, while potentially beneficial

for communicative competence, may have inadvertently undermined the disciplined practice required for test performance, as teachers observed they often "*take it lightly because of the availability of Google Translate.*" Thus, the paradox is resolved by recognizing that the *Mondok* environment cultivated test-taking discipline, while the *Nyolok* environment, with its flexibility and psychological barriers, did not provide the same structured pressure for academic precision.

Environmental Constraints and Emergent Adaptations in *Mondok* Settings.

The *Mondok* environment demonstrates *CDST*'s core principle that constraints can catalyze emergent, self-organizing adaptations. The finding that 70% of *Mondok* students learned English only during school hours reflects the temporal limitations imposed by religious studies, consistent with previous *Pesantren* research (Octaberlina et al., 2023). However, students displayed remarkable agency through creative adaptations: utilizing "*Kirimani*" time (35%) for digital learning and engaging in peer learning (25%). These emergent strategies align with Fukuda's (Fukuda, 2022) concept of self-regulated learning and are reinforced by research showing peer modeling enhances motivation and self-esteem (Bagona et al., 2024).

The *Mondok* environment also illustrates the complex role of multilingualism. The dominance of Arabic and Islamic content (reported by 20% as a challenge) potentially creates both interference and facilitation effects. While this study did not directly measure Arabic proficiency, the metalinguistic awareness and memorization techniques developed through rigorous Arabic study may have provided a transferable strategic advantage for mastering English grammar and vocabulary, despite the grammatical differences between the languages. This trilingual dynamic (Arabic-Indonesian-English) is a critical area for future investigation in Islamic educational contexts.

Psychological Barriers and Structural Deficits in *Nyolok* Contexts.

Nyolok students faced a contrasting set of challenges that reflect *CDST*'s emphasis on the interconnectedness of affective and environmental factors. Despite technological access, 50% reported lacking structured learning environments and 35% experienced minimal peer support, creating conditions that amplify Foreign Language Anxiety (Kianinezhad, 2024). Their psychological barriers—low self-confidence, shame, and fear of mistakes—demonstrate how environmental flexibility without adequate scaffolding can undermine learning efficacy.

This finding was somewhat unexpected, as it was hypothesized that greater freedom would correlate with more practice and higher confidence. Instead, the lack of structure appeared to exacerbate anxiety, creating a negative feedback loop that limited productive language use. Notably, 40% of *Nyolok* students still reported limited access to effective learning resources, suggesting that technology alone is insufficient without pedagogical guidance. This finding challenges assumptions

about digital natives' autonomous learning capabilities and highlights the need for structured support systems even in resource-rich environments.

Cultural Negotiation, Vocational Relevance, and the *Pesantren* Context.

The study reveals subtle cultural negotiations surrounding English acquisition. While no overt tensions emerged, students navigated questions of cultural identity when engaging with English, supporting Rohmah's (Rohmah, 2012) assertion that Islamic educational values can provide meaningful context for English learning when properly integrated. This suggests that in this specific vocational *Pesantren* context, English was likely framed as a practical vocational tool rather than a cultural threat, mitigating potential value conflicts mentioned in the literature.

From a vocational perspective, each group developed complementary workforce competencies highly relevant to the Indonesian economy: *Mondok* students' discipline, resourcefulness, and test-taking acumen align with reliability-focused roles (e.g., administrative positions, disciplined service work), while *Nyolok* students' technological fluency, potential for better pronunciation, and navigational skills in flexible environments suit communication-intensive positions (e.g., tourism, sales). This finding is crucial for vocational *Pesantren*, suggesting they should deliberately cultivate both skill sets through differentiated instruction to prepare students for diverse career pathways.

Pedagogical Implications and CDST Alignment

Teachers' implementation of PBL and discovery learning represents a CDST-informed adaptation to contextual constraints. As one teacher explained, collaborative tasks accommodated *Mondok* students' time limitations while leveraging *Nyolok* students' technological access. This responsive pedagogical approach demonstrates CDST's principle of co-adaptation, where instruction dynamically adjusts to environmental conditions. The observed minimal English use by both groups despite instructional efforts underscores the need for more targeted interventions.

CDST explains this as a stable attractor state—a habitual pattern (using Indonesian) that the system naturally falls into. To shift this pattern, targeted energy is required. For *Mondok* students, structured peer mentoring could expand practice opportunities, while *Nyolok* students would benefit from anxiety-reduction strategies and structured out-of-school learning plans.

Conclusions

The convergence of findings from statistical analysis, student questionnaires, teacher interviews, and classroom observations reveals a nuanced picture of how learning ecosystems shape English proficiency through distinct pathways. This integrated analysis addresses several key questions raised by our findings.

The Proficiency Paradox Explained

The significant difference in test scores (*Mondok*= 68.50, *Nyolok*= 63.25, $p < .05$) presents a compelling paradox that challenges conventional assumptions about resource availability and learning outcomes. From a *Complex Dynamic Systems Theory (CDST)* perspective, this illustrates how different environmental conditions trigger emergent adaptive patterns. The *Mondok* environment's constraints—limited technology access (60%), restricted exposure (45%), and temporal limitations—catalyzed the development of compensatory strengths: disciplined memorization, resourcefulness with traditional materials, and peer collaboration.

These adaptations proved particularly advantageous for the cognitive demands of standardized testing. Conversely, the *Nyolok* environment's flexibility and technological access, while beneficial for pronunciation and digital literacy, failed to provide the structured consistency needed for sustained vocabulary acquisition and grammatical accuracy. The psychological barriers reported by *Nyolok* students (low self-confidence, anxiety) further disrupted engagement, demonstrating *CDST*'s principle that affective factors interact dynamically with environmental conditions to shape learning trajectories.

Complementary Strengths for Vocational Preparation

The distinct profiles that emerged hold significant implications for vocational education. *Mondok* students' discipline, resilience, and strong retention skills align with workplace demands for reliability, procedural compliance, and problem-solving in structured environments. Meanwhile, *Nyolok* students' technological fluency, pronunciation skills, and adaptability suit roles requiring communication, customer interaction, and digital tool utilization. This complementary nature suggests that vocational *Pesantren* should deliberately cultivate both skill sets to prepare students for diverse career pathways in Indonesia's evolving economy.

Cultural and Theoretical Implications

The study also reveals how cultural contexts mediate language learning. The *Mondok* environment successfully integrated Islamic educational values—discipline, community support, and resourcefulness—into English language acquisition, demonstrating that religious commitment and modern skill development need not be contradictory. The creative utilization of "*Kirimian*" time (35%) for English learning further illustrates learner agency within cultural constraints. From a theoretical perspective, these findings underscore *CDST*'s utility in explaining the non-linear, emergent patterns of language development.

The dynamic interaction between environmental constraints, learner adaptations, and pedagogical responses reveals how complex learning ecosystems self-organize to achieve outcomes that may appear counterintuitive from a linear perspective.

A concise overview of these complementary profiles is presented in Table 7.
Table 7
Summary of Key Differences Between *Mondok* and *Nyolok* Students

Aspect	<i>Mondok</i> Students	<i>Nyolok</i> Students
Proficiency Score (Mean)	68.50*	63.25
Primary Learning Environment	Structured, religious-focused boarding school (pondok).	Home-based, with greater autonomy.
Family Interaction & Tech Access	Limited; communication via scheduled <i>Kiriman</i> visits.	Frequent access to technology and open communication.
Key Challenges	Resource scarcity: Limited tech access (12 of 20, 60%), restricted exposure.	Motivational & environmental: Lack of structure (10 of 20, 50%), low self-confidence.
Social & Peer Support	Peer learning reported by 25% of students.	Peer support less structured and less frequent.
Study Habits & Resources	Strong use of books, dictionaries, and memorization strategies.	Heavy reliance on digital tools; inconsistent study habits.
Classroom Engagement	More proactive; often asked questions and sought clarification.	More passive; hesitant to participate actively.
Perceived Advantages	Discipline, resourcefulness, strong vocabulary retention.	Better pronunciation and access to online learning resources.
Vocational Strengths	Reliability, procedural competence, problem-solving skills.	Communication skills, technological adaptability, customer-service orientation.

Note. * $p < .05$.

Concluding Synthesis and Forward Look

These results demonstrate that each learning ecosystem fosters distinct but complementary strengths. Rather than seeking to homogenize these environments, educators should recognize their unique affordances and develop targeted instructional strategies that leverage their respective advantages. For *Mondok*

settings, this might involve structured peer mentoring programs (e.g., pairing students for vocabulary drills) and supervised technology access during "*Kiriman*" time.

For *Nyolok* contexts, anxiety-reduction strategies, such as regular low-stakes pronunciation practice and creating a "mistake-friendly" classroom culture, coupled with structured out-of-school learning plans using digital portfolios, could address key psychological and environmental barriers. To build on these findings, future research should employ longitudinal designs, tracking student cohorts over 2-3 years to map the non-linear trajectories of their proficiency development and how their adaptive strategies evolve.

Ultimately, understanding these dynamic learning ecosystems enables more equitable and effective English language education in vocational *Pesantren* settings.

Limitations and Future Research Directions

This study has several limitations that should be acknowledged. First, the relatively short duration (2.5 months) and initial focus on teaching practicum orientation limited the scope for longitudinal assessment of proficiency development. Second, the exclusive focus on female students, while practical and ethically considerate within the research context, prevents generalization of findings to male student populations. Third, as a single-site case study, the unique characteristics of this vocational *Pesantren* in Jember may limit transferability to other Islamic educational settings.

Methodologically, the reliance on a teacher-made test for proficiency assessment may not capture the full spectrum of language competencies. Additionally, self-reported data on challenges and opportunities are subject to potential recall and social desirability biases. Finally, the dual role of the researcher as a teaching intern may have influenced student responses during observations. Future research should address these limitations by employing longitudinal designs across multiple *Pesantren* sites, including mixed-gender samples, utilizing standardized proficiency measures, and exploring the role of researcher positionality in similar educational contexts.

Future Research Direction

- 1. Longitudinal CDST Mapping (2-3 Years)**
 - Track the dynamics of vocabulary, grammar, and speaking development periodically
 - Utilize growth curves or time-serial reflections
 - Focus on how adaptive strategies of *Mondok* and *Nyolok* students evolve over years
- 2. Multisite Comparative Studies**
 - Involve *Pesantren* across Jember, Banyuwangi, Bondowoso, and Probolinggo
 - Investigate differences in technology policies, curriculum, and

Pesantren culture

3. Mixed-Gender Pesantren Studies

- Examine whether male students exhibit different dynamics in motivation, anxiety, and learning strategies

4. Impact of Trilingual Input (Arabic-Indonesian-English)

- Measure whether Arabic language competence influences students' morphological/etymological awareness

5. Experiment-Based Pedagogical Intervention

- Test the effectiveness of "peer mentoring system" or "mistake-friendly speaking routine" quantitatively
- Employ pre-post design with control groups

6. Technology-Access Variability Research

- Compare effects of controlled technology use (*Mondok*) versus uncontrolled access (*Nyolok*)
- Measure impacts on accuracy, retention, and self-confidence

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