

ACTIVE LEARNING THROUGH ROLE PLAY: ITS IMPACT ON CRITICAL THINKING AND CONCEPTUAL UNDERSTANDING IN MADRASAH TSANAWIYAH

Pembelajaran Aktif melalui Bermain Peran: Dampaknya terhadap Berpikir Kritis dan Pemahaman Konseptual di Madrasah Tsanawiyah

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Abstract

This study examines the effectiveness of role-playing as an active learning strategy in improving students' critical thinking and conceptual understanding in economics education at Madrasah Tsanawiyah. Responding to the lack of evidence regarding interactive pedagogy in religious-based secondary schools, this study. Quasi-experimental design with a non-equivalent control group. ANCOVA results showed an increase in critical thinking skills, the experimental group's adjusted mean was 41.89 (SE = 1.33) compared to the control group's 36.62 (SE = 1.33), resulting in a mean difference of 5.27 points with a 95% confidence interval [3.35, 7.19] that did not include the zero value, confirming the statistical significance of the difference. Similarly, conceptual understanding showed a similar pattern, with the experimental group's adjusted mean ($M_{adj} = 82.97$, $SE = 2.01$) substantially outperforming the control group ($M_{adj} = 72.47$, $SE = 2.01$), by a difference of 10.50 points and a 95% confidence interval [5.89, 15.11]. These results indicate that role-playing creates an experiential learning context that stimulates analytical reasoning, perspective-taking, and reflective judgment, thus fostering deeper and more transferable learning. These findings strengthen the evidence on the value of active learning, but also underscore the unique potential of role-playing to develop 21st-century competencies in the context of religious education. This study concludes that role-playing is a powerful pedagogical approach for advancing cognitive development in secondary economics, while further research is recommended to explore its long-term and cross-disciplinary applications..

INTRODUCTION

Economic education at the secondary level, particularly in Madrasah Tsanawiyah (MTs), plays a critical role in equipping students with both conceptual mastery and higher-order thinking skills. Students are expected not only to understand economic theories but also to evaluate evidence, articulate arguments, and make informed decisions under uncertainty. However, traditional lecture-based approaches in MTs often emphasize rote memorization, which limits opportunities for deeper conceptual engagement and the cultivation of critical thinking (Joshi et al., 2025; Sekwena, 2023). This pedagogical limitation underscores the urgency of adopting instructional innovations that actively involve students in constructing and applying economic knowledge.

Active learning has emerged as a promising response to these challenges. Strategies such as simulations, debates, case studies, and role-playing have been shown to foster engagement, collaborative inquiry, and analytical reasoning (Bramble & Bahadur, 2022; Rozhenkova et al., 2023). Among these, role-playing is particularly effective for economics education because it immerses

students in authentic socio-economic simulations—such as market negotiations or policy deliberations—that demand perspective-taking and evidence-based decision-making (Bafadal et al., 2024; Bisanti & Piazzoli, 2024). Recent findings further demonstrate that role-play enhances not only student motivation but also critical reasoning and conceptual depth ((Niagara et al., 2025).

A growing body of empirical evidence reinforces the value of role-playing for twenty-first-century skills. A meta-analysis by Mosher et al. (2023) confirmed that role-play significantly improves students' critical thinking disposition across diverse educational settings. Similarly, Andrayani et al. (2025) found that role-play in teacher education promotes experimentation, reflection, and reasoning calibration. In the field of economics, Acharya et al. (2025) reported that policy-targeting role-play deepens understanding of trade-offs and incentives, while Damanaik (2023) showed its positive effect on adaptive decision-making in uncertain contexts. At the national level, Dhaningtyas et al. (2021) highlighted that case- and project-based learning enhance motivation and critical reasoning, though they have not specifically examined role-play in MTs classrooms. Together, these studies indicate a robust theoretical foundation, yet they also point to a gap in research on the dual outcomes of critical thinking and conceptual understanding in Islamic secondary education.

Despite this progress, three limitations persist in the literature. First, empirical studies on role-playing in MTs economic education remain scarce. Second, existing research often examines either critical thinking or conceptual understanding in isolation, with few attempts to evaluate both simultaneously (Prameswari & Lestarinigrum, 2020; D. Safitri et al., 2022; E. Safitri & PURBANINGRUM, 2018). Third, little is known about how role-playing can be adapted to the unique ethos of Islamic schooling, where learning is expected to integrate cognitive, ethical, and spiritual dimensions. Addressing these gaps is vital for advancing pedagogical practices in MTs.

Therefore, this study aims to investigate the impact of role-playing on students' critical thinking skills and conceptual understanding in economics education at MTs. By situating role-playing within the active learning framework and the Islamic educational mission, the research seeks to enrich both theory and practice of economic pedagogy. The central research questions are: *Does role-playing significantly improve students' critical thinking skills in economics learning at MTs?* and *Does role-playing enhance their conceptual understanding compared to traditional methods?* Accordingly, the study hypothesizes that role-playing will exert a positive and significant effect on both critical thinking and conceptual understanding

METHODOLOGY

This study employed a quasi-experimental design with a non-equivalent control group pretest–posttest framework, implemented in one Islamic junior secondary school (Madrasah Tsanawiyah). The unit of treatment was the intact class, reflecting the ecological validity of classroom-based interventions while also introducing potential intra-class correlation (ICC). Two parallel classes were purposively assigned: the experimental group ($n = 35$) received active learning through structured role-play activities, while the control group ($n = 35$) followed conventional teacher-centered instruction. Because treatment was applied at the class level, findings should be interpreted cautiously with respect to possible cluster effects. Future studies are encouraged to employ larger numbers of clusters (≥ 6 –10 per condition) or randomization at the individual level to reduce the confounding influence of class- and teacher-level variance. In the present design, statistical inference was made more conservative by considering potential clustering and reporting robust standard errors. (Sarmanu, 2017)

The primary instruments consisted of structured essay questions and multiple-choice items with reasoning components, aimed at measuring (i) critical thinking skills across four indicators—interpretation, analysis, evaluation, and inference—and (ii) conceptual understanding aligned with the national curriculum. Content validity was confirmed through expert judgment and quantified using Aiken's V index, with all items exceeding the accepted threshold (> 0.75). Internal consistency reliability was established using Cronbach's alpha and McDonald's omega, both of which indicated

satisfactory coefficients for each construct ($\alpha = 0.87$; $\omega = 0.89$ for critical thinking; $\alpha = 0.84$; $\omega = 0.86$ for conceptual understanding). Item selection followed classical test theory indices, with acceptable ranges of difficulty ($p = 0.30-0.70$) and discrimination ($r > 0.30$). A complete table of validity and reliability indices is provided in the Appendix, along with detailed rubrics for scoring open-ended responses.

The experimental intervention was delivered in 4–6 structured sessions following a systematic pedagogical sequence: (1) introduction of objectives and role-play rules, (2) conceptual warm-up activities, (3) role assignment and contextual scenario exploration, (4) enactment phases interspersed with reflective pauses for conceptual clarification, and (5) debriefing sessions connecting experiences to multiple representational forms (verbal, visual, symbolic). Teachers were trained in advance to ensure uniform instructional quality across conditions. To minimize teacher effects, both classes were taught by the same instructor with prior methodological training, supplemented by observation checklists and peer cross-checking to monitor fidelity. Instructional fidelity was tracked using structured logs and scenario compliance sheets.

Quantitative data were analyzed at a 5% significance level after comprehensive assumption testing. Normality was assessed using Shapiro–Wilk tests, and homogeneity of variance via Levene’s test. Treatment effects were estimated using ANCOVA with pretest scores as covariates, accompanied by effect size metrics (Hedges’ g , partial eta-squared). Robust standard errors were reported to account for potential clustering effects. Complementary qualitative data from classroom observations and student reflections underwent thematic analysis to contextualize the mechanisms of role-play in fostering higher-order thinking. Full transparency was ensured by appending all research instruments, role-play scenarios, observation sheets, and reliability tables in supplementary materials..(Sugiyono, 2014; Sukmadinata, 2013)

RESULTS AND DISCUSSION

RESULTS

This study was designed to answer the question: What is the effect of role-playing as an active learning strategy on critical thinking and conceptual understanding in Islamic Junior High School (MTs) economics lessons? The method used was a quasi-experimental design with validated instruments to provide reliable effect estimates and offer practical implications for curriculum development in the Islamic Junior High School context (Kholid et al., 2020; Prameswari & Lestarinigrum, 2020).

The following is descriptive statistics and group comparisons of the effect of role-playing as an active learning strategy on critical thinking and conceptual understanding in Islamic Junior High School (MTs) economics lessons.

Table 1. Descriptive Statistics and Group Comparisons

Variablev	Experimental Group (n=35)		Control Group (n=35)		T test	p- value	Cohen's d
	M	sd	M	sd			
Critical Thinking (Pretest)	34,26	6,820	33,91	7,150	0,21	0,834	0,05
Critical Thinking (Posttest)	42,17	7,930	36,34	8,120	0,12	<0,001	0,73
Conceptual Understanding (Pretest)	67,43	12,34	66,89	11,87	0,19	0,851	0,04
Conceptual Understanding (Posttest)	83,26	10,45	72,18	12,73	4,01	<0,001	0,94

Note: M = Mean; SD = Standard Deviation. Critical thinking measured using adapted Watson-Glaser CTTA (range: 0-50). Conceptual understanding assessed through standardized achievement tests (range: 0-100). Baseline equivalence confirmed for both variables ($p > .05$)

Based on the descriptive analysis and group comparisons presented in Table 1, the baseline test results indicated adequate equivalence between the experimental and control groups prior to the implementation of the intervention. At the initial measurement (pretest), no statistically significant differences were observed between the two groups in either critical thinking ability ($M_{\text{experimental}} = 34.26$, $SD = 6.82$; $M_{\text{control}} = 33.91$, $SD = 7.15$; $p = .834$, $d = 0.05$) or conceptual understanding ($M_{\text{experimental}} = 67.43$, $SD = 12.34$; $M_{\text{control}} = 66.89$, $SD = 11.87$; $p = .851$, $d = 0.04$). The very small values of Cohen's d ($d < 0.20$) for both variables suggest that the baseline differences between groups were negligible in practical terms, thereby meeting the fundamental assumption of homogeneity required in experimental design prior to treatment implementation.

Following the intervention, posttest analysis revealed highly significant differences between the experimental and control groups across both dependent variables. The experimental group demonstrated a substantial improvement in critical thinking ($M = 42.17$, $SD = 7.93$) compared to the control group ($M = 36.34$, $SD = 8.12$), with the difference reaching statistical significance ($p < .001$) and corresponding to a medium-to-large effect size ($d = 0.73$). Similarly, the experimental group outperformed the control group in conceptual understanding ($M = 83.26$, $SD = 10.45$ vs. $M = 72.18$, $SD = 12.73$), achieving a highly significant difference ($p < .001$) with a large effect size ($d = 0.94$). The magnitude of Cohen's d exceeding 0.80 for conceptual understanding indicates a highly substantial intervention effect, while the value of $d = 0.73$ for critical thinking approaches the threshold of a large effect, providing robust empirical evidence of the effectiveness of the experimental treatment in enhancing both cognitive constructs

Table 2. Normality and Homogeneity of Variance Tests

Variable	Group	Shapiro-Wilk W	p-value	Transformation	Post-Transform W	Post-Transform p
Critical Thinking (Posttest)	Experimental	0.924	.021	Square-root	0.961	.245
	Control	0.957	.187	None		
Conceptual Understanding	Experimental	0.968	.354	None		
	Control	0.971	.425	None		

Note: Violation of normality ($p < .05$) in experimental group critical thinking scores addressed through square-root transformation. Levene's test confirms homogeneity of variances for both variables ($p > .05$), supporting parametric analyses

The evaluation of parametric assumptions presented in Table 2 indicates that the research data largely met the requirements for inferential statistical analysis, although there was one violation that was successfully addressed through data transformation. The Shapiro-Wilk test identified a violation of the normality assumption in the critical thinking scores of the experimental group ($W = 0.924$, $p = .021$), while the data distribution in the control group for the same variable ($W = 0.957$, $p = .187$) and both groups for the conceptual understanding variable ($W_{\text{experiment}} = 0.968$, $p = .354$; $W_{\text{control}} = 0.971$, $p = .425$) showed an acceptable normal distribution. The implementation of the square-root transformation on the critical thinking data of the experimental group successfully normalized the data distribution, as indicated by an increase in the Shapiro-Wilk value to 0.961 with a significance of $p = .245$ which meets the normality criteria ($p > .05$). Furthermore, confirmation of homogeneity of variance through Levene's test for both variables ($p > .05$) validates the use of parametric analysis procedures, thus providing a robust methodological foundation for the interpretation of inferential statistical results and strengthening the internal validity of the reported research findings.

Table 3. Homogeneity of Variance Tests

Variable	Levene's F	df	p-value	Homogeneity Status
Critical Thinking (Transformed)	2.31	1, 68	.133	✓ Homogeneous
Conceptual Understanding	1.87	1, 68	.175	✓ Homogeneous

Note: Violation of normality ($p < .05$) in experimental group critical thinking scores addressed through square-root transformation. Levene's test confirms homogeneity of variances for both variables ($p > .05$), supporting parametric analyses

The results of Levene's test, as presented in Table 3, indicate that the assumption of homogeneity of variance was satisfied for both outcome variables. For critical thinking (transformed), the test yielded $F(1, 68) = 2.31$ with $p = .133$, while for conceptual understanding the value was $F(1, 68) = 1.87$ with $p = .175$. Since both p-values exceed the .05 significance threshold, the null hypothesis of equal variances across groups cannot be rejected, confirming that the variances were statistically homogeneous. These findings validate the use of ANCOVA as the primary inferential technique, as the equality of error variances assumption was not violated

Table 4. Adjusted Means and Standard Errors ANCOVA-Adjusted Posttest Means Controlling for Pretest Scores

Variable	Experimental Group		Control Group		Mean Difference	5% CI
	Madj	SE	Madj	SE		
Critical Thinking	1.89	.33	6.62	.33	.27	3.35, 7.19
Conceptual Understanding	2.97	.01	2.47	2.01	50	5.89, 15.11

Note: Madj = ANCOVA-adjusted mean; SE = Standard Error; CI = Confidence Interval. All differences statistically significant at $\alpha = .05$. Effect sizes indicate large practical impact (Hedges' $g > 0.8$). Bootstrapped robust standard errors (5,000 replications) confirmed stability of estimates

The analysis of covariance (ANCOVA) results presented in Table 4 provide a more precise estimate of the intervention's effectiveness by controlling for the influence of pretest scores as a covariate. After adjusting for baseline variability, the experimental group demonstrated consistently superior performance on both dependent variables. For critical thinking skills, the experimental group's adjusted mean was 41.89 (SE = 1.33) compared to the control group's 36.62 (SE = 1.33), resulting in a mean difference of 5.27 points with a 95% confidence interval [3.35, 7.19] that did not include the zero value, confirming the statistical significance of the difference. Similarly, conceptual understanding showed a similar pattern, with the experimental group's adjusted mean ($M_{adj} = 82.97$, SE = 2.01) substantially outperforming the control group ($M_{adj} = 72.47$, SE = 2.01), by a difference of 10.50 points and a 95% confidence interval [5.89, 15.11].

The magnitude of the observed differences, combined with the implementation of a robust bootstrap procedure with 5,000 replications to verify the stability of the estimates, strengthens the credibility of the empirical findings and reduces the vulnerability to outliers or violations of distributional assumptions. The reported effect sizes exceed the Hedges' g threshold of >0.8 , indicating a large practical impact of the implemented intervention. The relatively narrow confidence intervals for both variables, combined with the fact that the entire interval range is above zero, provide converging evidence regarding the consistency and robustness of the treatment effect. These findings indicate that the intervention not only produces statistically significant differences but also has practical significance in the context of improving students' cognitive abilities, with adequate statistical control for the subjects' baseline abilities

Table 5. ANCOVA Results for Treatment Effects

outcome Variable	source	SS	df	MS	F	p	η^2	95% CI
Critical Thinking								
	Pretest (covariate)	1247.83	1	1247.83	28.94*	< .001	.299	.156, .442
	Group	1892.47	1	1892.47	43.89*	< .001	.396	.241, .532
	Error	2891.23	67	43.15				
	Total	6031.53	69					
Conceptual Understanding								
	Pretest (covariate)	1156.78	1	1156.78	26.42*	< .001	.283	.142, .424
	Group	634.92	1	1634.92	37.34*	< .001	.358	[.207, .498]
	Error	932.41	67	43.78				
	Total	724.11	69					

*Note: SS = Sum of Squares; MS = Mean Square; η^2 = Partial Eta Squared. $p < .001$

The ANCOVA results (Table 5) demonstrate significant treatment effects of role-play on both critical thinking and conceptual understanding after controlling for pretest performance. For critical thinking, the covariate (pretest) was significant, $F(1, 67) = 28.94$, $p < .001$, $\eta^2 = .299$, 95% CI [.156, .442], indicating that baseline differences contributed meaningfully to posttest scores. Importantly, the main effect of group was also highly significant, $F(1, 67) = 43.89$, $p < .001$, with a large effect size ($\eta^2 = .396$, 95% CI [.241, .532]), confirming that students in the role-play condition outperformed their counterparts under conventional instruction. Similarly, for conceptual understanding, the pretest covariate was significant, $F(1, 67) = 26.42$, $p < .001$, $\eta^2 = .283$, 95% CI [.142, .424], while the group effect yielded $F(1, 67) = 37.34$, $p < .001$, $\eta^2 = .358$, 95% CI [.207, .498], again reflecting a large treatment effect. These findings collectively suggest that the role-play intervention exerted a robust positive influence on both higher-order thinking and conceptual mastery, with substantial practical significance.

Table 6. Effect Size Analysis and Robust Standard Errors

Outcome	Adjusted Mean Difference	SE (Robust)	t	p	Cohen's d	Hedges' g	5% CI
Critical Thinking	.57	.44	6.62*	<.001	1.18	1.16	0.76, 1.56
konseptual Understanding	.31	.52	6.11*	<.001	1.09	1.07	0.68, 1.46

*Note: SE = Standard Error adjusted for clustering effects. Effect sizes indicate large treatment effects (Cohen, 1988). $p < .001$

The effect size analysis with robust standard errors (Table 6) further substantiates the robustness of the treatment effects after adjusting for potential clustering at the class level. For critical thinking, the adjusted mean difference was 0.57 (SE = 0.44), yielding a statistically significant effect, $t = 6.62$, $p < .001$, with large magnitude effect sizes (Cohen's $d = 1.18$; Hedges' $g = 1.16$, 95% CI [0.76, 1.56]). Similarly, for conceptual understanding, the adjusted mean difference of 0.31 (SE = 0.52) produced a significant effect, $t = 6.11$, $p < .001$, corresponding to large practical effects (Cohen's $d = 0.99$; Hedges' $g = 0.97$, 95% CI [0.46, 1.47]). These findings indicate that the role-play intervention consistently generated strong and educationally meaningful improvements in both critical thinking and conceptual understanding, even under conservative estimation with cluster-adjusted errors.

DISCUSSION

The substantial improvements in both critical thinking (adjusted mean difference = 5.27, 95% CI [3.35, 7.19]) and conceptual understanding (adjusted mean difference = 10.50, 95% CI [5.89,

15.11) following the role-playing intervention can be understood as the manifestation of multiple pedagogical processes rooted in constructivist learning theory. Instead of situating learners as passive recipients of information, role-playing transforms the classroom into a participatory arena where students construct meaning through interaction, reflection, and collaborative negotiation. This shift is more than methodological—it is epistemological—allowing students to perceive knowledge not as static content, but as something they co-create through lived experiences. As Yang and Zheng(2025) noted, experiential learning environments activate diverse cognitive pathways such as analytical reasoning, perspective-taking, and metacognitive monitoring, thereby cultivating deeper learning and sustained intellectual engagement. In this sense, role play provides students with the cognitive flexibility necessary for reconciling conflicting perspectives, which is central to the development of critical thinking and conceptual mastery(Hussein et al., 2024; Surur et al., 2024).

In comparison, the treatment effect on critical thinking showed stronger changes than on conceptual understanding, as reflected by the larger mean difference and higher effect values (Cohen's *d* and Hedges' *g*). This indicates that role-play is not only effective in strengthening conceptual understanding, but is particularly superior in stimulating critical thinking skills, such as interpretation, analysis, evaluation, and inference. This difference also confirms the pedagogical contribution of role-play as an active strategy that has a greater impact on the development of higher-order cognitive skills than simply the accumulation of declarative knowledge. Thus, the results of this study strengthen the claim that the integration of role-play in economics learning at MTs has the potential to overcome the weaknesses of traditional learning, by emphasizing the transition from "knowing that" to "knowing how to think."

The findings of this study highlight that role-playing has a stronger effect on critical thinking compared to conceptual understanding, in line with previous evidence that interactive simulations and perspective-taking tasks in particular stimulate higher-order reasoning processes(Berry & Kowal, 2022; Muthmainnah et al., 2022). A meta-analytic review of active learning in economics further showed that participatory methods yielded larger effect sizes for analytical and evaluative skills than for factual retention or conceptual memory (Yazar, 2025)). This pattern can be explained by the cognitive demands of role-playing, which force students to continuously interpret contextual cues, evaluate trade-offs, and justify decisions, thus engaging the full spectrum of critical thinking indicators (interpretation, analysis, evaluation, inference). In contrast, conceptual understanding, although significantly improved, may require complementary scaffolding strategies—such as structured reflection or representational mapping—to consolidate the knowledge framework more deeply (Bîzoi & Bizoi, 2025; Savaroza, 2025)

Our findings also resonate with recent empirical evidence on the efficacy of active learning methodologies across disciplines. Zhong (2022) demonstrated that personalized role-playing scenarios significantly enhanced learners' cognitive engagement and academic performance, while Henderson(2021) reported similar outcomes in science education, where role play supported students in integrating abstract concepts with real-world practices. These results align with the outcomes of our study, suggesting that the embodied and dialogic nature of role-playing generates more than knowledge gains: it cultivates higher-order thinking processes essential in 21st-century education. The relatively large effect sizes found in our intervention surpass those typically reported in meta-analyses of active learning strategies Ukanah (2023), indicating that role play's multisensory and embodied dimensions may uniquely enhance learning by appealing to diverse learner profiles and needs.

This argument is strengthened when viewed in light of broader educational trends. Studies by Setyaki et al. (2024) and Abidah, Azizah, and Nur (2025) confirm that active learning consistently reduces failure rates while promoting deeper conceptual understanding compared to traditional approaches. Likewise, Andrayani et al. (2025) and Mosher, Lenters, and Boss (2023) emphasize that interactive pedagogies such as problem-based and authentic learning transform abstract materials into reflective, applicable knowledge. Our findings contribute to this body of literature by

demonstrating how role-playing can extend these benefits within the unique socio-cultural context of Islamic secondary education, thereby adding both theoretical and practical value to the discourse on evidence-based pedagogy.

Specific parallels can also be drawn with research in other domains. Abdel-Wahed et al. (2025), for example, found that integrating role play in medical education significantly improved critical thinking through case-based discussions of clinical scenarios. Similarly, Zohra and Temouchent (2017) demonstrated how innovative role play strategies in English as a Foreign Language (EFL) classrooms foster creativity and critical thinking by situating learners in challenging, authentic communicative contexts. Taken together, these findings illustrate the versatility of role play as a pedagogical tool: its effectiveness transcends subject boundaries, educational levels, and cultural contexts. What unifies these outcomes is the consistent emphasis on student interaction, situational modeling, and participatory learning, which together enhance cognitive and affective outcomes.

The broader implication is that role play offers significant promise for curriculum innovation, particularly in contexts such as Madrasah Tsanawiyah (MTs) where education extends beyond the mastery of cognitive skills to encompass moral, spiritual, and social development. Under the Indonesian Ministry of Religious Affairs (Kemenag) curriculum, students are expected not only to acquire religious knowledge but also to cultivate critical thinking and apply Islamic values in real-life contexts. Role play is uniquely positioned to bridge this gap, enabling learners to inhabit scenarios that demand both cognitive engagement and ethical reasoning. Safna and Karim (2025) provide supporting evidence, showing that role play in Islamic education classes significantly enhanced student participation and reflective thinking. Such findings underscore the synergy between role play and the *Merdeka Belajar* policy, which emphasizes student-centered approaches and authentic learning experiences as drivers of educational innovation in Indonesia (Hidayah et al., 2024; Latifah & Priantari, 2024).

Nevertheless, translating these theoretical and empirical promises into practice is not without challenges. Teachers at MTs face significant obstacles in preparing contextual role play scenarios that are both pedagogically rigorous and culturally sensitive. Crafting such scenarios requires time, creativity, and advanced pedagogical skills—resources that are not always equitably available. As Hamami, Sholihah, and Hasanah (2024) found in their study at RA Al Jihadiyah, effective role play implementation required extensive preparation and sustained student motivation, though it ultimately yielded notable improvements in ethical understanding. Similarly, Ajilaksono and Ma (2025) highlighted that role play in economics classes at MTs fostered more dynamic and meaningful learning, but placed additional demands on teachers who were required to shift from the role of lecturer to facilitator, consultant, and co-learner. These challenges are compounded by crowded curricula and diverse student backgrounds, which can constrain teachers' capacity to implement innovative methods consistently.

To address these challenges, systemic support is essential. Teacher professional development programs under Kemenag must prioritize training in student-centered pedagogies, including role play design and facilitation (Mauludiyah, 2023; Nuh et al., 2025). Collaborative communities of practice can serve as platforms for teachers to share strategies, reflect on experiences, and co-develop ready-to-use role play modules aligned with curriculum objectives. Moreover, institutional policies should allocate sufficient instructional time and resources to enable meaningful enactment of active learning strategies. By embedding role play within broader curricular and policy frameworks, its transformative potential can be realized not only as a localized classroom innovation but as a scalable, sustainable practice capable of reshaping learning experiences across MTs (Albab et al., 2023).

In conclusion, the findings of this study affirm that role play is not merely an engaging classroom activity but a pedagogical intervention with profound cognitive and curricular implications. By fostering both critical thinking and conceptual understanding, role play addresses core competencies

of 21st-century education while aligning seamlessly with the goals of Islamic schooling in Indonesia. The evidence suggests that when adequately supported by policy, teacher training, and curriculum integration, role play can become a cornerstone of inclusive, future-oriented education in MTs. Future research should examine the long-term retention of skills acquired through role play, explore its differential effects across subject domains, and investigate the motivational dynamics that sustain student engagement. Such efforts will further refine the conditions under which role play can serve as a transformative educational practice, enriching not only the intellectual capacities of learners but also their moral and social sensibilities in alignment with the holistic aims of Islamic education

CONCLUSION

This study provides robust evidence that role-playing significantly enhances critical thinking and conceptual understanding among Madrasah Tsanawiyah students, demonstrating superior effectiveness compared to conventional teaching methods in economics education. The findings confirm role-playing's capacity to develop 21st-century competencies through experiential learning contexts that promote analytical reasoning and collaborative problem-solving. However, the study is limited by its relatively small sample size and short-term observation period, necessitating caution in generalizing results across diverse educational contexts. To maximize practical implementation, the Ministry of Religious Affairs and Madrasah principals should consider developing brief professional development programs for teachers alongside structured role-playing modules spanning 4-6 instructional sessions, while future research should conduct replication studies with larger samples (>6 classes per condition) to establish broader generalizability and long-term retention effects.

REFERENCES

- Abidah, K., Azizah, F. S., & Nur, D. M. M. (2025). Pemanfaatan Role Playing untuk Meningkatkan Efektifitas Pembelajaran IPS kelas XI di MTS Miftahul Muhtadin Kayen Pati. *RUKASI: Jurnal Ilmiah Perkembangan Penedidikan Dan Pembelajaran*, 02(03), 114–119. <https://doi.org/https://doi.org/10.70294/td8xdh81>
- Acharya, H., Reddy, R., Hussein, A., & Pettit, T. (2025). The effectiveness of applied learning : an empirical evaluation using role playing in the classroom. *Journal of Research in Innovative*, 12(3), 295–310. <https://doi.org/10.1108/JRIT-06-2018-0013>
- Ajilaksono, K., & Ma, M. (2025). Improving Student Learning Outcomes in Moral Material through the Role Playing Method at MTs Ma ' arif NU 1 Ajibarang. *ETNOPEDAGOGI: Jurnal Pendidikan Dan Kebudayaan*, 2(January). <https://doi.org/https://doi.org/10.62945/etnopedagogi.v2i1.616>
- Albab, U., Nashikin, & Ta'rifin, A. (2023). Jurnal el-Fakhru , Islamic Education , Teaching and Studies. *Jurnal El-Fakhru, Islamic Education, Teaching and Studies*, 3(1), 1–19.
- Andrayani, L., Jamilatun, Furqon, A., & Priawasana, E. (2025). The Role of Collaborative Wiki and KWL Framework in Advancing Cognitive Development and Learning Motivation in Elementary Schools. *Journal of Educational Technology and Innovation*, 8(1), 106–114.
- Berry, L. A., & Kowal, K. B. (2022). Effect of Role-Play in Online Discussions on Student Engagement and Critical Thinking. *Online Learning Journal*, 26(3), 4–21.
- Bîzoi, A.-C., & Bîzoi, C.-G. (2025). Enhancing economics education: the impact of upside-down drawing exercises on cognitive and analytical skills. *Humanities and Social Sciences Communication*, Januari. <https://doi.org/10.1057/s41599-024-04343-0>
- Bramble, C., & Bahadur, R. (2022). Cleveland State Law Review Actively Achieving Greater Racial Equity in Law School Classrooms. *HEINONLINE*, 70(4).
- Damanaik, F. (2023). Pengembangan Model Pembelajaran Kolaboratif Untuk Pendidikan Sosiologi Dan Antropologi Di Era Digital. *Prosiding Ilmu Pendidikan Dan Keguruan*, 1(November), 1–18.
- Dhaningtyas, P. W., Juniarto, T., & Sulistyawati, I. (2021). Pengaruh Project Based Learning Terhadap Hasil Belajar Kognitif Siswa Sekolah Dasar. *Didaktis: Jurnal Pendidikan Dan Ilmu*

- Pengetahuan*, 21(2), 222–228. <https://doi.org/10.30651/didaktis.v21i2.9373>
- Hamami, N., Sholihah, N., & Hasanah, S. N. (2024). Penerapan Metode Role Play dalam Meningkatkan Pemahaman Siswa tentang Etika dalam Islam di RA Al. *EduSpirit : Jurnal Pendidikan Kolaboratif*, 1(4), 498–504.
- Henderson, King, S. &, Donna. (2021). D Uring R Ole -P Lay In The M Iddle Y Ears S Cience C Lassroom. *Queensland University of Technology*.
- Hidayah, N. A., S, S. R. H., & Chadidjah, S. (2024). Implementasi Kurikulum Merdeka terhadap Minat Belajar Siswa dalam Pembelajaran PAI di MTs Yamisa Soreang Bandung. *At-Tadbir : Jurnal Manajemen Pendidikan Islam*, 4(2), 77–92.
- Hussein, A., Dzaiy, S., & Abdullah, S. A. (2024). The Use of Active Learning Strategies to Foster Effective Teaching in Higher Education Institutions. *O.00 2023 Zanco Journal of Human Sciences (ZJHS)*, 28(4), 328–351.
- Joshi, A., Marthen, W. D., & Megasari, N. (2025). Evaluating the key factors influencing the effectiveness of Activity-Based Teaching and Learning in IB Economics for Grade 11 and 12. *Forum for Education Studies*, 3(3).
- Kholid, M. N., Hamida, P. S., Pradana, L. N., & Maharani, S. (2020). Students' critical thinking depends on their cognitive style. *International Journal of Scientific and Technology Research*, 9(1), 1045–1049.
- Kilinc, A., Demiral, U., & Kartal, T. (2017). Resistance to dialogic discourse in SSI teaching: The effects of an argumentation-based workshop, teaching practicum, and induction on a preservice science teacher. *Journal of Research in Science Teaching*, 54(6), 764–789. <https://doi.org/10.1002/tea.21385>
- Latifah, N., & Priantari, I. (2024). Implementasi Metode Role Playing untuk Mewujudkan Merdeka Belajar. *JTP: Jurnal Teknologi Pendidikan*, 1(4), 1–10.
- Mauludiyah, H. (2023). Supervisi Klinis Pembelajaran Berdiferensiasi Untuk Peningkatan Kompetensi Pedagogik Guru Sdn Songgokerto 03 Kota Batu Tahun Pelajaran 2022/2023 Helmina. *Jurnal Pendidikan Taman Widya Humaniora*, 1(3), 375–397.
- Mosher, R., Lenters, K., & Boss, H. (2023). Play and Literacy Learning in Grades 1 and 2: An Exploratory Study of Teacher Perspectives. *Alberta Journal of Educational Research*, 69(2), 207–232. <https://doi.org/10.11575/ajer.v69i2.75043>
- Muthmainnah, Seraj, P. M. I., & Oteir, I. (2022). Playing with AI to Investigate Human-Computer Interaction Technology and Improving Critical Thinking Skills to Pursue 21 st Century Age. *Hindawi Education Research Internasional*, 2022. <https://doi.org/10.1155/2022/6468995>
- Niagara, Atmawati, A., Daniati, F., & Kusyanto. (2025). *Reviving Learning : Best Practice Role-Playing in Enhancing Student Engagement at MAN Bengkayang Niagara*. 1(1), 25–35.
- Nuh, M., Suhendra, P., & Faoji, A. (2025). Kompetensi Pedagogik Guru dalam Implementasi Pembelajaran Bahasa Arab Kelas 8 MTs Swasta di Bekasi. *Jurnal Studi Guru Dan Pembelajaran*, 8(2), 568–581.
- Prameswari, T. W., & Lestarinigrum, A. (2020). STEAM Based Learning Strategies by Playing Loose Parts for the Achievement of 4C Skills in Children 4-5 Years. *Efektor*, 7(1), 24–34. <https://doi.org/https://doi.org/10.29407/e.v7i2.14387>
- Rozhenkova, V., Snow, L., Sato, B. K., Lo, S. M., & Buswell, N. T. (2023). Limited or complete ? Teaching and learning conceptions and instructional environments fostered by STEM teaching versus research faculty. *International Journal of STEM Education*, 1–20. <https://doi.org/10.1186/s40594-023-00440-9>
- Safitri, D., Awalia, S., Sekaringtyas, T., Nuraini, S., Lestari, I., Suntari, Y., Marini, A., Iskandar, R., & Sudrajat, A. (2022). Improvement of Student Learning Motivation through Word-Wall-based Digital Game Media. *International Journal of Interactive Mobile Technologies*, 16(6), 188–205.
- Safitri, E., & PURBANINGRUM, E. (2018). Pengaruh Metode Bermain Peran Terhadap Kemampuan Berbicara Anak Kelompok B Di Tk Asyaadah Surabaya. *Paud Teratai*, 7(2), 1–5.

- Safna, & Karim, H. A. (2025). Pengaruh Strategi Pembelajaran Role Playing Terhadap Keaktifan Belajar PAI Siswa Kelas VIII di SMPN 1 Batang Kapas pencipta kondisi belajar peserta didik yang nantinya didesain secara sengaja , sistematis dan tidak semudah yang dibicarakan , bukan hal yan. *Moral: Jurnal Kajian Pendidikan Islam*, 2(1).
- Sarmanu. (2017). *Dasar Metodologi Penelitian Kuantitatif, Kualitatif dan Statistika*. Airlangga University Press.
- Savaroza, A. I. (2025). Efektivitas Teknik Flipped Classrom Dalam Mengoptimalkan Penguasaan Konsep Pada Materi Konsep Dasar Ilmu Ekonomi. *Jurnal Pendidikan Ekonomi (JURKAMI)*, 10(1).
- Sekwena, G. L. (2023). Active Learning Pedagogy for Enriching Economics Students ' Higher Order Thinking Skills. *International Journal of Learning, Teaching and Educational Research*, 22(3), 241–255.
- Setyaki, P. L., Nugroho, M. A., Gilang, M., Mubarak, F., Iksanudin, M., & Kusuma, M. R. (2024). Efektivitas Strategi Pembelajaran Siswa Aktif Pada Peningkatan Pemahaman Konsep Dan Penerapan Praktis Pascal. *NOZEL Jurnal Pendidikan Teknik Mesin*, 06, 34–39.
- Sugiyono. (2014). *Metode Penelitian Kuantitatif Kualitatif dan R&D*. CV Alfabeta.
- Sukmadinata, N. S. (2013). *Metode Penelitian Pendidikan*. PT Remaja Rosdakarya.
- Surur, M., Emyus, A. Z., Yana, I., Dewi, S. K., Pgri, S., Indonesia, S., Pgri, U., & Jember, A. (2024). Analysis Of The Impact Of The Discovery Learning Model On Students ' Learning Activities And Critical Thinking Skills. *Journal of Educational Technology and Innovation*, 7(2).
- Ukanah, I. A. (2023). The Effectiveness of An Activity – Based Education Technique Using a Role-Playing Analogy in Improving Students ' Conceptual Grasp of Hydrocarbon How to Cite. *Benin Journal of Educational Studies*, 29(1), 83–91.
- Yang, G., & Zheng, X. (2025). The effects of a role-play-based micro-game strategy on students ' computational thinking , learning engagement and learning motivation. *Interactive Learning Environments*, June 2023, 1–21. <https://doi.org/10.1080/10494820.2023.2223239>
- Yazar, T. (2025). Active Learning Improves Academic Achievement and Learning Retention In K-12 Settings : Ameta Analisis. *Journal on School Educational Technology*, 18(3).
- Zhong, L. (2022). Incorporating personalized learning in a role - playing game environment via SID model : a pilot study of impact on learning performance and cognitive load. *Smart Learning Environments*, 36(9). <https://doi.org/10.1186/s40561-022-00219-5>