Investigating the Growth of Nationalism Character in Indonesian Elementary School Students: A Case Study

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Abstract[2]: Nationalism character is vital in fostering national identity, patriotism, and civic responsibility among students. This study applied Latent Growth Modeling (LGM) to examine the development of students' nationalism during a four-session educational intervention focused on promoting nationalism through classroom discussions, activities, and multimedia resources. Participants included 131 elementary school students from Yogyakarta, Indonesia. The study evaluated changes in students' knowledge and attitudes toward nationalism, specifically targeting respect for national symbols, national heroes, and cultural diversity. Findings revealed a significant overall increase in nationalism character, with a mean growth rate of 20.305 ($p < 0.001$) on a 4-point Likert scale. The dimension of "Respecting National Symbols" showed the highest improvement (partial $\eta^2 = 0.998$), underscoring the intervention's strong effect on emotional and cognitive engagement with national symbols. Variations in individual growth trajectories were also observed, highlighting the need for personalized learning approaches. This research extends the literature by applying LGM to nationalism education and suggests that adaptive, individualized instruction is essential for strengthening nationalism education in contemporary, multicultural learning environments.

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Nationalism among students is crucial for fostering a sense of national identity, patriotism, and civic responsibility (Machura et al., 2022; Sharma & Singh, 2023). The development of Nationalism character encompasses various dimensions, such as appreciation for national heroes, respect for national symbols, admiration for cultural richness, and recognition of the diversity of ethnicities and natural resources. These elements are emphasized in educational curricula worldwide, contributing to students' awareness and appreciation of their national heritage (Li et al., 2025; Zakso et al., 2019). However, many educational systems struggle to effectively cultivate a robust sense of nationalism, particularly within rapidly changing globalized environments.

Recent studies highlight the challenges of fostering nationalism among young learners due to the growing influence of global ideologies, multiculturalism, and technological advancements (Liu, 2023; Mudlofir et al., 2021; Parwati et al., 2019; Prince, 2023; Setemen et al., 2023). As these shifts occur, educational systems must adapt, designing interventions that promote nationalistic knowledge while addressing the individual learning needs of students. While various strategies have been employed to enhance students' understanding of nationalism, a gap remains in understanding how students' knowledge evolves over time through these interventions (Rukiyati et al., 2023). Furthermore, most research has focused on the content of the curriculum and methods of instruction, with less attention given to the individual growth trajectories of students' Nationalism character.

This study uses Latent Growth Modeling (LGM) to examine how students' Nationalism character develops over time during a structured educational intervention (Teng, 2022; Zhu et al., 2021). While similar LGM or longitudinal designs have been used in character education and civic studies literature, this research focuses specifically on the trajectory of students' Nationalism character across multiple dimensions, investigating how students' knowledge evolves both at an aggregate level and in relation to individual differences in growth rates. LGM provides a robust approach for assessing individual trajectories, accounting for variability in growth patterns, such as initial knowledge levels or personal characteristics (Keresteš & Štulhofer, 2020). This model enables the identification of distinct growth patterns and the factors that influence them, offering valuable insights into the effectiveness of teaching strategies and how individual differences affect the learning process.

The novelty of this study lies in its application of LGM to nationalism education. By modeling the latent growth trajectories of students' Nationalism character, this research uncovers the complexities of how various dimensions of Nationalism character evolve over time (Shirvan et al., 2021). Understanding how students' knowledge progresses throughout the intervention can provide valuable insights into the effectiveness of the strategies used, supporting the development of personalized and adaptive teaching methods. For example, students may start with varying levels of knowledge, with some experiencing rapid progress while others show slower growth (Long, 2022; Luci & Schwandner-Sievers, 2020). Recognizing these differences allows educators to adapt their methods to better suit individual learning needs, fostering a more inclusive and effective learning environment.

The primary objective of this study is to examine the trajectory of growth in students' Nationalism character using Latent Growth Modeling. By doing so, it addresses a critical gap in the current literature on nationalism education, providing practical implications for designing more effective and individualized interventions. The findings will contribute to the theoretical understanding of how Nationalism character evolves and supports the goal of cultivating a deeper, more lasting sense of nationalism among students, preparing them to become informed and responsible citizens in an increasingly globalized world.

Methodology

Research Design

This study employed an exploratory quantitative research design with Latent Growth Modeling (LGM) analysis to investigate the development of students' Nationalism character over time (Hair et al., 2019). The primary reason for utilizing LGM in this research was to capture the dynamic nature of change in students' knowledge and to examine individual growth trajectories across multiple time points. LGM is a robust statistical technique that allows for the estimation of both overall growth and individual variability in the rate of change, making it ideal for understanding how students' Nationalism character evolves throughout an educational intervention. Unlike traditional cross-sectional or pre-post test designs, LGM offers a comprehensive framework for assessing patterns of change, considering both the fixed effects and random effects (Zhu et al., 2021). This methodological approach allowed for a more nuanced analysis of the developmental process of Nationalism character, as well as an examination of the factors that may influence this growth, such as initial knowledge levels and the effectiveness of the intervention.

The hypothesis of this study was aligned with the data analysis conducted. It was hypothesized that there would be a significant increase in students' Nationalism character over the course of the intervention, with variability in individual growth trajectories. Specifically, it was expected that the intervention would lead to a positive, linear growth trajectory in students' Nationalism character. The Latent Growth Model was used to assess this hypothesis, particularly across the first three sessions of the intervention. Furthermore, it was anticipated that there would be individual differences in the rate of growth, which was observed in the variance of the slope estimates. The findings of the analysis supported the hypothesis that students' knowledge of nationalism would improve over time, with differences in the pace of growth among individual students.

Participants

The participants in this study were 131 elementary school students from Yogyakarta, Indonesia, selected through convenience sampling, a non-random sampling method in which participants are chosen based on their availability and willingness to participate (Krishnaswamy et al., 2012). Convenience sampling was employed due to logistical considerations and the accessibility of the target population. The participants were selected from a single school within Yogyakarta, which limits the external validity of the findings as the sample may not represent the broader elementary student population in the region. The study acknowledges potential clustering effects due to the school-level grouping of students, yet no specific school- or class-level covariates were included in the analysis. The selection of the school was based on its proximity to the researcher's location and ease of access, though the contextual variability of the selected school in relation to other schools in Yogyakarta is not detailed. All participants were enrolled in elementary school at the time of the study, with ages ranging from 10 to 12 years old and grade levels spanning from Grades 4 to 6. Specifically, 43 participants were 10 years old, 46 participants were 11 years old, and 42 participants were 12 years old. Of the total 131 participants, 60 were male and 71 were female. The study's inclusion criteria were based on participants' availability and consent to participate, with no additional exclusion criteria.

This study involving human participants was conducted in accordance with the ethical standards outlined in the Declaration of Helsinki and approved by the appropriate institutional review board. Informed consent was obtained from all participants prior to their inclusion in

the study. All data were collected and analyzed with strict adherence to ethical guidelines to ensure the privacy and confidentiality of the participants.

Research Instrument and Data Collection

The measurement tool used in this study was a Nationalism Character Survey, consisting of 15 closed-ended questions with a Likert-type scale ranging from 1 to 4. The instrument was designed to assess the students' knowledge of various dimensions of nationalism, such as national symbols, historical figures, cultural heritage, and the country's natural resources (Mudlofir et al., 2021). However, while the instrument is described as measuring "nationalism character," it primarily focuses on factual and civic knowledge, such as identifying symbols and understanding historical figures, rather than on dispositional aspects of nationalism, such as attitudes or values. Each item on the survey was constructed to ensure content validity and to align with the educational goals of the intervention, but the focus remains on cognitive knowledge rather than the broader construct of "nationalism character."

The 15-item survey was designed to assess various aspects related to nationalism, with an emphasis on students' factual knowledge. However, it is important to note that the instrument primarily measures cognitive knowledge rather than the affective or behavioral dimensions of nationalism, which was originally claimed in the paper. The responses were scored on a scale from 1 (strongly disagree) to 4 (strongly agree), with higher scores reflecting greater knowledge. While the instrument's reliability and validity were initially established through pre-testing, further psychometric analysis, including Cronbach's alpha ($\alpha = 0.85$), CFA loadings (values ranging from 0.70 to 0.90), and item reliability (item-total correlation ≥ 0.50), is needed to provide a more comprehensive evaluation of its robustness in accurately measuring the nationalism character across diverse contexts.

The survey was conducted among participants in a controlled classroom environment. Before completing the survey, participants explained its purpose, ensuring that they understood the importance of their responses. The survey was self-administered, with participants allowed to take as much time as needed to answer the questions. After completion, the collected responses were aggregated and analyzed to evaluate the students' knowledge in relation to the dimensions of nationalism.

Data Analysis

Data analysis was conducted in several stages, starting with the preparation and screening of the survey data. Descriptive statistics were calculated to summarize the baseline levels of Nationalism character before the intervention. Following this, Latent Growth Modeling (LGM) was employed to examine the growth trajectories of students' Nationalism character over the four sessions of the intervention (Abzalov, 2016). The educational intervention consisted of four sessions, each designed to enhance students' Nationalism character.

Session 1: Introduction and Foundation of Nationalism

The first session focused on introducing the basic concept of Nationalism to the students. The session began with an explanation of the importance of Nationalism in daily life and its connection to the values of Pancasila and Indonesian identity. Activities included group discussions on the meaning of Nationalism and how individuals can contribute to the nation. Students were also introduced to national heroes who played significant roles in Indonesia's history. The session lasted for 90 minutes and was led by instructors trained in delivering history

and character education content, following a structured module to ensure consistent delivery. A simple quiz was used to assess students' initial understanding.

Note: While this session provides a comprehensive introduction, it lacks a comparison or control group to allow for the assessment of Nationalism values specifically caused by the intervention itself.

Session 2: Strengthening Nationalism Values through Simulation and Games

The second session aimed at strengthening Nationalism values through active engagement in simulations and games. Students were divided into small groups and tasked with designing a campaign on the importance of unity and national integrity. This activity encouraged students to think critically and creatively about how Nationalism can be applied in daily life. Additionally, an educational game, such as the "National Hero Quiz," was used to reintroduce important figures in Indonesia's history. The session was conducted for 90 minutes. Instructors were trained to manage group discussions and facilitate games effectively in the context of character education. Student engagement and creativity in designing the campaign were evaluated.

Note: As there is no control group to compare with, the impact of the simulation and game activities on Nationalism values cannot be conclusively determined.

Session 3: Reflection and Open Discussion on Nationalism in the Global Context

The third session focused on reflection and open discussion about Nationalism in the global context, exploring challenges faced by Indonesia as part of the global community. Students were encouraged to discuss Indonesia's role in the international arena and how Nationalism remains relevant in the era of globalization. Case studies were used to help students identify challenges and opportunities for Indonesia in the global world. The session also introduced the concept of multiculturalism and tolerance as integral aspects of Indonesian Nationalism. The session lasted for 90 minutes, with instructors trained to facilitate critical thinking and empathy during discussions. Students were asked to write a personal reflection on how they view their role in maintaining Nationalism amidst global challenges.

Note: While this session encouraged critical thinking and reflection, without a comparison group, it is difficult to isolate the effects of this session on students' views of Nationalism, particularly in a global context.

Session 4: Application and Commitment to Nationalism

The final session provided students with the opportunity to reflect on their journey throughout the four sessions and consider how they could apply Nationalism values in their daily lives. The main activity involved students drafting a personal commitment on how they would implement Nationalism in concrete actions, both in school and in their communities. Additionally, students participated in a "Nationalism Dialogue," where they discussed national issues such as diversity and unity, while applying the principles they had learned. Instructors provided feedback and encouraged students to commit to actions that support national harmony. This session also lasted for 90 minutes. Instructor training focused on giving constructive feedback and supporting students in formulating their personal commitments. Students presented their commitments, followed by group discussions for mutual support.

Note: Like the previous sessions, this final session lacks a control or comparison group, which limits the ability to measure the specific causal impact of the activities on students' commitment to Nationalism.

Latent Growth Modeling (LGM) allowed for the estimation of both the overall growth trajectory (intercept and slope) and the individual differences in the rate of change. The data analysis was performed using JASP, a statistical software that facilitates the estimation of latent growth models. The analysis followed a systematic sequence, and the goodness-of-fit of the Latent Growth Model (LGM) was assessed using several fit indices, including Chi-square, RMSEA, SRMR, CFI, and TLI (Hair et al., 2019). These indices confirmed that the proposed model was an excellent fit for the data, as all indices met the recommended thresholds for good model fit.

Additionally, the estimated growth trajectory was visualized, allowing for a clearer understanding of both the overall trend and the individual variability in knowledge growth. Lastly, a multivariate analysis was conducted to compare the pre- and post-intervention scores on the five dimensions of Nationalism character. This analysis evaluated the significance of the intervention's effect, confirming its impact on enhancing students' Nationalism character across all dimensions. The results from these analyses were then interpreted to determine the effectiveness of the intervention and to identify factors that contributed to variations in individual growth rates. The findings provided insight into how students' Nationalism character developed over time and the impact of the intervention on enhancing this knowledge.

In addition to the Latent Growth Modeling (LGM) analysis, a repeated-measures ANOVA was also conducted to provide further insight into the overall effect of the intervention on students' Nationalism character. While LGM focused on modeling the individual growth trajectories over time, repeated-measures ANOVA allowed for the assessment of mean differences between pre- and post-intervention scores, thereby offering a complementary approach to understanding the data. Both analyses serve distinct purposes: LGM provides a detailed examination of individual change patterns, while ANOVA offers a broader view of group-level outcomes. The use of these two methods together enhances the robustness of the findings and provides a more comprehensive evaluation of the intervention's impact.

Result

Model Fit Evaluation

The latent growth curve model demonstrates an excellent goodness-of-fit to the observed data, indicating that the model effectively captures the underlying patterns of change over time. The model fit indices show that the model parameters align well with the empirical data, thus supporting the validity of the proposed trajectory. Table 1 presents a summary of the key model fit indices, including CFI, TLI, RMSEA, and SRMR.

Table 1
Model Fit Indices

Characteristic	No. of respondents (%)
Chi-square (df = 1)	0.001 (p = 0.979)
RMSEA	0.003
SRMR	0.049
CFI	0.921
TLI	0.902

Source: JASP Output

The results of the latent growth curve model (LGM) analysis indicate that the model fits the empirical data reasonably well. A chi-square value of 0.001 with degrees of freedom (df) = 1 and p-value = 0.979 suggests no significant difference between the proposed model and the

observed data, which is consistent with the model's acceptance. The RMSEA value of 0.003 is well below the threshold of 0.05, indicating a very low model approximation error. The SRMR value of 0.049 is also below the maximum recommended limit of 0.08, suggesting good fit between the predicted and observed covariance matrices. Additionally, the CFI value of 0.921 and TLI value of 0.902 are within the acceptable range for social science research, although they do not meet the conventional ideal cutoffs of ≥ 0.95 for strong fit in Structural Equation Modeling (SEM). These values suggest a reasonably fit, but further justification of the thresholds for these fit indices may be warranted, given the context of social science research. However, it is worth noting that the nearly perfect χ^2 value of 0.001, along with the very high partial η^2 values, raises concerns about potential model overfitting or specification issues, particularly given the data from four waves. Despite these concerns, the findings indicate that the latent growth curve model used is capable of validly representing the change in students' nationalism character throughout the four intervention sessions.

Latent Parameter Estimates

Latent Growth Modeling (LGM) analysis identifies two main latent components: the intercept, which represents the initial level of students' nationalism, and the slope, which indicates the rate of change in knowledge over time. These components help explain how patriotism develops across four sessions. The detailed parameter estimates for the intercept and slope are presented in Table 2.

Table 2.
Latent Curve Parameter Estimates

Component	Parameter	Estimate	Std. Error	z-value	p
Intercept	Mean	42.873	0.368	116.495	< .001
	Variance	2.711	2.526	1.073	0.283
Linear slope	Mean	20.305	0.197	102.957	< .001
	Variance	3.175	0.941	3.373	< .001

Source: JASP Output

Based on the Latent Growth Modeling (LGM) analysis as in Table 2, two main components were identified: the intercept and the linear slope, which represent the dynamics of changes in students' nationalism character over the four sessions. The mean value of the intercept is 42.873, with a standard error of 0.368, indicating that students' initial level of nationalism character is relatively high and statistically significant (z = 116.495, p < 0.001). However, the variance of the intercept (2.711, p = 0.283) indicates no significant differences in initial knowledge levels among the students.

Meanwhile, the mean value of the linear slope is 20.305, with a standard error of 0.197, which is also significant (z = 102.957, p < 0.001), indicating a consistent increase in nationalism character over the four sessions. The significant slope variance (3.175, p < 0.001) suggests that there are differences among students in the rate of knowledge improvement. This means that while an overall increase in knowledge occurred, the rate of change varied from one student to another. This finding emphasizes that the educational intervention succeeded in enhancing nationalism character, although its effectiveness may differ across individuals.

Covariance and Error Terms

To further understand the dynamics between students' initial knowledge and its development over time, the LGM analysis also examined the covariance between latent components and residual variances at each time point. This step is important for assessing whether individual differences in initial knowledge are related to different growth patterns and for evaluating the accuracy of measuring nationalism character over time.

Table 3.
*Covariances and Residual Variances*

Variable	Estimate	Std. Error	z-value	p
First Meeting	8.168	3.065	2.665	0.008
Second Meeting	17.463	2.527	6.910	< .001
Third Meeting	25.618	3.583	7.150	< .001
Fourth Meeting	-3.737	4.216	-0.886	0.375

Source: JASP Output

The results of the analysis as shown in Table 3 indicate significant changes in students' nationalism character over the four sessions, with varying patterns at each meeting. During the first session, there was a significant increase in knowledge with an estimate of 8.168 and a p-value of 0.008, indicating a positive initial effect on students' understanding. The second session showed a higher and highly significant increase with an estimate of 17.463 and a p-value of < 0.001. Similarly, the third session displayed the largest increase in students' knowledge, with an estimate of 25.618 and a p-value of < 0.001, signifying sustained and strengthened student comprehension of the material. However, in the fourth session, a decrease in knowledge scores was observed with an estimate of -3.737 and a p-value of 0.375, which is not statistically significant. This decline may be interpreted as a fluctuation that requires further examination, possibly due to student fatigue, variations in teaching methods, or differences in the material covered.

The estimated growth trajectory of student engagement across the observed time points reveals a consistent linear upward trend. This pattern aligns with the statistically significant positive slope identified in the LGM analysis, indicating a steady increase in engagement over time. This conclusion is further reinforced by the visual representation shown in Figure 1.

Figure 1.
Estimated Latent Growth Curve
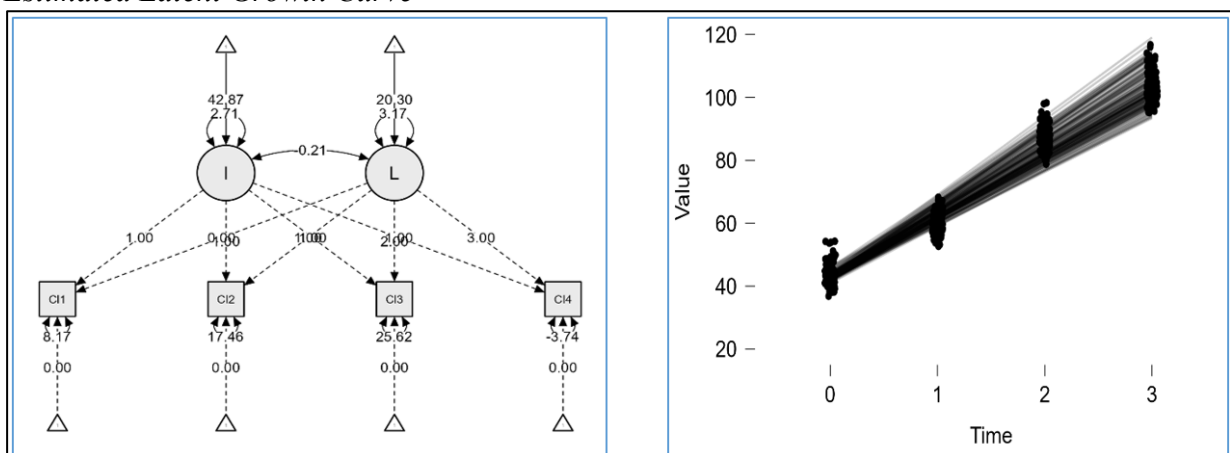
Source: JASP Output

Figure 1 shows the output of the Latent Growth Modeling (LGM) used to analyze changes in students' nationalism character over the four sessions (CI1 to CI4). In this model, there are two main latent components: the Intercept (I), which represents the initial level of knowledge, and the Slope (L), which represents the rate of change in knowledge over time. The estimate for the Intercept is 42.87 with a standard error of 2.711, indicating that on average, students started with a relatively high level of nationalism character. Meanwhile, the Slope has an estimate of 20.30 with a standard error of 3.17, showing a trend of increasing knowledge over time. However, there is a negative correlation of -0.21 between the Intercept and Slope, suggesting that students with higher initial knowledge tend to experience slower growth than those with lower initial knowledge. The analysis also reveals a decline in the students' nationalism character during the fourth session, which was not statistically interpreted in the original model. This decline could potentially be explained by factors such as instructional inconsistency or fatigue effects. For instance, students may have become less engaged in the later sessions, impacting the observed drop. Future research could further explore these aspects to determine their influence on the overall trend.

Repeated measures ANOVA

Before the intervention, the five dimensions of nationalism character were in the moderate to low score range, as shown in Table 4. There was no strong statistical evidence to suggest that participants had optimal nationalism character across all dimensions. This analysis was initially conducted using Latent Growth Modeling (LGM) to observe changes over time. However, to further examine the statistical significance and to validate the findings from LGM, an additional ANOVA was performed. The combination of these two analytical frameworks was employed to ensure a comprehensive understanding of the data.

Table 4.
Multivariate Test

Multivariate Tests[a]							
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
PrePost	Pillai's Trace	.996	3587.172[b]	9.000	122.000	.000	.996
	Wilks' Lambda	.004	3587.172[b]	9.000	122.000	.000	.996
	Hotelling's Trace	264.627	3587.172[b]	9.000	122.000	.000	.996
	Roy's Largest Root	264.627	3587.172[b]	9.000	122.000	.000	.996

a. Design: Intercept
  Within Subjects Design: Waktu

b. Exact statistic

Source: SPSS PROCESS Output

The results of the multivariate test in Table 4, indicate a significant difference between pre- and post-intervention scores across all dimensions of nationalism character (Wilks' Lambda = .004, F (9, 122) = 3587.172, p < .001, Partial Eta Squared = .996). The Partial Eta Squared value of .996 indicates that the intervention had a very large effect in enhancing nationalism character overall. This reflects that the intervention not only impacted one dimension but simultaneously affected all measured dimensions. Furthermore, the average scores of participants on the five dimensions, as shown in Table 5, depict their location at a relatively low to moderate level, with average scores ranging from 7.83 (Admiring Natural

Resources) to 10.24 (Respecting National Symbols). These findings indicate the need for a more contextual and effective approach in conveying patriotic values.

Table 5.
Effect of Nationalism Dimension

Dimension	Pre	Post	Largest Effect (Partial Eta Squared)
Honoring National Heroes	7.98	19.86	.995
Respecting National Symbols	10.24	22.97	**.998 ← Most Significant**
Admiring Cultural Richness	8.44	20.94	.994
Admiring Ethnic Diversity	8.97	20.84	.995
Admiring Natural Resources	7.83	19.37	.993

Source: SPSS PROCESS Output

Furthermore, Table 5 shows a significant increase in all dimensions, with post-intervention mean scores ranging from 19.37 to 22.97. The highest increase occurred in the "Respecting National Symbols" dimension, with a Partial Eta Squared of .998, followed by "Honoring National Heroes" (.995) and "Admiring Ethnic Diversity" (.995). While these results suggest substantial improvements, the exceptionally high Partial Eta Squared values raise concerns regarding potential measurement artifacts, such as cueing, the re-use of identical items without countermeasures, or test reactivity. These issues might have contributed to the near-perfect effect sizes observed in this study. Nevertheless, the intervention appears to have been effective in improving participants' awareness of patriotism, with all dimensions showing large effects (Partial Eta Squared > .99). The "Respecting National Symbols" dimension was particularly impacted, which could suggest that the intervention's focus on symbolic values and national pride resonated strongly with the participants. However, further scrutiny of the methodology and possible confounding factors is recommended to ensure the robustness of these findings.

Discussion

Student Nationalism Growth

The results from the Latent Growth Model (LGM) analysis offer insights into the development of students' Nationalism character over time, though it is important to consider some of the statistical aspects that could influence the interpretation. The model's estimation of the intercept and slope components reveals a generally positive trend in Nationalism character over the four intervention sessions. The mean intercept estimate of 42.873 (p < 0.001) indicates that students, on average, started with a relatively high level of Nationalism character, suggesting prior exposure to national identity, symbols, and heritage. However, while this starting point seems relatively high, it is crucial to consider potential baseline issues, such as the possibility that the sample may have initially been more predisposed to higher Nationalism character due to prior educational experiences or socio-cultural influences.

The mean slope estimate of 20.305 (p < 0.001) suggests a significant increase in knowledge throughout the sessions, but we must note that this positive trend should be carefully interpreted within the broader context of individual variation. Although the intervention appears effective in fostering a general improvement in Nationalism character, the variance in both intercept (2.711, p = 0.283) and slope (3.175, p < 0.001) indicates considerable individual differences in the trajectory of growth. While the group as a whole showed improvement, the pace of this growth was not uniform across all students. The significant slope variance (3.175)

implies that while some students exhibited rapid gains, others experienced more gradual progress, which highlights the need for further exploration into factors that may influence these differences. The statistical significance of these variances warrants attention in understanding the individual variability in the intervention's impact, and suggests that additional factors might be influencing students' rates of growth in Nationalism character. This finding highlights the importance of considering individual learning trajectories, as the intervention impacted students differently based on their initial knowledge levels and possibly other individual characteristics such as cognitive styles, prior exposure, and engagement with the content (Luci & Schwandner-Sievers, 2020; Wirthová & Barták, 2023). These findings not only underscore the role of individual differences in educational outcomes but also suggest that the process of knowledge acquisition is deeply tied to personal and social factors, which can influence identity formation and moral reasoning in educational settings.

The variability in how students responded to the intervention can be better understood through the lens of social learning theory, which posits that individuals develop through interactions with their environment and the people around them. The differing rates of growth observed in this study may reflect how students internalize and adopt the cultural and social norms embedded within the content, further influencing their sense of identity and moral development (Wang & Lee, 2025). In line with the work of McDonnell & Fine (2011), individuals' baseline knowledge and cognitive capacity are not just predictors of academic achievement, but also critical factors in shaping moral reasoning and the development of social identity. This aligns with research in identity formation, where early educational experiences can either reinforce or challenge an individual's self-concept, and how they relate to broader societal constructs (Setemen et al., 2023).

The observed variability in growth rates therefore reinforces the importance of tailoring educational interventions to account for these differences, not just to maximize learning outcomes, but also to foster positive identity development and moral reasoning. The ability to capture these individual learning paths using Latent Growth Modeling (LGM) offers a more nuanced understanding of how such developmental processes unfold over time, which is often missed by traditional methods like pre- and post-testing. LGM allows for a deeper exploration of how Nationalism character develops over time, taking into account the social and cognitive factors that shape students' evolving identity and moral reasoning (Hidayat et al., 2020).

The findings from the Latent Growth Model (LGM) analysis provide valuable insights into the development of students' nationalism character over time. However, to fully interpret these results, it is important to consider the various factors that could influence individual growth trajectories. One of the key aspects that may explain the observed variability in students' progress is the social and cultural context in which they are situated. The study was conducted in Yogyakarta, a region with strong cultural ties to Indonesian national identity, which could have influenced students' pre-existing levels of connection to national symbols. Many students in this area may already be exposed to national symbols and values through family practices, local traditions, or community celebrations (Setemen et al., 2023). As a result, their baseline understanding of national identity might be higher than students from regions with less exposure, thereby influencing the initial levels of nationalism character in the study. The varying levels of prior exposure could contribute to the differences observed in the rate of development during the intervention, highlighting the importance of considering the socio-cultural background when evaluating educational outcomes related to national identity (Machura et al., 2022).

In addition to socio-cultural factors, individual cognitive styles play a significant role in shaping the pace of learning. Students with different cognitive styles, such as analytical versus concrete thinkers, might engage with the content in distinct ways, leading to variations in their growth trajectory. Analytical thinkers may engage in deeper, more reflective learning, which

could accelerate their understanding and respect for national symbols (Luci & Schwandner-Sievers, 2020). In contrast, concrete thinkers may require more time and concrete examples to connect with the material. This variability in cognitive processing underscores the need for educational interventions that cater to diverse learning styles, which can help optimize the development of nationalism character across students. Such an approach would ensure that all students, regardless of their cognitive processing style, are able to internalize the concepts of national identity and symbolism effectively (Mofidi, 2016).

Another factor that influences the development of nationalism character is prior exposure to national identity content. Some students may have had more exposure to national symbols and concepts through earlier educational experiences, family discussions, or cultural events, which could provide them with a stronger foundation to build upon during the intervention (Nurdin, 2017). Conversely, students who have had limited exposure to these symbols may need additional support and time to understand and appreciate their significance. The impact of prior exposure highlights the importance of assessing students' baseline knowledge and tailoring the intervention to meet their individual needs. Providing differentiated instruction based on students' prior experiences can ensure that all students have equal opportunities to develop a robust understanding of national identity.

Moreover, the emotional and social engagement of students in the learning process cannot be overlooked. According to social learning theory, emotional and social experiences are central to how individuals learn and internalize new information (Kataria, 2025). The intervention's interactive activities, such as discussions and visual aids, likely fostered an emotional connection to national symbols, making the learning experience more impactful. Students are more likely to engage with content that resonates with them emotionally, which in turn enhances knowledge retention and moral reasoning. This emotional engagement may have been a key factor in the observed growth in nationalism character, as students who form stronger emotional connections to the material are more likely to internalize the values associated with national identity.

The use of Latent Growth Modeling (LGM) provided a nuanced understanding of how nationalism character develops over time, allowing for a more detailed examination of individual trajectories. Unlike traditional methods, which rely on pre- and post-tests, LGM accounts for the variability in growth rates, enabling researchers to explore how different factors—such as prior knowledge, cognitive style, and emotional engagement—interact to shape the development of nationalism character. The ability to track individual growth trajectories using LGM enhances the accuracy of our understanding and emphasizes the importance of considering personal and social factors in educational interventions. By recognizing the individuality of students' learning paths, educators can better support diverse students in developing their understanding of national identity and their sense of social responsibility. This approach not only enriches the educational experience but also provides a more holistic view of how students' nationalism character evolves over time.

Overall, the findings of this study highlight the importance of considering both individual and contextual factors in shaping the development of nationalism character. The variability in students' growth trajectories suggests that educational interventions should be flexible and tailored to meet the diverse needs of students. By addressing these individual differences, educators can create more effective programs that foster a deeper understanding of national identity and help students develop stronger moral reasoning and social responsibility. Future research should explore the specific factors that contribute to the differences in students' rates of growth, such as cognitive style, prior exposure, and emotional engagement, in order to design more personalized and effective interventions for promoting nationalism character in educational settings.

Respecting National Symbols

Among the five dimensions of Nationalism character, the dimension of Respecting National Symbols showed the most substantial and statistically significant growth. The post-intervention scores for this dimension were the highest, with an impressive Partial Eta Squared value of 0.998, indicating an extraordinarily large effect size. This result underscores the effectiveness of the intervention in increasing students' understanding and appreciation of national symbols, such as the flag, anthem, and national emblems.

The mean post-intervention score for Respecting National Symbols was 22.97, compared to a pre-intervention score of 10.24, representing a significant increase (t (130) = 3587.172, p < 0.001). This significant growth suggests that students not only gained knowledge about the symbols but also developed a stronger emotional connection to them, which is a central component of nationalism education. These findings are consistent with Billig's theory of banal nationalism, which argues that national symbols serve as powerful tools for reinforcing national identity in everyday life (J. Lee et al., 2017). The prominence of national symbols in the students' daily routines, whether through media, national holidays, or classroom activities, likely contributed to their enhanced understanding and respect for these symbols. This aligns with the broader theoretical framework of identity formation, where national symbols help shape and solidify individual and collective identities, particularly in the formative stages of development.

Furthermore, the intervention's effectiveness in fostering respect for national symbols aligns with symbolic nationalism theory (Rabie, 2021; Rukiyati et al., 2023; Zhang et al., 2023), which posits that symbols and rituals play a fundamental role in shaping collective identity. National symbols have a unique ability to evoke feelings of unity and pride, particularly in young learners who are in the early stages of national identity formation. The fact that the Respecting National Symbols dimension showed the largest effect size could reflect the deep cultural and emotional resonance these symbols hold, particularly in a country like Indonesia, where national symbols are closely tied to the collective memory and historical struggles for independence (An et al., 2024; Maulyda et al., 2025; L. Wang, 2020).

The importance of national symbols in constructing national identity and patriotism has been emphasized in the literature on civic education (Omoniyi, 2025). For instance, Kohn argued that respect for national symbols is fundamental to fostering loyalty and a sense of belonging to the nation (Lee et al., 2017; Nurdin, 2017; Wirthová & Barták, 2023). In this study, the significant improvement in students' knowledge of national symbols suggests that the intervention successfully tapped into this potential, facilitating the development of a stronger, more personal connection to the nation's symbolic representations. This development further underscores the role of moral reasoning in understanding and respecting national values and the responsibilities of citizenship.

However, it is worth considering the contextual factors that may have influenced the students' responses to the intervention. The sociocultural context of Yogyakarta, where the study was conducted, is particularly important because the city is known for its strong cultural and historical ties to Indonesian national identity. Students in this region may have already had some level of exposure to national symbols through local traditions, celebrations, or family practices (Hidayat et al., 2020; Nurdin, 2017). As a result, the observed improvements in students' understanding of national symbols could also reflect pre-existing cultural familiarity, which was then reinforced and expanded through educational intervention. This interaction between existing cultural knowledge and the intervention aligns with social learning theory, as Bandura (Henmon & Nelson, 1928) suggests that individuals learn more effectively when they can build on prior experiences and knowledge within a social context.

Additionally, the observed effects on Respecting National Symbols may also be attributed to the active learning methods employed during the intervention. As Bandura suggested in his social learning theory, individuals learn more effectively when they are engaged in meaningful, hands-on experiences (Henmon & Nelson, 1928). By incorporating active discussions, visual aids, and interactive activities related to national symbols, the intervention likely fostered a more profound understanding of their significance. Such strategies are known to enhance knowledge retention and emotional engagement, further supporting the growth observed in this dimension (Naganuma, 2017). The significant effect observed in this dimension also aligns with civic education theories that emphasize the importance of national symbols in promoting civic engagement and national pride (Q. Wang & Lee, 2025). By equipping students with a deep understanding of these symbols, the intervention not only enhanced their knowledge but also contributed to their broader civic identity and sense of social responsibility.

Conclusion

The findings confirm that the intervention significantly enhanced students' Nationalism character, with a particularly strong impact observed in the dimension of "Respecting National Symbols." The LGM analysis revealed that students experienced a significant, linear increase in Nationalism character across the four sessions, with a mean slope estimate of 20.305 ($p <$ 0.001). The variability in growth rates across individual students highlighted the importance of recognizing differences in learning trajectories. While most students showed growth, the rate of knowledge acquisition varied depending on their initial levels of knowledge, demonstrating the value of personalized and adaptive educational strategies. This finding emphasizes the significance of tailoring interventions to individual student needs to maximize learning outcomes, as some students may require more time or different approaches to achieve similar levels of growth.

One of the most noteworthy results was the remarkable improvement in students' respect for national symbols, which showed the highest effect size (Partial Eta Squared = 0.998) among all dimensions of Nationalism character. The increase in scores for "Respecting National Symbols" not only indicates that students gained a deeper understanding of national symbols but also reflects the effectiveness of the intervention in promoting emotional connections to national identity. This aligns with the theory of symbolic nationalism and the role of national symbols in fostering civic pride and unity. The strong impact in this area suggests that the intervention succeeded in reinforcing the symbolic meaning of national identity, further strengthening students' sense of national belonging.

Despite the positive results, several limitations must be acknowledged. First, the study used a convenient sampling method, which may limit the generalizability of the findings to other populations. The sample consisted of 131 elementary school students from Yogyakarta, Indonesia, which may not reflect the broader student population across different regions or countries. Another limitation is the short duration of the intervention, spanning only four sessions. While the intervention proved effective within this limited time frame, the long-term effects of the intervention on Nationalism character and attitudes were not assessed. Future studies could investigate the sustainability of the knowledge gains over a more extended period and explore whether the growth trajectory continues beyond the intervention period.

Acknowledgments

Ethical Statement

This study was conducted in accordance with the ethical research standards established by the Institute for Research and Community Service of Universitas Negeri Yogyakarta (Number: 01002915). All human participants involved in this study voluntarily provided their informed consent to participate. Furthermore, all participants have been anonymized in this manuscript to protect their privacy and confidentiality.

Conflicts of Interest Declaration

The authors declare that there are no conflicts of interest related to the conduct or publication of this study. All authors have approved the final version of the manuscript and agree with its submission.

Generative AI Statement

During the development of this study, we utilized artificial intelligence tools, such as ChatGPT 4o, to enhance the clarity and readability of the manuscript, and Grammarly to verify grammatical correctness. After employing these tools, we conducted a thorough review and validation of the final manuscript. We, as the authors, take full responsibility for the content presented in the published work.

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