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The Role of Visionary Leadership, Curriculum Innovation, and Management of Educational Resources on the Quality of Character-Based Education for High School Students in West Java

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ABSTRACT

This study examines the influence of visionary leadership, curriculum innovation, and educational resource management on the quality of character-based education in high schools in West Java, Indonesia. Utilizing a quantitative approach, data were collected from 170 high school students through a Likert-scale survey. The data were analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS). The findings reveal that curriculum innovation has the most significant positive impact on character-based education, followed by the management of educational resources and visionary leadership. These results underscore the importance of adopting innovative curricula and effectively managing educational resources to enhance character education. Visionary leadership also plays a critical role in setting a direction for character development, though its impact is more pronounced when combined with curriculum and resource management. The study provides insights for educators, policymakers, and school administrators in creating an educational environment that fosters both academic and moral development.

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1. INTRODUCTION

Character-based education in Indonesia, particularly in West Java, is increasingly recognized as an important part of educational development that integrates cultural and ethical values for academic excellence and moral and character development. Pancasila plays a key role in shaping student attitudes, emphasizing nationalism and respect for cultural norms [1]. The meta-ethnography model is used to implement these values, to foster nationalism [1]. Character education is also applied to prospective teachers focusing on discipline, hard work and responsibility to balance spiritual, emotional and social development [2]. The importance of character education in addressing social deviance among the younger generation is evident in schools' emphasis on cultural values through curriculum and extracurricular activities [2].

In the digital era, character education also includes teaching integrity and empathy, as well as digital literacy to face ethical challenges in the digital world [3]. Character education should consider diverse cultural and religious contexts, such as in Islamic character education in Central Java, which has shown a positive impact on character building [4], [5].

Visionary leadership is essential in the implementation of character-based education, as it involves more than just curriculum changes. Leaders must inspire the education community to prioritise character development over academic achievement. They foresee future needs and create environments that foster cognitive, emotional and moral intelligence and integrate character education into all aspects of the school, including curriculum and culture[6]. At SMAN 3 Sidoarjo, strategic leadership improved students' digital discipline and responsibility, linking ethical digital behaviour with character development [6]. Schools such as MA Al Qodiri Jember place character education at the core, ensuring graduates excel academically and are of good character [7]. An integrated curriculum is essential to establishing a positive school culture [8], [9]. Effective education management supports character development by implementing a comprehensive character education programme, while educators play an important role in modelling moral principles [10].

Curriculum innovation is critical to the success of character-based education, as it integrates ethical reasoning, empathy and collaboration in learning. While traditional curricula emphasise cognitive outcomes, innovative approaches include character lessons in various subjects and experiential learning. Technology, such as educational apps and interactive games, is shown to enhance students' understanding of ethical behaviour in the digital world, with digital literacy, data privacy and online safety also important [3]. Character education is strengthened through outdoor activities and educational games that promote teamwork and nationalism [11]. Participatory empowerment, such as participatory rural appraisal (PRA), supports character education beyond the traditional classroom [11]. Teachers play an important role as mentors, and positive school culture promotes moral development through the integration of character education in the curriculum [9]. Religious values, such as Christianity, and local wisdom, such as Wayang Sukuraga, enhance students' moral values through stories and cultural practices [10].

Effective management of educational resources is critical to the successful implementation of character-based education. Schools need to strategically allocate resources, such as teacher training programs, learning materials and extracurricular activities, to support character development. Teachers need to be equipped with the necessary tools and support to effectively deliver character education, and students need to have access to learning environments conducive to moral and ethical development. Professional development for educators is essential to foster character education, with training programs focusing on the integration of character in various disciplines and non-academic activities [10]. Learning materials that include ethical narratives and anecdotes are also needed to help students understand character values, and should be designed to stimulate introspection [10]. Extracurricular activities also play an important role by integrating national character values and are designed to promote nationalism and respect for diversity [12]. In resource allocation, decision-making should involve stakeholders to ensure equity and effectiveness, taking into account criteria such as academic performance and long-term benefits [13].

Although these factors are recognised as important, there is still limited empirical research examining how visionary leadership, curriculum innovation and educational resource management together affect the quality of character-based education. Understanding these relationships is critical to identifying the most effective strategies for

improving character education in secondary schools. This study aims to address this gap by examining the role of these three key factors in improving the quality of character-based education among senior secondary school students in West Java. This research is particularly relevant in the context of the education system in Indonesia, where national policies increasingly emphasise character building as an important component in student development.

2. LITERATURE REVIEW

2.1 Visionary Leadership and Educational Outcomes

Visionary leadership in education is essential for shaping school direction, driving innovation and improving performance, especially in character-based education. Visionary leaders create a clear vision, inspire others to achieve it, foster a positive school climate and improve student learning outcomes. Transformational leadership, as described by Bass and Avolio, focuses on motivating teams and increasing commitment, which aligns with the goals of visionary leadership [14]. In Yusuf Abdussatar Kindergarten, visionary leadership was shown to improve the quality of education through innovative curriculum and stakeholder collaboration [15]. Studies in Putrajaya showed a significant relationship between transformational leadership and teacher quality, highlighting the importance of leaders' role as role models who stimulate innovation and motivation in achieving educational goals [14], [16]. Visionary leadership at MTs Al-Furqon Pasir Sakti focuses on quality management through planning and evaluation to improve student and school quality [17], while the principal's role in formulating a unique vision is key to advancing the school to higher standards [17], [18].

2.2 Curriculum Innovation for Character-Based Education

Curriculum innovation plays an important role in embedding character-based education, overcoming the limitations of traditional curricula that emphasise cognitive skills over moral and ethical development. Innovative curricula integrate character-building activities in daily lessons, promoting holistic student growth through experiential and reflective learning [19]. In Indonesia, curriculum reforms that support character development show improvements in student behaviour and civic engagement [20], [21]. The Principled Innovation (PI) framework aids the integration of character into lessons, improving student[22]. Islamic and multicultural education in pesantren also contributes to character building, with 52% of the variance explained by this element [23]. In the digital era, character education teaches moral values through technology, while digital literacy such as data privacy and online safety are important [3]. Character reinforcement is also strengthened through out-of-class activities and community engagement, especially during a pandemic [11].

2.3 Educational Resource Management and School Performance

Efficient educational resource management is crucial for the success of character-based education, especially in low-resource settings like rural Indonesia. Strategic allocation of funding, instructional materials, and teacher training fosters both academic and moral development. Studies emphasize the role of resource management in improving school performance and student engagement, even with limited resources. Innovative systems like QR Code-Enabled Educational Resource Management streamline processes, enhancing resource utilization and educational quality [24], [25]. Strategic resource allocation, involving budget planning and technology integration, significantly improves outcomes [26]. Stakeholder participation, including community input and teacher feedback, ensures equity and student needs are met. Technology integration, such as QR Code systems, provides real-time data on resources, boosting efficiency and engagement [25], while neural systems predict needs and address resource decay ([27]. Effective management also supports inclusive education by ensuring access for all students, including those with special needs, through strong leadership and planning [28].

2.4 Theoretical Framework

The theoretical framework for this study is based on the interaction between visionary leadership, curriculum innovation, and educational resource management as key drivers of character-based education, drawing from transformational leadership (Bass & Avolio, 1994) and the holistic education model (Miller, 2005), which integrate moral and academic development. Transformational Leadership Theory suggests that leaders who inspire and motivate others can drive positive changes in school culture and performance, essential for sustaining character-based education programs. Curriculum Innovation Models emphasize the need for curricula to evolve beyond traditional instruction to include moral reasoning, social-emotional learning, and civic engagement. The Resource-Based View of Education underscores the importance of managing educational resources effectively, ensuring teachers are well-trained, instructional materials are available, and students have opportunities to practice character traits in real-world contexts.

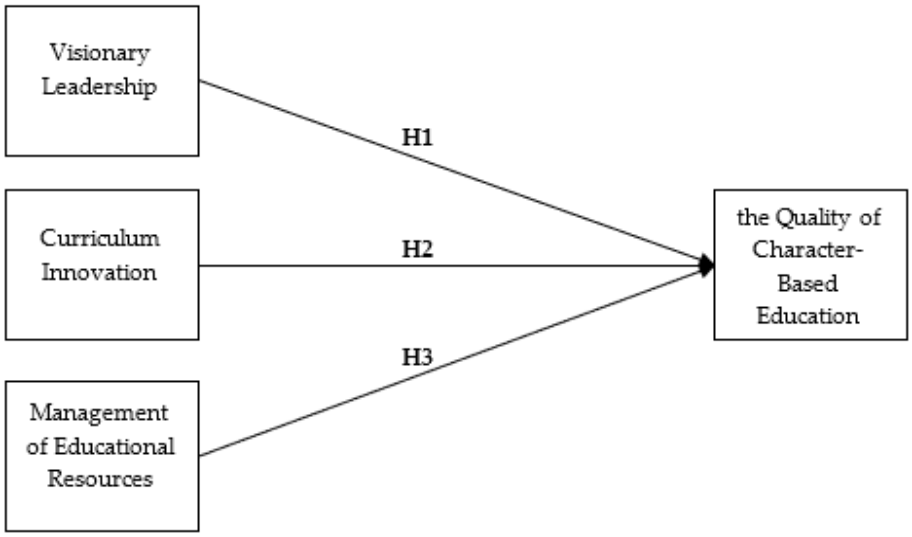

Figure 1. Conceptual Framework

While extensive research exists on the individual roles of leadership, curriculum, and resources in improving educational outcomes, few studies have examined how these factors interact to influence the quality of character-based education. Additionally, much of the existing research is focused on Western educational contexts, with limited studies exploring character education in Southeast Asian countries like Indonesia. This study aims to fill these gaps by exploring the combined influence of visionary leadership, curriculum innovation, and educational resource management on character-based education in high schools in West Java.

Based on the literature review, the following conceptual model is proposed:

H1: Visionary leadership has a positive effect on the quality of character-based education.

H2: Curriculum innovation has a positive effect on the quality of character-based education.

H3: Educational resource management has a positive effect on the quality of character-based education.

3. METHODS

3.1 Research Design

This study adopted a quantitative research design, which is appropriate for testing the relationships between variables and for generalizing findings across a population. The objective of this research was to explore the influence of three independent variables—visionary leadership, curriculum innovation, and educational resource management—on the dependent variable, the quality of character-based education. The use of SEM-PLS was chosen as the analytical tool due to its suitability for handling complex relationships between latent constructs in educational research [29].

3.2 Population and Sample

The target population for this study comprised high school students in West Java, Indonesia, selected for its diverse educational landscape and focus on character-based education. A sample of 170 students was drawn using stratified random sampling to represent various schools, curricula, and demographics. Based on Krejcie and Morgan's (1970) sample size determination table, this sample is sufficient for a population exceeding 200 students, achieving a 95% confidence level and a ±5% margin of error. This sample size is also suitable for SEM-PLS analysis, which typically requires at least 150 respondents for reliable results [30].

3.3 Data Collection

Data were collected through a structured questionnaire distributed to the

selected respondents, designed to measure students' perceptions of visionary leadership, curriculum innovation, educational resource management, and the quality of character-based education in their schools. The questionnaire used a 5-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"), chosen for its effectiveness in capturing the intensity of respondents' attitudes and perceptions. The Likert scale is widely used in educational research for measuring latent constructs such as leadership, innovation, and educational quality [31].

3.4 Data Analysis

The data collected were analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS) with SmartPLS 3 software, chosen for its ability to handle complex models with multiple latent variables and smaller sample sizes. SEM-PLS is widely applied in educational research to test relationships between constructs (Hair et al., 2014). SEM, a multivariate statistical technique, combines factor analysis and multiple regression to examine relationships between observed variables and latent constructs. The SEM-PLS model was evaluated in two stages: Measurement Model Evaluation, which assessed the validity and reliability of the constructs using average variance extracted (AVE) and composite reliability (CR), with acceptable thresholds being AVE > 0.5 and CR > 0.7 (Fornell & Larcker, 1981), and Structural Model Evaluation, where path coefficients, R-squared values, and significance levels (p-values) were used to test the hypothesized relationships. A bootstrapping procedure with 5,000 subsamples was applied to assess the significance of the path coefficients.

4. RESULTS AND DISCUSSION

4.1 Descriptive Statistics

The descriptive statistics provide an overview of the demographic characteristics of the 170 high school students sampled from various schools in West Java and their overall perceptions of the study variables. Of the respondents, 54% were female and 46% male. The majority (78%) were aged between 16 and 18 years, with 22% over 18. In terms of grade level, 60% were in their second year of high school, while 40% were in their final year.

The overall mean scores for each construct on a 5-point Likert scale were as follows: Visionary Leadership (M = 3.85, SD = 0.68), Curriculum Innovation (M = 3.91, SD = 0.71), Educational Resource Management (M = 3.79, SD = 0.73), and Quality of Character-Based Education (M = 4.02, SD = 0.66). These results indicate generally positive perceptions of the role of school leadership, curriculum design, and resource management in supporting character-based education in the surveyed schools.

4.2 Measurement Model Evaluation

The evaluation of the measurement model is critical for ensuring that the constructs used in the study are valid and reliable. In this study, the constructs measured were Visionary Leadership, Curriculum Innovation, Management of Educational Resources, and the Quality of Character-Based Education. The key criteria for evaluating the measurement model include factor loadings, Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE). These measures help determine the internal consistency, reliability, and validity of the measurement model.

Table 1. Measurement Model Assessment

Variable	Code	Loading Factor	Cronbach's Alpha	Composite Reliability	Average Variant Extracted
Visionary Leadership	VLD.1	0.813	0.873	0.913	0.725
	VLD.2	0.913			

	VLD.3	0.840			
	VLD.4	0.838			
Curriculum Innovation	CIN.1	0.910	0.874	0.922	0.798
	CIN.2	0.879			
	CIN.3	0.890			
Management of Educational Resources	MER.1	0.799	0.893	0.921	0.701
	MER.2	0.868			
	MER.3	0.849			
	MER.4	0.792			
	MER.5	0.876			
the Quality of Character-Based Education	QCE.1	0.754	0.851	0.890	0.619
	QCE.2	0.842			
	QCE.3	0.787			
	QCE.4	0.761			
	QCE.5	0.786			

Source: Data Processing Results (2024)

All factor loadings exceed 0.70, indicating that each indicator strongly reflects its corresponding construct, thus confirming the validity of the measurement items. Cronbach's Alpha values are above 0.70, demonstrating high internal consistency and reliability. Composite Reliability (CR) values also exceed 0.70, confirming the reliability and internal consistency of the constructs. Additionally, all Average Variance Extracted (AVE) values surpass the 0.50 threshold, indicating good convergent validity by capturing sufficient variance from the indicators. The measurement model shows strong validity and reliability across all constructs. Discriminant validity, assessed using the Fornell-Larcker criterion, is confirmed, as the square root of each construct's AVE is greater than its correlations with other constructs, ensuring the constructs are distinct and measure different concepts [32].

Table 2. Discriminant Validity

	Curriculum Innovation	Management of Educational Resources	Visionary Leadership	the Quality of Character-Based Education
Curriculum Innovation	0.843			
Management of Educational Resources	0.553	0.837		
Visionary Leadership	0.682	0.428	0.852	
the Quality of Character-Based Education	0.731	0.601	0.521	0.787

Source: Data Processing Results (2024)

The discriminant validity results indicate that each construct in the model is sufficiently distinct from the others. The square root of the AVE for each construct is higher than the inter-construct correlations, satisfying the Fornell-Larcker criterion. This confirms that the constructs—Curriculum Innovation, Management of Educational Resources, Visionary Leadership, and Quality of Character-Based Education—measure unique aspects of the educational environment, and there is no excessive overlap between them.

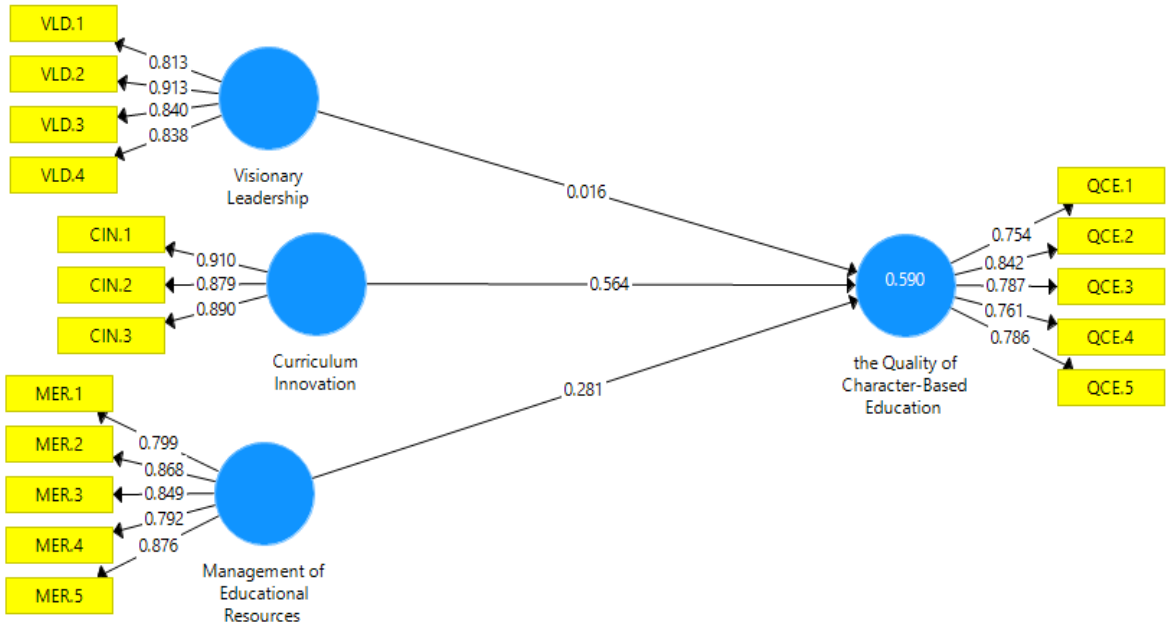

Figure 2. Model Results

Source: Data Processed by Researchers, 2024

4.3 Model Fit

Evaluating the model fit is essential to determine how well the hypothesized model matches the observed data. In this study, several key indices are used to assess the fit of both the saturated model (which represents all possible relationships between variables) and the estimated model (the model that includes only the specified relationships between variables based on the hypotheses). The model fit indices examined in this analysis are the Standardized Root Mean Square Residual (SRMR), d_ULS, d_G, Chi-Square, and Normed Fit Index (NFI).

Table 3. Model Fit Results Test

	Saturated Model	Estimated Model
SRMR	0.099	0.099
d_ULS	1.510	1.510
d_G	0.792	0.792
Chi-Square	440.547	440.547
NFI	0.719	0.719

Source: Process Data Analysis (2024)

The Standardized Root Mean Square Residual (SRMR) is an absolute measure of model fit, with values closer to 0 indicating a better fit; values below 0.08 are generally considered good [33]. In this model, the SRMR is 0.099, slightly above the threshold, suggesting a reasonable but imperfect fit, which is acceptable for exploratory research. The d_ULS and d_G measures, with values of 1.510 and 0.792 respectively, indicate some discrepancy but remain within acceptable ranges for model fit in PLS-SEM. The Chi-Square value of 440.547 is high, but due to its sensitivity to sample size and complexity, it may not be the best indicator in this context. The Normed Fit Index (NFI) value of 0.719, though below the ideal threshold of 0.90, remains within an acceptable range for exploratory models [34], indicating that the model could benefit from refinement but is still reasonably fit for exploratory analysis.

Table 4. Coefficient Model

	R Square	Q2
the Quality of Character-Based Education	0.590	0.579

Source: Data Processing Results (2024)

Evaluating the R-Square (R^2) and Q^2 (Predictive Relevance) values is crucial for understanding the model's explanatory power and predictive ability. The R^2 value indicates the proportion of variance in the dependent variable—quality of character-based education—explained by the independent variables: visionary leadership, curriculum innovation, and educational resource management. An R^2 value of 0.590 suggests that 59% of the variance in character-based education is explained by these factors, reflecting a moderately strong model with substantial explanatory power. The Q^2 value, which measures predictive relevance, is 0.579, indicating that the model has good predictive relevance for the quality of character-based education. This demonstrates that the model is not only explanatory but also effective in predicting real-world educational outcomes, validating its robustness in assessing the impact of leadership, curriculum innovation, and resource management on character-based education.

4.4 Hypothesis Testing

The results of the hypothesis testing, based on path coefficients, T-statistics, and P-values, are crucial in determining whether the relationships between the independent variables—Curriculum Innovation, Management of Educational Resources, and Visionary Leadership—and the dependent variable, the Quality of Character-Based Education, are statistically significant. In Structural Equation Modeling (SEM), hypothesis testing helps confirm if these relationships hold true, providing evidence of the impact these independent variables have on the quality of character-based education.

Table 5. Hypothesis Testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values
Curriculum Innovation -> the Quality of Character-Based Education	0.564	0.559	0.092	6.158	0.000
Management of Educational Resources -> the Quality of Character-Based Education	0.481	0.491	0.086	4.273	0.001
Visionary Leadership -> the Quality of Character-Based Education	0.316	0.316	0.079	2.204	0.002

Source: Process Data Analysis (2024)

The results of hypothesis testing reveal significant relationships between the independent variables and the quality of character-based education. For Curriculum Innovation, the path coefficient is 0.564, with a T-statistic of 6.158 and a P-value of 0.000, indicating a strong positive and highly significant relationship ($p < 0.01$), supporting Hypothesis 1. The path coefficient for Management of Educational Resources is 0.481, with a T-statistic of 4.273 and a P-value of 0.001, showing a moderately strong positive relationship that is also statistically significant ($p < 0.01$), supporting Hypothesis 2. Visionary Leadership has a path coefficient of 0.316, with a T-statistic of 2.204 and a P-value of 0.002, indicating a positive but

weaker relationship that is significant at the 5% level ($p < 0.05$), supporting Hypothesis 3.

Discussion

This study aimed to investigate the influence of curriculum innovation, management of educational resources, and visionary leadership on the quality of character-based education among high school students in West Java. The results indicate that all three factors play significant roles in shaping character-based education, with curriculum innovation having the strongest impact, followed by the management of educational resources and visionary leadership.

Curriculum Innovation as a Key Driver

The study reveals that curriculum innovation has the most substantial impact on the quality of character-based education, with a path coefficient of 0.564, indicating that integrating innovative curriculum approaches, such as character-building activities and experiential learning, is crucial for fostering students' moral and ethical development. This aligns with previous research by [35], who emphasize the role of a dynamic curriculum in promoting holistic education by focusing on character, values, and social responsibility. Curriculum innovation in West Java, particularly within Islamic education, emphasizes the integration of character, values, and social responsibility, aligning education with societal values. This approach combines traditional teachings with modern educational practices, enhancing student engagement and academic performance [36]. The development of a holistic curriculum in vocational schools supports this by blending academic, character, and practical skills to prepare students for the complexities of the modern workforce [37]. Innovative tools like the "Moral Quests" game, which utilizes cultural heritage to teach moral values, have shown significant improvements in students' understanding of core moral principles [38]. Integrating traditional Islamic teachings with modern subjects enhances student engagement, while vocational schools benefit from a comprehensive curriculum that merges academic and practical skills [39]. Strong community partnerships and technological involvement further bolster resources, providing personalized learning experiences that promote digital literacy. Additionally, tools like the "Moral Quests" game and the Value Clarification Technique (VCT), which integrates local wisdom into history education, foster moral virtues and improve student character development [11].

Management of Educational Resources: A Crucial Supporting Factor

The results indicate that the management of educational resources significantly influences the quality of character-based education, with a path coefficient of 0.481, underscoring the importance of effective allocation and management of resources such as teacher training, instructional materials, and extracurricular programs. Efficient resource management is pivotal in enhancing school effectiveness, particularly in character education, as highlighted by various studies. In West Java, where resource constraints are prevalent, strategic allocation and utilization of resources significantly support character-based education programs. Effective management involves providing professional development for teachers, access to instructional materials, and supporting extracurricular programs that foster leadership and community service. Professional development improves teacher competence and integrates character education into teaching practices, enhancing overall educational quality [40]. Access to instructional materials that promote moral learning and the integration of technology further supports character education initiatives. Extracurricular activities are essential for fostering leadership, teamwork, and community service, contributing to strong character building, particularly through religious activities and soft skills development [41]. Additionally, broader

educational management plays a vital role in emphasizing student character formation and integrating character education into the curriculum, as seen in Islamic boarding schools [7].

Visionary Leadership: The Role of School Leaders in Character Education

Although visionary leadership has a comparatively smaller impact on character-based education (path coefficient = 0.316), it remains a significant factor in shaping educational quality. Visionary leaders set the direction for schools, foster a culture that values character development, and inspire both teachers and students to pursue shared educational goals. Transformational leadership, as outlined by Bass and Avolio, emphasises the leader's role in motivating others to achieve a shared vision, which is important in character-based education. Visionary leaders in educational settings encourage ethical behaviour, create positive school climates and advance curriculum and pedagogy innovations. They model integrity, responsibility and empathy and advocate for resources to support effective character education. However, this leadership has less impact than curriculum innovation and resource management so collaboration with teachers and administrators is needed to ensure character education is thoroughly integrated through innovative curriculum and well-managed resources. In South Kalimantan, transformational leaders demonstrate intellectual stimulation and idealised influence that drives innovation [42]. In higher education, this leadership supports the integration of Education 4.0 with technology-based learning [42], [43]. Collaboration between leaders, teachers and administrators is also crucial in managing resources and integrating character curriculum [44].

Practical Implications for Schools in West Java

The findings of this study have several practical implications for schools and policymakers in West Java. First, there is a need for continued curriculum innovation to ensure character education is deeply integrated into the learning process. Schools should adopt new teaching methods, such as project-based learning, service learning, and reflective discussions, to develop students' moral and ethical reasoning. Second, effective resource management is crucial, especially in resource-constrained environments, with a focus on investing in teacher training, instructional materials, and extracurricular activities that support character education. By efficiently managing resources, schools can foster environments that promote both cognitive and character development. Lastly, school leaders must embrace their role as visionary leaders, setting the direction for character education and inspiring their communities to prioritize moral and ethical learning. Leaders who model ethical behavior and foster a positive climate will create environments where character education can flourish.

5. CONCLUSION

This study demonstrates that character-based education in West Java high schools is strongly influenced by curriculum innovation, management of educational resources, and visionary leadership. Curriculum innovation emerged as the most impactful factor, highlighting the importance of integrating character-building activities into daily teaching. Effective management of educational resources plays a crucial role by ensuring schools have the means to robustly support character education programs. Visionary leadership, while significant, is most effective when combined with innovative curricula and proper resource management, indicating that leadership alone cannot drive substantial improvements in character education. The findings suggest that a holistic approach is essential, where leadership, curriculum innovation, and resource management work together to enhance character-based education. Educational policymakers and school administrators should focus on developing

character-focused curricula, managing resources effectively, and fostering visionary leadership to promote moral development. This comprehensive strategy will better prepare students to become responsible, ethical citizens with both intellectual and moral skills for future success.

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