

Adaptive dynamic pattern of alternative educational institution in Java, Indonesia

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ABSTRACT

Alternative educational institutions in Indonesia deal with significant problems in maintaining their unique pedagogical approaches, meeting regulatory requirements and societal expectations. This study addresses the problem of balancing institutional autonomy with systemic integration by introducing the adaptive dynamic of alternative education (ADAE) pattern. Using a qualitative approach, data was collected through two focus group discussions (FGDs) with purposively selected participants representing three distinct alternative education institutions: Tanoker in East Java, Komunitas Belajar Qaryah Thayyibah (KBQT) in Central Java, and Sekolah Alam Sukahaji in West Java. The sample comprised 12 participants (3 institution heads and 9 teachers) chosen based on their understanding of their respective institution's social situations. Additionally, two education experts with expertise in mainstream and alternative education were interviewed. The findings of the study reveal that ADAE is built on three integrated philosophical pillars: theomorphic, eduhumanistic, and futuristic. The pattern demonstrates how alternative educational institutions navigate between autonomy and integration through dynamic positioning influenced by external and internal factors. The research found the practical implications include a framework for alternative institutions that implementation of ADAE enables institutions to maintain their innovative practices, achieving legitimacy through measurable community impact.

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1. INTRODUCTION

Alternative education emerges as a critical response to the limitations of mainstream educational systems in the contemporary education era. This phenomenon not only reflects the need for diversification of pedagogical approaches but also represents a manifestation of a paradigm shift in our understanding of the purpose and process of education itself [1]. Alternative education, with its various forms and manifestations-ranging from *pesantren* (Islamic boarding school), *sekolah alam* (nature school), homeschooling, Montessori schools, to community-based educational programs-and others-offers a more flexible, personal, and holistic approach. The position of alternative education in the broader educational ecosystem is often ambiguous and

contestable. On one hand, it is viewed as a potential laboratory for pedagogical innovation [2]; on the other hand, it faces challenges in legitimacy, scalability, and integration with the broader system.

In Indonesia's diverse archipelagic setting, alternative education has emerged as a vital response to both geographical constraints and cultural diversity, reflecting the nation's educational philosophy of "*Bhinneka Tunggal Ika*" (unity in diversity) [3]. The implementation of alternative education in Indonesia has deep historical roots, from the *pesantren* system to modern community learning center, demonstrating the country's long-standing recognition of diverse educational approaches. This dynamic is evident in how Indonesia's *sekolah alam* (nature schools) movement has successfully balanced innovative nature-based pedagogies while meeting the basic competency requirements set by the Ministry of Education.

Indonesia's implementation of *Kurikulum Merdeka* (Freedom to Learn Curriculum) has created a more conducive environment for alternative education approaches that emphasis on flexibility and adaptation [4]. This reform has opened new possibilities for alternative education institutions to maintain their pedagogical innovations and gaining formal recognition. The challenges faced by alternative education institutions in Indonesia can mirror those identified in the pattern of education for strengthening position and optimizing alternative education institution, particularly regarding legitimacy and scalability. However, these challenges manifest uniquely within Indonesia's socio-cultural context. For instance, many community-based learning initiatives in remote areas struggle with resource allocation, teacher training and attempting to preserve local wisdom and cultural practices [2].

Recent research in Indonesian education policy have shown increasing recognition of alternative education approaches. The government's support for *Pusat Kegiatan Belajar Masyarakat* (community learning centers) and various alternative education institutions demonstrates a growing understanding of the need for diverse educational pathways [5]. The application of the education in Indonesia must consider the country's unique characteristics, including its demographic diversity, geographical challenges, and varying levels of technological infrastructure. Alternative education initiatives in urban areas often focus on progressive pedagogies and technology integration, while rural programs might support community engagement and local wisdom preservation [6], [7].

Indonesia's experience with *pesantren* modernization offers insights into the education implementation [8]. Many *pesantren* have successfully maintained their distinctive Islamic educational approach [9], integrated modern subjects and teaching methods, exemplifying the pattern of dynamic positioning between tradition and innovation [10]. The COVID-19 pandemic has accelerated the adoption of alternative education approaches in Indonesia, forcing traditional institutions to embrace more flexible and technology-enabled learning methods [11]. This transition has revealed the relevance on adaptability and has created new opportunities for alternative education institutions to demonstrate their value.

The pattern of alternative education institution in Indonesia suggests the need for continued policy support and resource allocation to alternative education initiatives. The pattern could help guide the development of more inclusive and adaptive educational policies that recognize and support diverse learning approaches and maintaining educational quality and accessibility. These patterns in Indonesian alternative education demonstrate how the pattern can be effectively contextualized within specific national settings and highlighting the importance of considering local cultural, social, and economic factors in its implementation. The pattern dynamization positioning between autonomy and integration provides a valuable framework for understanding and supporting the continued evolution of alternative education in Indonesia.

The adaptive dynamic of alternative education (ADAE) emerges as a theoretical and practical pattern designed to address the complex problems faced by alternative education institutions in Indonesia. This pattern provides a framework for institutions to navigate between preserving their innovative approaches and integrating with mainstream education systems. ADAE's development was driven by several critical needs within Indonesia's educational institutions, particularly the struggle for legitimacy, maintaining pedagogical innovation, and the challenge of adapting to new policies such as *Kurikulum Merdeka* [4]. The pattern is especially relevant to Indonesia's context, where the principle of "*Bhinneka Tunggal Ika*" necessitates educational approaches that can accommodate cultural diversity and meeting national standards [3]. ADAE was specifically designed to address the unique challenges of Indonesia's geographically dispersed and culturally diverse educational ecosystem, where institutions like *pesantren*, *sekolah alam*, and community learning centers must balance traditional wisdom with modern educational demands. The pattern provides a systematic framework for these institutions to respond to technological advances and evolving labor market demands and maintaining their distinctive characteristics and core educational values. Through ADAE, alternative education institutions can find pathways to strengthen their position within the educational system and optimizing their unique contributions to Indonesia's educational development.

Research on alternative education has shown significant growth and positive outcomes over recent decades. Studies from diverse contexts have demonstrated its effectiveness across multiple dimensions. For example, the comprehensive study of Steiner schools in Europe found higher levels of student autonomy and learning independence compared to traditional schools [12]. The research that shows how alternative education

approaches foster greater student agency and self-directed learning [13]. The connection between alternative education and creativity has been well-documented. A study that revealed strong correlations between alternative learning environments and enhanced creative thinking and problem-solving capabilities [14]. Conducted extensive research across multiple alternative schools, demonstrating improved social skills and adaptability among students in these settings [15]. Tavares [16] provided compelling evidence through their mixed-methods study of alternative education programs, showing positive impacts on student engagement and character development. Grossman and Loeb research [17], which documented improved learning motivation and personal growth across diverse alternative education settings. In the context of contemporary challenges, particularly during the COVID-19 pandemic, alternative education has shown remarkable resilience. Riele [18] found that students in flexible learning programs showed greater adaptability to changing educational circumstances and maintained stronger learning outcomes during periods of disruption.

The impact of alternative education has also been notable. A comprehensive review by Preston [19] showed consistent patterns of success in terms of graduates' career satisfaction and professional adaptability. These findings show the enduring value of alternative education approaches in preparing students for contemporary challenges. Research has highlighted the tension between innovation and standardization in education, showing the increasing importance of adaptive skills, creativity, and lifelong learning in the era of globalization and digital revolution [20]. Alam's research [21] for the integration of spirituality in education, stressing the importance of developing a sense of connectedness, meaning, and purpose in the learning process. These insights, along with theory of multiple intelligences and integral education concept, have informed the pattern, contributing to its multidimensional approach to alternative education.

This research presents significant novelty through the development of the ADAE pattern, which offers a revolutionary approach to the positioning of alternative educational institutions within the broader educational ecosystem. Unlike previous research that tends to view alternative education within a static or binary framework, ADAE introduces a more dynamic and flexible positional spectrum, enabling alternative educational institutions to strategically navigate between full autonomy and integration with mainstream systems. This novelty is strengthened by the integration of three complementary philosophical pillars-theomorphic, eduhumanistic, and futuristic-which provide a comprehensive foundation for alternative educational institutions to maintain their core values while adapting to external demands. The ADAE pattern is also specifically contextualized to address the unique challenges in Indonesia's educational landscape, particularly in the context of implementing the Merdeka Curriculum and the principle of "*Bhinneka Tunggal Ika*" (unity in diversity). Beyond mere theoretical conceptualization, this research identifies concrete adaptation mechanisms such as regulatory negotiation, pedagogical innovation, and curricular synthesis that enable alternative educational institutions to build legitimacy through measurable community impact, rather than solely through formal recognition. This new analytical framework offers a more nuanced understanding of how external factors (policies, technology, and market demands) and internal factors (values, vision, and resources) interact in shaping the dynamic positioning of alternative educational institutions. Thus, ADAE not only bridges the gap between theoretical conceptualization and practical implementation but also shifts the paradigm from viewing alternative education as an entity operating outside the mainstream system to understanding it as a component that positions itself dynamically within the broader educational ecosystem-an innovative contribution highly relevant to contemporary educational challenges in Indonesia.

This study addresses several key research questions:

- i) How do alternative educational institutions in Java maintaining their unique practices and meeting educational requirements?
- ii) What factors influence the alternative educational institutions?
- iii) How can alternative educational institutions strengthen their position and optimizing their operations?

These questions are particularly relevant in the Indonesian context, where alternative education institutions must balance local wisdom, national curriculum requirements, and contemporary educational demands. The primary purpose of this study is to introduce and elaborate on the ADAE pattern as a theoretical and practical tool for strengthening position and optimizing alternative education institution in contemporary educational contexts. Specifically, this research aims to explain the philosophical foundations and conceptual framework of the ADAE pattern, describe its operational methodology, implications for educational practice and policy, and provide recommendations for implementing the pattern in alternative education contexts. Through these objectives, the study seeks to contribute to the ongoing dialogue about educational innovation and the future of learning in an increasingly complex world.

2. METHOD

2.1. Research design

To obtain in-depth data regarding adaptive leadership patterns in alternative educational institutions, this research was designed qualitatively with a descriptive type. Meanwhile, the main data in this research was obtained through two focus group discussions (FGDs), as supported by Sevilmiş and Yıldız [22], who suggest that ideal focus group sizes typically range from 6-12 participants per session. Additionally, Bekele and Ago [23] indicate that data saturation in qualitative research often occurs within the first 12 interviews when working with a homogeneous group of experts or professionals in a specific field, with purposively selected participants representing three distinct alternative education institutions: Tanoker in East Java, Komunitas Belajar Qaryah Thayyibah (KBQT) in Central Java, and Sekolah Alam Sukahaji in West Java, Indonesia. The sample comprised 12 participants (3 institution heads and 9 teachers). Apart from that, this research also conducted separate both interviews with two experts who understand mainstream education and alternative education online using Zoom and also face to face, with the distribution as in Table 1.

The selection of each participant was based on their understanding of the social situation respective alternative educational institutions. Before the interview begins, we brief them on the questions we will ask, containing important information about the alternative approaches and methods they have implemented, and give them an equal opportunity to do so answer all questions in turn. To this, the participants agreed without providing any conditions. Meanwhile, the identity of the expert who was the informant in the interview was a professor in the field of mainstream education and non-school education. Therefore, the types of questions we ask are questions related to the nature and paradigm of alternative education, alternative school education systems, and the function of alternative education as well as questions related to continuous improvement.

In the first FGD held in the third week of June 2024, questions were more directed at the core values of the institution, internal and external factors that influence the institution. Furthermore, the second FGD held in the first week of July 2024 was more directed at how alternative education is implemented in each institution. On the same day, researchers also conducted separate interviews with two lecturers who were already professors who were experts in the field of education. Each FGD lasted for approximately 2 hours, and each participant was given the opportunity to express their opinions.

Table 1. FGDs participants

Institution	Location	Participants	Number	Codes
Tanoker	East Java	Head of institution	1	T-H1
		Teachers	3	T-T1, T-T2, T-T3
KBQT	Central Java	Head of institution	1	K-H1
		Teachers	2	K-T1, K-T2
Sekolah Alam Sukahaji	West Java	Head of institution	1	S-H1
		Teachers	4	S-T1, S-T2, S-T3, S-T4
Education experts	N/A	Education expert	2	E1, E2
Total			14	

2.2. Data analysis, reduction, presentation, and drawing conclusion

The analysis began with data reduction, where researchers carefully selected, focused, abstracted, and transformed the raw data gathered from field notes after completing the FGDs with participants from three alternative education institutions. During this initial phase, researchers specifically reduced and organized responses from participants across the three social situations (institutions) A, B, and C. Following data reduction, the analysis moved into the data presentation stage, which served as a crucial bridge between the interviews with research informants and the final conclusions. The researchers emphasized that the quality of the data presentation directly influenced the validity of the results, indicating a careful attention to analytical rigor. The final stage involved drawing conclusions, which occurred both during and after the research process. The verification of conclusions was conducted through multiple methods, including brief reviews where researchers reflected on their analytical thoughts while writing, reviewing field notes, and engaging in more extensive processes, such as peer review and brainstorming sessions to develop intersubjective understanding. The researchers also sought to verify their findings by looking for supporting evidence in other data sets, demonstrating a commitment to triangulation and validation of interpretations.

2.3. Data triangulation

The triangulation process involved collecting data from diverse participants across three different alternative education institutions spanning different regions of Java, Indonesia: Tanoker in East Java, KBQT in Central Java, and Sekolah Alam Sukahaji in West Java. The study gathered perspectives from multiple levels of stakeholders, including institution heads (3 participants) and teachers (9 participants), supplemented

by insights from two education experts specializing in mainstream and alternative education. The methodological triangulation was achieved through two distinct data collection approaches: FGDs and individual interviews. Two separate FGDs were conducted, with the first FGD in the third week of June 2024 focusing on core institutional values and influencing factors, while the second FGD in the first week of July 2024 concentrated on implementation aspects of alternative education. Additionally, individual interviews were conducted with two professors who served as education experts, providing an external academic perspective on the findings.

2.4. Limitations of the study

The research examined only three alternative education institutions across Java (East, Central, and West Java), involving 12 participants (3 institution heads and 9 teachers) supplemented by input from 2 education experts, which constitutes a relatively small sample that may not adequately capture the rich diversity of alternative education institutions throughout Indonesia's expansive archipelago. Additionally, the purposive selection of participants based on "their understanding of the social situation respective alternative educational institutions" potentially introduced bias, as individuals with deeper institutional understanding might naturally hold more favorable perspectives of their organizations.

3. RESULTS AND DISCUSSION

3.1. Adaptive pattern of alternative educational institution

The research results in an alternative education pattern called ADAE which was developed to articulate strategic strengthening and optimization of alternative education, as illustrated in Figure 1. ADAE is built on three integrated philosophical pillars-theomorphic, eduhumanistic, and futuristic.

"... We see education as a holistic and transformative process..." (E1)

"The theomorphic approach allows us to integrate spiritual dimensions into learning without neglecting the diversity of student beliefs." (K-H1)

The implementation of these philosophical pillars is evident in various concrete activities, as expressed by one of the participants.

"... In our institution, we implement praying and reflection as theomorphic practices..." (T-H1)

Eduhumanistic programs are realized through environmental care projects, while futuristic aspects are implemented through weekly 'Labs' teaching developing technological solutions for social problems.

In their journey, alternative educational institutions demonstrate dynamic positions in the autonomy-integration spectrum. The participants affirm that:

"...our position in this contestation between mainstream and alternative is never static..." (K-T1)

"...We continuously make adjustments based on student needs and national education system demands..." (T-T2)

This dynamic is manifested through the 'bridge learning' program that creatively combines the national curriculum with project-based learning methods, as well as regular workshops with mainstream schools to share innovative practices. The adaptation of alternative educational institutions is influenced by external and internal factors.

"...Our core values serve as a compass in every adaptation decision we make..." (T-H1)

Another participant adds the influence of external factors:

"...Technological developments and changes in national education policies force us to continually innovate in our learning method..." (K-H1)

To manage these factors, institutions develop various programs such as monthly teacher capacity development training, 'tech integration week', and quarterly stakeholder forums.

Adaptation mechanisms in ADAE are manifested through various strategies that enable institutions to balance autonomy and integration. One participant explains that:

“...We develop a regulatory negotiation system that allows us to remain independent and meeting government standards....” (K-T2)

The implementation of this mechanism is evident in innovative programs such as ‘learning beyond walls’ which integrates nature-based learning with national curriculum standards, and the development of a portfolio assessment system that accommodates each student’s uniqueness. The successful implementation of ADAE is reflected in various significant achievements. T-H1 says that “...our legitimacy comes from the real impact felt by the community...,” as evidenced through the ‘community impact’ project that has helped local SMEs, the high success rate of graduates in establishing social enterprises, and the adoption of innovative learning programs by mainstream schools. E2 provides a convincing perspective:

“... Successful alternative educational institutions not only survive but also contribute to the transformation of the education system as a whole ...”

These findings depict ADAE as a comprehensive pattern in strengthening the position and optimizing alternative educational institutions, with concrete implementation evidence and measurable impact in the field. The pattern is demonstrated through various achievements, from community empowerment projects to the successful adoption of innovative practices by mainstream schools. Through balancing core values and adaptability, ADAE enables alternative educational institutions to develop and make meaningful contributions to overall educational development. This holistic approach not only ensures the sustainability of alternative education institutions but also positions them as catalysts for positive transformation in education.

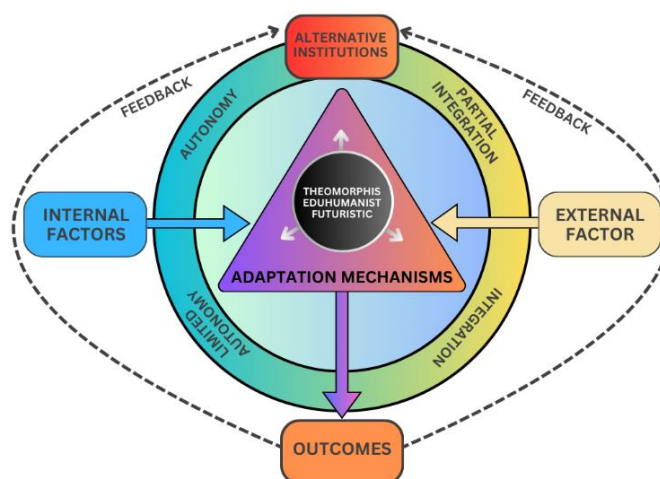


Figure 1. Alternative dynamic of alternative education pattern

3.2. Factors and adaptation mechanisms in alternative educational institutions

ADAE offers a transformative perspective to education through three integrated philosophical pillars. This paradigm reflects the evolution of contemporary educational thinking that seeks to bridge spiritual traditions, human values, and future demands. The theomorphic pillar [24], rooted in perennial philosophy and transpersonal psychology, shows alignment with Wilber’s thinking in “integral vision” [25], which supports the importance of spiritual dimensions in developing the whole person. The mindfulness practices and deep reflection promoted in ADAE align with previous research [26], which demonstrates the effectiveness of awareness practices in improving students’ mental well-being and learning abilities. Roeser *et al.* [27] in the “mindfulness in education” also underscore how the integration of mindfulness practices can create a more conducive learning environment and support students’ social-emotional development.

The eduhumanistic [28] dimension in ADAE shows strong influence from Paulo Freire’s thinking on critical pedagogy and empowerment. This approach is strengthened by Gardner’s multiple intelligence theory [29], which expands understanding of human potential beyond conventional intelligence. Nussbaum research on humanistic education [30] affirms the importance of developing critical capacity and empathy in forming responsible global citizens. The integration of emotional intelligence concepts popularized by Goleman provides a strong theoretical foundation for developing social-emotional competencies in the learning process [31].

ADAE's futuristic [32] pillar resonates with Alvin Toffler's thinking on "future shock" and the importance of preparing students to deal with change. Yuval Noah Harari in "21 lessons for the 21st century" point up the importance of developing adaptability and continuous learning capabilities in dealing with future uncertainties [20]. ADAE's focus on digital literacy and global competencies reflects the views of theorists like Henry Jenkins on the importance of "participatory culture" in the digital era. The integration of these three pillars creates a holistic and adaptive educational framework [33]. Research by Baker *et al.* [34] supports this integrative approach, showing how meaningful learning requires a balance between traditional knowledge, practical skills, and global awareness. Gericke in his work on sustainable education affirms the importance of connecting ecological awareness with the learning process [35].

The integration of spiritual aspects presents a series of complex things. When alternative education institution tries to incorporate spiritual dimensions into the secular education system [36], they are deal with fundamental paradoxes that require deep consideration. Alternative educational institutions attempting to integrate spiritual elements often experience difficulties in balancing these aspects with deeply rooted secular values. This challenge becomes increasingly complicated when they consider the methodological aspects of measuring the effectiveness of such spiritual integration. Currently, existing evaluation instruments tend to be subjective and have not been able to provide comprehensive validation of the impact of spirituality in education [37]. This condition demands the development of more sophisticated and refined measurement tools to accurately assess the extent to which spiritual aspects have been successfully integrated into the learning process. A more structured approach is needed, yet one that remains sensitive to spiritual nuances that are often abstract and personal in nature.

There is also an intriguing paradox worth examining. When an educational institution persistently implements humanistic empowerment, they face increasingly greater challenges in meeting various standardization demands [38]. This phenomenon creates a complex dilemma, where graduates from institutions that heavily emphasize humanistic values encounter significant obstacles when facing various international standardized tests [39]. Furthermore, there is a concerning gap between the highly upheld humanistic idealism and the harsh realities of the job market [40]. This finding leads to a rather unsettling conclusion: the implementation of a purely humanistic approach without pragmatic adaptation to contemporary demands actually has the potential to disadvantage students' futures in the competitive arena.

Many educational institutions are trapped in an excessive obsession with technological aspects. They are racing to adopt various digital devices and platforms under the pretext of preparing students for the future. However, ironically, this overemphasis on "future readiness" is actually eroding the fundamental elements that should be the foundation of education. Critical thinking ability [41], which is an essential skill, is actually declining because it is being displaced by various technological trends considered more "futuristic". Even more concerning, this "future readiness" approach is built on a questionable assumption—that education institutions can predict what kind of future students will face. In reality, the future is becoming increasingly difficult to predict due to rapid changes across various fields.

The implementation of these three principles in alternative education deal with a series of problems requiring wisdom and balance. The theomorphic principle must be carefully navigated to avoid the risk of indoctrination and open space for exploring transcendent dimensions while respecting diverse beliefs [42]. Eduhumanistic faces challenges in balancing human value development with traditional academic standard demands, yet enriches education with deeper and more meaningful dimensions. Meanwhile, the futuristic approach needs to be implemented in a way that does not ignore traditional wisdom while preparing learners for an uncertain future [43]. This balance creates a dynamic and transformative learning space within the autonomy-integration spectrum.

The autonomy-integration spectrum is a fundamental concept in the ADAE model, describing the dynamics of alternative educational institutions' positions within the broader education system. Alternative educational institutions operate in a complex spectrum between maintaining autonomy and integrating with the mainstream system. Each institution's position in this spectrum is not fixed but continuously moves as an adaptive response to various external and internal factors. This dynamic reflects the complexity of challenges faced by alternative educational institutions in balancing their unique identity with national education system demands. At full autonomy, alternative educational institutions have maximum flexibility in determining their educational program direction and implementation. Institutions at this position typically have very distinctive educational philosophies and tend to operate outside the national education regulatory framework. They have full authority in curriculum development, teaching method selection, and determining evaluation systems aligned with their vision. This freedom allows them to develop truly innovative pedagogical approaches responsive to their served communities' specific needs. Meanwhile, in limited autonomy-partial integration positions, alternative educational institutions show greater flexibility in adapting to the mainstream system. Institutions in this position tend to maintain their alternative education philosophy's

essence while adopting some national curriculum elements. These adjustments are often made to meet minimum regulatory standards or facilitate possible student transitions to mainstream education systems [44].

There is an interesting phenomenon that shows two different sides. The concept of “full autonomy” that is often touted by various educational institutions turns out to harbor a deep illusion. Facts on the ground reveal a different reality-even institutions that claim to have total independence remain bound and dependent on the mainstream education system in various fundamental aspects. This dependency appears in various forms, ranging from curriculum frameworks to assessment standards that are difficult to separate from the established system [45]. More interestingly, this phenomenon is intertwined with a striking legitimacy problem. There is a surprising inverse relationship: the higher the level of autonomy possessed by an educational institution, the lower the social legitimacy it obtains. This problem creates a fundamental dilemma in the effort to develop alternative education. Alternative education practitioners [46] seem to be faced with a difficult choice-between maintaining ideal independence but risking losing social recognition, or compromising with the mainstream system to maintain legitimacy in the eyes of society.

Alternative educational institutions often face a dilemma between maintaining their ideal values and facing the reality of existing social demands [47]. They have a vision and mission that differs from the mainstream, but on the other hand, there is pressure to “normalize” their programs for social acceptance. This creates complex internal struggles, where institutions must weigh how far they can compromise without losing the essence of their uniqueness. Alternative or radical educational models in their approach tend to experience difficulties in surviving in the long term. The high failure rate in such institutions serves as a warning that pure idealism without adjustment to social reality can backfire. Alternative educational institutions need to find the right balance-unique enough to provide different added value. The fundamental challenge lies in balancing distinctive educational philosophies with practical sustainability. These institutions often find themselves at a crossroads where they must carefully navigate between preserving their core alternative values and adapting to societal expectations. The pressure to conform to mainstream educational standards for the sake of social acceptance creates an ongoing tension. This tension is further complicated by the empirical evidence showing that highly alternative educational models frequently struggle with long-term viability. The significant failure rates observed in these institutions serve as a cautionary tale, suggesting that pure ideological commitment without pragmatic adaptation to social realities may ultimately prove unsustainable.

External and internal factors in ADAE reflect the complex dynamics that shape the position of alternative educational institutions within the autonomy-integration spectrum. In the external dimension, national education policies serve as a significant regulatory framework influencing institutional adaptation, where changes in curriculum standards and accreditation systems drive strategic adjustments. This aligns with Perner and Skjølsvik findings [48], which underscore how regulatory demands often drive institutional transformation. Technological developments, particularly in the context of industry 4.0 and society 5.0, present new imperatives in learning methodologies and competency development, as argued in the study by Alexander *et al.* [49] on digital transformation in education. Labor market dynamics and societal expectations also shape the external landscape influencing educational program orientation, where Iroriteraye-Adjekpovu and Nwabuku [50] identify strong connections between industry demands and the evolution of alternative education curricula.

Meanwhile, internal factors play a crucial role in determining the adaptive capacity of alternative educational institutions. The institution’s core values, reflected in its philosophy and vision-mission, form the ideological foundation that determines institutional flexibility in responding to external pressures. Buchanan *et al.* [51] emphasize that institutions with strong yet adaptive core values tend to be more successful in maintaining their identity while adapting to contemporary demands. Pedagogical innovation capacity and resource availability become determining factors in implementing adaptation strategies, where research by Youssef *et al.* [52] shows a positive correlation between innovation capacity and institutional sustainability. Leadership vision, as analyzed by Gallos and Bolman [53], serves as a strategic compass directing institutional navigation within the autonomy and integration.

The dynamic interaction between these external and internal factors creates unique adaptation patterns for each alternative educational institution. Miotto *et al.* [54] observes that adaptation success often depends on an institution’s ability to strategically align internal responses with external pressures. These findings are reinforced by Aleixo *et al.* study [55], which demonstrates how alternative educational institutions capable of effectively integrating external and internal factors show higher levels of sustainability and impact. The ability to balance these two dimensions becomes key in maintaining the relevance and effectiveness of alternative education amid an evolving educational stage.

Adaptation mechanisms in ADAE demonstrate two distinct yet complementary approaches across the autonomy spectrum. In the full autonomy position, alternative educational institutions implement more radical and transformative strategies. They actively engage in regulatory negotiations to create “regulation-free zones” through intensive public campaigns, develop entirely new educational paradigms through radical experimentation in learning, and establish educational laboratories to test revolutionary ideas unconstrained

by conventional systems [56]. This perspective is strengthened by creative synthesis that combines various educational traditions, traditional knowledge, modern science, and spiritual practices through a deep interdisciplinary approach [57]. Furthermore, these institutions strive to build self-sustaining alternative education ecosystems through the formation of networks and associations that develop independent standards and accreditation systems.

Meanwhile, in the context of partial-limited autonomy, alternative educational institutions adopt a more moderate yet effective approach. They conduct regulatory negotiations through formal channels such as advocacy and lobbying in policy-making processes, develop pedagogical innovations that balance external demands with alternative education philosophy, and perform curricular synthesis integrating national curriculum elements with unique alternative education components [56]. This strategy is reinforced by building strategic collaborations with various stakeholders, including mainstream educational institutions and industry, to enhance program legitimacy and relevance. The outcomes of these two approaches show significant differences. In the context of full autonomy, institutional legitimacy is built through community recognition and measurable project impacts [56], while learners develop practical skills relevant to contemporary challenges through direct experience in project management and complex problem-solving. Operational sustainability is achieved through flexible adaptation to local needs and resources [58], creating transformative impacts that contribute to fundamental changes in educational paradigms.

On the other hand, in the context of partial-limited autonomy, outcomes focus more on achieving legitimacy through recognition from formal education systems and regulators. These institutions can produce graduates with competencies relevant to contemporary societal needs, maintain long-term operations despite existing regulatory limitations, and create transformative impacts contributing to educational innovation and broader social change [58]. These differing outcomes reflect the complexity of challenges faced by alternative educational institutions in balancing idealism with practical demands, while maintaining the relevance and sustainability of their programs in an ever-changing socio-economic context.

In the context of modern education, educational institutions need to change the rigid perspective on the separation between alternative and mainstream education. This dichotomy may be no longer relevant to today's learning needs. What is needed is a fundamental transformation in viewing education a new paradigm capable of integrating elements of autonomy with integration in a more dynamic and adaptive model to change. The concept of "selective autonomy" becomes important in this transformation. Educational institutions need to develop the ability to strategically select which aspects need to be managed autonomously while maintaining beneficial integration with the broader system. This more fluid and flexible approach allows educational institutions to make appropriate decisions according to their context, without losing the benefits of connectivity with educational ecosystem. Thus, this fundamental reorientation paves the way for a more adaptive, contextual, and meaningful educational model for all stakeholders.

4. CONCLUSION

This research has produced findings about the ADAE pattern as a comprehensive framework for strengthening the position and optimizing alternative educational institutions in Indonesia. Built on three philosophical pillars (theomorphic, eduhumanistic, and futuristic), this model has successfully demonstrated its effectiveness in helping alternative educational institutions operate dynamically between full autonomy and integration with mainstream education systems. Through adaptation mechanisms including regulatory negotiation, pedagogical innovation, and curricular synthesis, ADAE enables institutions to respond to change and maintaining their unique identity. The successful of ADAE is evidenced by strong legitimacy from social impact and operational sustainability achieved through flexible adaptation to local needs and resources. This pattern not only contributes to the individual strengthening of alternative educational institutions but also to the transformation of the education system as a whole, especially in the context of Indonesia which is undergoing educational transformation with the implementation of the Merdeka Curriculum. Future research should focus on studying the effects of ADAE on student success and school sustainability, examining how ADAE works in different regions of Indonesia, exploring ways to combine ADAE with modern technology in education, testing ADAE in other types of alternative schools, and investigating how ADAE can help shape national education policies.

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AUTHOR CONTRIBUTIONS STATEMENT

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Pajar Hatma Indra Jaya	✓		✓		✓		✓		✓		✓		✓	

- C : Conceptualization
- M : Methodology
- So : Software
- Va : Validation
- Fo : Formal analysis
- I : Investigation
- R : Resources
- D : Data Curation
- O : Writing - Original Draft
- E : Writing - Review & Editing
- Vi : Visualization
- Su : Supervision
- P : Project administration
- Fu : Funding acquisition

CONFLICT OF INTEREST STATEMENT

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. This research was conducted without any commercial or financial relationships that could be construed as a potential conflict of interest. Additionally, the authors confirm the absence of any non-financial competing interests including political, personal, religious, ideological, academic, and intellectual interests that might impact the objectivity and validity of the presented findings. Authors state no conflict of interest.

ETHICAL APPROVAL

Research ethics before conducting the FGD, the researcher sent a letter of request for the willingness of the founder, teacher and expert to become research informants. The researcher also explained that later all data obtained through the FGD and interviews would be published and used for academic purposes. Their names will also be listed according to their real names, and the school will give permission. In addition, the alternative institution is also ready to help and select informants who meet the criteria. Before conducting the FGD, the researcher explained in detail about the initial research information to the details of each question and purpose. Even before the FGD was conducted, the researcher had sent sample questions to be discussed during the FGD. Ethical approval has been determined from the Institutional Research Committee of Universitas Negeri Yogyakarta for all aspects of this research.

DATA AVAILABILITY

Data supporting this study’s results are accessible through direct request to the corresponding author [MIFMR]. To protect participant confidentiality and comply with privacy requirements, the datasets are not deposited in public repositories.

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