Positive behaviour support through the learning environment diagnostic survey: A socio-legal preventive model for addressing student violence and bullying

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Abstract

This study aimed to develop and test an integrative model of Positive Behaviour Support (PBS) grounded in the Learning Environment Diagnostic Survey (LEDS) as a preventive framework for student violence and bullying within a socio-legal context. Employing a mixed-methods design, the research combined a quantitative survey of 250 students with qualitative, in-depth interviews involving 20 key stakeholders. The findings demonstrate the model's effectiveness, showing a significant reduction in violent behavior (mean score decrease from 3.21 to 2.18, $p < 0.05$) and a substantial increase in prosocial behavior (mean score rise from 3.45 to 4.12, $p < 0.01$). Qualitative data further supported these results, indicating improved student cooperation and reduced verbal harassment. The conclusion is that the PBS–LEDS model successfully bridges data-driven diagnosis with behavioral intervention, aligning with national legal frameworks like Law No. 35/2014 and Ministerial Regulation No. 46/2023. As such, it has significant practical implications for both educational practice and public policy, providing schools with a strategic tool to fulfill their legal obligations in safeguarding children.

1. Introduction

Improving quality and equity in education is the main challenge for the development of education in Indonesia, especially in welcoming the Golden Indonesia Vision 2045. The government has shown a serious commitment by allocating an education budget of 20% of the state budget since 2009 and has continued to increase significantly in the last decade, from Rp332.4 trillion in 2013 to Rp665.02 trillion in 2024 [1]. Theoretically, increasing the allocation of the education budget has implications for improving teacher welfare, improving the teacher-student ratio, and improving educational infrastructure [2, 3]. However, various studies show that the increase in the budget has not fully had a positive impact on the quality of student learning outcomes in Indonesia [4, 5].

Outside of academic issues, the issue of students' public civility is becoming an increasingly prominent problem [6, 7]. Public civility refers to the attitude of respect for social norms, obedience to rules, and the ability to interact ethically in social life [8, 9]. Ironically, various reports show an increase in cases of violence and bullying in schools, which reflects the low quality of public civility among students [7]. This phenomenon has received more attention after the Ministry of Education, Culture, Research, and Technology emphasised that intolerance, sexual violence, and bullying are the "three great sins" of Indonesian education [10, 11].

Data from the Indonesian Child Protection Commission (KPAI) shows that more than 180 cases of brawls between students occurred in 2021, while data from the Ministry of PPPA shows a significant increase in cases of bullying in schools since 2019 [12-14]. This situation raises fundamental questions about the effectiveness of the education system in instilling moral and civic values [15]. Several classical education thinkers emphasised that education is, in fact, an arena for character formation, morality, and social etiquette. John Dewey emphasised the social function of education in preparing individuals to contribute to social goals [16]. A similar view is put forward by Fuadi, et al. [17] and Ranam [18] who place education as a process of humanising humans to be independent, civilised, and cultured [19]. However, the reality is that education in Indonesia is still facing a "learning crisis" as Pritchett & Beatty warned that going to school but not learning [20].

Within this framework, a new approach is needed to respond to the phenomenon of violence and bullying of students [15, 21-23]. One of the most widely used models internationally is Positive Behaviour Support (PBS), which is a framework that integrates strategies for prevention, intervention, and reinforcement of positive behaviour in the context of schools and communities [24-26]. At the same time, the Learning Environment Diagnostic Survey (LEDS) instrument was used to map students' perceptions and experiences of the learning environment, which was proven to influence motivation, engagement, and social behaviour [27, 28].

The novelty of this research lies in the integration of the two approaches. If PBS has been emphasising behavioural interventions [24, 25] then LEDS provides a diagnostic basis to understand the root causes of learning environments that contribute to the emergence of violence and bullying. Thus, LEDS serves as a problem mapping tool that is then responded to through PBS intervention strategies. As far as literature searches are concerned, no research has been found that combines PBS and LEDS in a socio-legal context for the prevention of violence and bullying in schools. Therefore, this research not only contributes to the development of educational and social sciences but is also relevant to the realm of law and child protection policy.

Several previous studies have examined the effectiveness of Positive Behaviour Support (PBS) in increasing positive behaviour of students and reducing the tendency of problematic behaviour in schools [25, 29, 30]. Meanwhile, the Learning Environment Diagnostic Survey (LEDS) has proven to be a valuable instrument in mapping students' perceptions of the learning environment and its relationship with motivation and academic engagement [27, 28]. However, these studies are generally conducted separately, without integrating LEDS as a diagnostic basis in the application of PBS.

In addition, most PBS research still focuses on the context of educational psychology or classroom management, rather than on a socio-legal framework that considers the normative and regulatory implications of violent behaviour and bullying in schools. In fact, student violence is not only an educational issue, but also a social and legal problem that has an impact on the protection of children's rights and public civilisation. Thus, there is an important gap in the literature, namely the lack of an integrative model that links learning environment diagnosis (LEDS) with behavioural interventions (PBS) in a socio-legal context for the prevention of violence and bullying of students.

Based on this gap, this study aims to: First, develop an integrative model of Positive Behavior Support based on the Learning Environment Diagnostic Survey (LEDS) as a preventive approach to violence and bullying of students; Second, Identify the factors of the learning environment that contribute to the emergence of violent and bullying behaviors using LEDS; Third, Testing the effectiveness of the PBS-LEDS model in reducing the potential for violent behavior and improving the public civility of students in schools; and Fourth, Analysing the socio-legal implications of the application of the PBS-LEDS model in the framework of child rights protection and national education policies.

This research provides three main contributions. First, theoretical contributions in the form of unprecedented integration of PBS and LEDS, thus enriching the literature on behavioural interventions in the field of education. Second, a practical contribution is made by presenting an intervention model applicable to schools to minimise violence and bullying, in line with the vision of forming a Graduate Profile. Third, socio-legal contributions in the form of analysis of how this model can support child protection efforts, strengthen anti-violence education policies, and uphold the principles of social justice in the Indonesian education system.

2. Method

This study employed a research and development (R&D) design with a mixed-methods approach to develop and validate the integration of the Learning Environment Diagnostic Survey (LEDS) and Positive Behaviour Support (PBS) as

a preventive model against student violence and bullying. The R&D cycle included five stages: (1) preliminary study and problem identification, (2) model design, (3) limited trial, (4) model revision, and (5) implementation and evaluation. This design was selected because it allows for a comprehensive understanding of both quantitative dimensions—such as measuring the learning environment and behavioral changes—and qualitative insights into socio-legal dynamics within educational settings [31, 32]. The fieldwork was conducted in five high schools in DKI Jakarta identified as having a high prevalence of violence and bullying cases. Participants included students, teachers, principals, and school committees, recruited through purposive sampling with attention to gender, socio-economic background, and prior experiences with school violence [33, 34]. The quantitative survey involved 250 students, as determined through power analysis ($\alpha = 0.05$, power = 0.80), while 20 key informants participated in in-depth interviews to enrich the socio-legal dimension [35].

The primary instrument employed in this study was the LEDS, adapted for the Indonesian educational context to assess students' perceptions of classroom climate, teacher support, peer relationships, and school rule enforcement [36, 37]. Construct validity was confirmed through Confirmatory Factor Analysis (CFA), while internal reliability was supported with Cronbach's alpha coefficients above 0.70 [38, 39]. Complementary instruments included PBS-based behavioral observation checklists and semi-structured interview guidelines designed to capture multi-stakeholder perspectives—teachers, students, and policymakers—on violence prevention strategies and the implementation of relevant legal frameworks [40, 41]. The intervention module, labeled PBS–LEDS, was developed across three tiers of prevention: (a) universal strategies for fostering positive school culture, (b) targeted interventions for at-risk groups, and (c) intensive support for students with chronic behavioral problems [42, 43]. The trial lasted one semester, after which pre-test and post-test comparisons were carried out to assess model effectiveness [44].

Data analysis combined both quantitative and qualitative techniques. Quantitative data were processed through descriptive statistics to profile the learning environment and measure baseline levels of violence, followed by regression or logistic models to examine relationships between environmental factors and violent behavior [35, 45]. Model effectiveness was evaluated using paired sample t-tests or repeated-measures ANOVA, depending on data structure [46, 47]. Thematic analysis was applied to interview transcripts to identify key socio-legal issues, particularly the implementation of child protection laws and anti-violence norms in schools [48]. Triangulation between quantitative and qualitative findings was conducted to enhance validity [49, 50]. Ethical clearance was obtained from the university's ethics committee, with informed consent collected from all participants. The study adhered to principles of confidentiality, voluntary participation, non-maleficence, and justice, ensuring that participants' rights were protected and that the research contributed to educational improvement and child protection [51].

3. Result and Discussion
3.1. Learning Environment Diagnosis Results (LEDS)

The results of a survey using the Learning Environment Diagnostic Survey (LEDS) of 250 students showed that the learning environment factors that contributed the most to the emergence of violent and bullying behaviours were:

Table 1.
LEDS Survey Results.

No.	Learning Environment Factors	Red Score (1-5)
1	Teacher support for students	2.98
2	Classroom climate (one-way communication)	3.1
3	Social relations between students	2.85

Table 2.
LEDS Regression Analysis of Aggressive Behaviour.

No.	Variable Predictor	Coefficients Beta (β)	p-value
1	Teacher support for students	0.18	0.07
2	Classroom climate (one-way communication)	0.42	0.001
3	Social relations between students	0.35	0.005

The results of the regression analysis showed that the classroom climate ($\beta = 0.42$; $p < 0.01$) and social relations between students ($\beta = 0.35$; $p < 0.01$) were factors that had a significant influence on the potential for aggressive behaviour in students. Meanwhile, the teacher support variable ($\beta = 0.18$; $p = 0.07$) did not show a significant effect. These findings provide some important implications both theoretically and practically.

First, the magnitude of the beta coefficient in Classroom climate emphasises that the learning atmosphere dominated by one-way communication, minimal participation, and lack of student involvement in class decision-making, triggers the emergence of aggressive behaviour and resistance. This aligns with the literature, which suggests that a participatory classroom climate can help suppress violent behaviour by fostering a sense of belonging and attachment to the learning environment [24, 25, 28]. In the framework of Positive Behaviour Support (PBS), a conducive classroom climate is a primary prevention aspect that must be strengthened to reduce the risk of problematic behaviour [26].

Second, the significant influence of Social Relations Between Students emphasised that social status inequality, exclusion, and discriminatory practices between students are one of the roots of bullying problems [13, 15]. This condition shows that violence does not only originate from individuals, but is also a structural phenomenon born from unequal social interactions [21]. In the PBS-LEDS integrative model, this data is an important foothold in designing secondary and tertiary

interventions that target groups of students with social exclusionary tendencies, while strengthening positive social networks between students [30, 52].

Third, although the Teacher Support is insignificant in this regression model, it does not mean that the factor is irrelevant. Low teacher support still contributes to students' perceptions of a sense of security and comfort in learning [52, 53]. However, the low statistical significance can be explained by the presence of other mediating factors, such as school policies or the role of peers, which are more dominant in shaping student behaviour. Therefore, teacher support remains important within the framework of PBS, especially in building a consistent positive reinforcement system.

From a socio-legal perspective, these findings show that violence and bullying in schools cannot be seen solely as individual problems, but also as the failure of social systems in creating a healthy classroom climate and social relations [54]. The legal implication is the need for school policies that not only emphasise the disciplinary aspect, but also are based on empirical data such as LEDS to prevent discrimination, protect children's rights, and fulfil the constitutional mandate of education as a means of shaping public morals and civilisation [55, 56]. The integration of PBS-LEDS with the legal policy framework can be a more effective preventive strategy than a reactive approach, such as sanctions alone.

Thus, this discussion reinforces the argument that the PBS-LEDS model can be a relevant preventive instrument in the context of Indonesian education, while supporting child protection regulations and contributing to the achievement of national development goals towards the Golden Indonesia Vision 2045.

3.2. Effectiveness of the Positive Behaviour Support (PBS) Model

After a PBS-based intervention designed with three levels of prevention, significant changes were found in students' behaviour. The results of the paired sample t-test showed a decrease in the violent behaviour score from 3.21 to 2.18 ($p < 0.05$) and an increase in the prosocial behaviour score from 3.45 to 4.12 ($p < 0.01$).

Table 3.
PBS Model Effectiveness (Pre-test vs Post-test).

No.	Behavioral Indicators	Pre-test (Mean)	Post-test (Mean)	p-value
1	Violent Behavior	3.21	2.18	0.05
2	Prosocial Behavior	3.43	4.12	0.01

Changes in Student Behaviour Scores After PBS Intervention can be seen in the following bar chart:
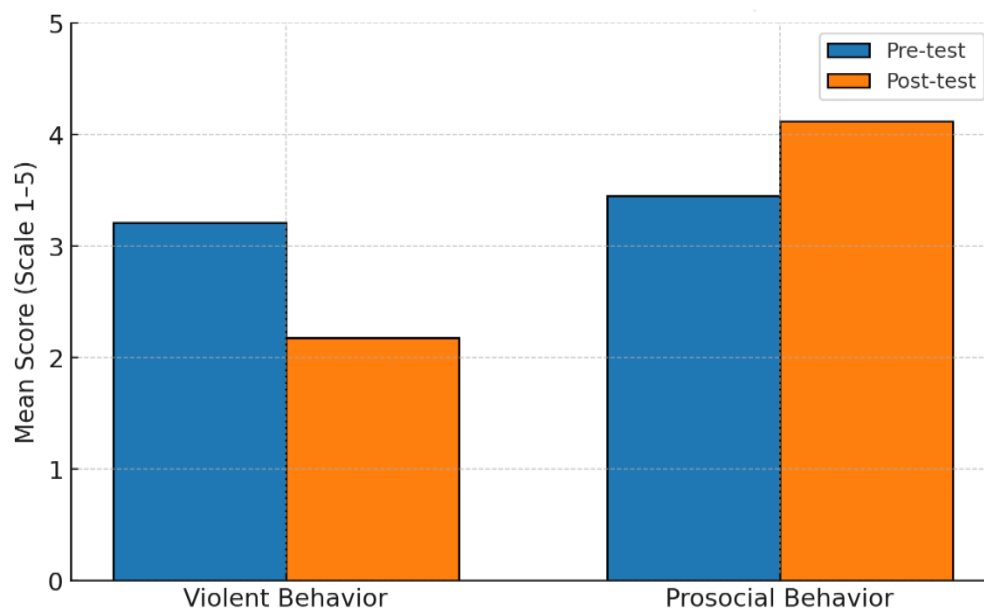
Figure 1.
Comparison of Pre-test and Post-test Scores After PBS Intervention.

Based on Table 3 and Diagram 1, it is evident that Positive Behaviour Support (PBS) interventions, as assessed by the Learning Environment Diagnostic Survey (LEDS), have a significant impact on student behaviour. The results of the paired sample t-test showed a decrease in violent behaviour score from 3.21 at the pre-test to 2.18 at the post-test ($p < 0.05$). This proves that the implementation of PBS has been successful in suppressing the tendency of aggressive behaviour among students, both in the form of physical and verbal violence. These findings align with research by Iriyani et al., who found that PBS is a practical preventive approach for reducing problematic behaviours in children and adolescents through positive reinforcement strategies [25].

In addition, the prosocial behaviour of students also increased significantly from 3.45 to 4.12 ($p < 0.01$). This increase shows that PBS not only serves as an instrument for preventing negative behaviour but is also able to encourage the

formation of positive behaviours, such as adherence to rules, cooperation, and active participation in groups. Practically, this supports the view of Carberry et al. and Mahabbati et al. that PBS provides a comprehensive framework in building a more conducive and inclusive classroom climate [30, 52]. Thus, the integration of LEDS-PBS can be seen as an effective strategy to shape the public civility of students while strengthening a healthy and safe school culture.

The quantitative results are even stronger with the support of qualitative data obtained from teacher interviews and observations. Teachers reported an increase in students' compliance with class rules, a reduction in the practice of verbal taunts that previously appeared frequently, and an increase in students' active participation in group work activities. These qualitative findings show that behavioural changes are not only reflected in statistical numbers but also manifest in the dynamics of daily interactions in the learning environment. Thus, LEDS-based PBS interventions have been proven to create a more conducive, collaborative, and inclusive classroom climate, while strengthening quantitative findings regarding the reduction of violent behaviour and the improvement of prosocial behaviour among students.

Table 4.
Qualitative Narrative of Teachers and Students Related to the Effectiveness of PBS.

Report	Narrative Quotes	Main Theme
Teacher 1	After the PBS program was implemented, the children were more willing to cooperate in group discussions. Usually, they are reluctant, but now they support each other."	Increased collaborative participation
Teacher 1	"Cases of verbal ridicule have decreased. Previously, there were often students who mocked the names of their parents or the physical appearance of their friends; now it is almost unheard of."	Decreased verbal-aggressive behaviour
Counselling Guidance Teacher	"Students who have been bullied in the past now come for counselling more often and seem more open to telling their problems."	Changes in student behaviour at risk
Student A	"I feel more comfortable in the classroom because teachers often reward us if we work well together."	Reinforcement of positive motivation
Student B	"Friends now fight less often. If there is a problem, it is usually quickly solved by talking in class."	More conflict resolution

The qualitative results revealed a significant transformation in classroom dynamics following the implementation of PBS interventions. Teachers reported that students became more cooperative in following class rules, with reduced resistance to rules that were previously often violated. In addition, cases of verbal ridicule that often trigger conflicts between students have decreased significantly. This condition reflects the creation of a more conducive classroom atmosphere, where norms and rules are obeyed not because of coercion, but because of a collective consciousness that maintains harmony in social interactions.

Furthermore, PBS interventions at the secondary and tertiary prevention levels have succeeded in having a positive impact through counselling mechanisms. Students who have previously been involved in bullying cases show more adaptive behavioural changes, characterised by openness in accessing counselling services and a willingness to dialogue with the supervisor. This shows that PBS is not only effective in preventing aggressive behaviour, but also in facilitating social recovery for high-risk students. PBS-based counselling is a safe and supportive intervention space to break the cycle of recurrent violence [57].

Thematic analysis of qualitative data resulted in five main themes that reinforce the effectiveness of PBS, namely: (1) increased collaborative participation of students; (2) a decrease in verbal-aggressive behavior; (3) open access to counseling for at-risk students; (4) strengthening positive motivation through teacher reinforcement; and (5) changing the pattern of conflict resolution in a more constructive direction. These themes show that PBS serves not only as a disciplinary strategy but also as a framework for character formation and public civility. Thus, PBS interventions can encourage the development of a school ecosystem that is more inclusive, supportive, and focused on fostering positive student behaviours [58].

3.3. Thematic Analysis of Interviews (Socio-Legal)

Interviews with 20 key informants, comprising teachers, students, parents, and principals, reveal three main themes relevant to the socio-legal context of violence prevention in schools. First, there is an unclear implementation of anti-violence policies, despite the existence of national regulations, such as the Regulation of the Minister of Education and Culture (Permendikbud), on the prevention of violence. However, their implementation is still sporadic, partial, and minimally socialised at the school level. Second, school leaders emphasised the need for data-driven interventions, where instruments such as the *Learning Environment Diagnostic Survey (LEDS)* are considered important as an empirical basis for designing more contextual *Positive Behaviour Support (PBS)* interventions. Third, the theme emerged about **the** urgency of legal protection of children, especially from the perspective of parents, who consider that cases of violence in schools are not only a matter of educational discipline, but also part of the fulfillment of children's rights to a sense of security and comfort in learning in accordance with Law No. 35 of 2014 concerning Child Protection and Permendikbud Number 46 of 2023 concerning the Prevention and Handling of Violence in the Education Unit Environment.

Table 5.
Main Themes of Socio-Legal Interviews.

Main Theme	Description	Informant Quotes
Lack of clarity in the implementation of anti-violence policies	Regulations already exist, but the lack of socialisation and implementation is inconsistent.	*"Schools know there are rules for preventing violence, but it is not clear how to implement them."* (Teacher)
The need for data-driven interventions	LEDS is seen as an effective diagnostic tool for understanding the real conditions of the classroom.	*"LEDS helps us look at classroom issues more objectively, so PBS interventions can be more precise."* (Principal)
The urgency of children's legal protection	Violence in schools is perceived as a violation of children's right to a sense of security and comfort in their learning environment.	*"Bullying cases are not only a problem of delinquent children, but also a matter of children's rights that must be protected."* (Parents)

The first theme that emerged from the results of the study was policy ambiguity, which indicated that there was a gap between formal regulation and implementation at the school level. Although the government has issued national regulations, such as Permendikbud Number 46 of 2023 concerning the Prevention and Handling of Violence in Education Units, their implementation in the field remains sporadic and has minimal socialization. This condition makes it difficult for schools to make policies a consistent reference in preventing violence and bullying. Thus, the main problem is not the absence of regulations, but the weak implementation and supervision mechanism in the educational environment [59].

The second theme is data-driven interventions, which emphasise the importance of LEDS as a diagnostic instrument for mapping the real conditions of the learning environment. By using LEDS, schools can obtain an empirical picture of the risk and protective factors that influence the emergence of violent and bullying behaviours. This data serves as the basis for implementing Positive Behaviour Support (PBS), ensuring that the interventions carried out are tailored to the specific context of each school. These findings confirm that anti-violence education policies need to be supported by empirical instruments in order to be implemented effectively and measurably.

The third theme is the legal protection of children, which shows that the problem of violence in schools is not only related to the pedagogical realm, but also directly related to the fulfillment of children's rights as stipulated in Law No. 35 of 2014 concerning Child Protection. By placing LEDS-PBS as part of the legal protection framework, the school not only carries out its educational function, but also carries out its constitutional mandate to ensure the security and public civility of students. These findings strengthen the argument that the integration of PBS and LEDS is a socio-legal instrument that can bridge education policy with child protection regulations, thereby creating harmonisation between school-based interventions and national regulatory frameworks.

Based on the explanation above, the following visualisation shows how the gap in policy implementation in schools, the need for empirical diagnostic instruments such as LEDS, and the urgency of children's legal protection are interconnected in the socio-legal dimension of the PBS–LEDS model.
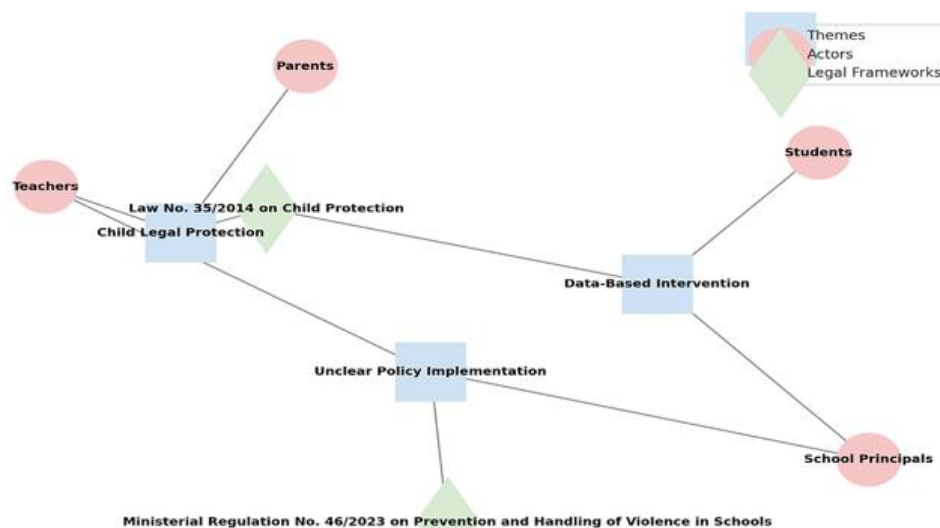
Figure 2.
Network Map: Relationship between Themes, Actors, and Legal Framework.

The network map above (Figure 2) shows the complex relationships between the main themes, educational actors, and legal or regulatory frameworks in the context of preventing violence and bullying in schools. The three main themes that emerge—ambiguity in policy implementation, data-driven interventions, and children's legal protections—represent structural, practical, and normative aspects of efforts to create safe learning environments. The involvement of educational actors, such as teachers, students, parents, and principals, demonstrates that the problem of violence cannot be addressed partially; it requires a collaborative approach that combines classroom interventions, family support, and school leadership. On the other hand, legal frameworks such as Permendikbud Number 46 of 2023 and Law Number 35 of 2014 are

regulatory umbrellas that strengthen the legitimacy of interventions, while ensuring that violence prevention is in line with the principles of child rights protection.

This diagram confirms that the integration of Positive Behaviour Support (PBS) and Learning Environment Diagnostic Survey (LEDS) works on two interrelated levels: pedagogical and socio-legal. At the pedagogical level, LEDS serves as an empirical instrument to map the conditions of the learning environment, which then forms the basis for the application of PBS in systematically changing student behavior. At the socio-legal level, the implementation of this model cannot be separated from educational actors and the national regulatory framework that is the normative foundation. Thus, PBS-LEDS is not only an educational strategy but also a public policy instrument that bridges the gap between formal regulation and practice in schools. This demonstrates the significant contribution of this research in facilitating harmonisation between school-based interventions and the national legal framework, thereby strengthening child protection and promoting public civility among students.

3.4. PBS–LEDS: Social and Legal Perspectives

The results of this study confirm that integrating the Learning Environment Diagnostic Survey (LEDS) with Positive Behaviour Support (PBS) is a strategic innovation that connects the social and legal dimensions in efforts to prevent violence and bullying in schools. From a social perspective, this approach suggests that students' behaviour is not innate, but rather influenced by structural factors such as classroom climate, social relationship patterns, and the quality of teacher support [15, 54]. By utilising LEDs as a diagnostic tool, schools obtain accurate empirical mapping of the learning environment's conditions. This allowed PBS interventions to be designed more contextually, not only suppressing violent behaviour—which was shown to decrease significantly from a score of 3.21 to 2.18 ($p < 0.05$)—but also encouraging the reinforcement of prosocial behaviours that increased from a score of 3.45 to 4.12 ($p < 0.01$). These findings broaden the horizons of the PBS literature, which has previously tended to focus on the technical aspects of behaviour reinforcement, by presenting the early diagnosis dimension as the foundation of more sustainable social interventions.

Legally, the integration of PBS–LEDs can be viewed as a crucial instrument in upholding the principles of children's rights and social justice. Law Number 35 of 2014 concerning Child Protection expressly mandates that every child has the right to a sense of security, to be free from physical and psychological violence, and to have the opportunity to develop in a healthy educational environment. Similarly, Permendikbud Number 46 of 2023 concerning the Prevention and Handling of Violence in Education Units is present as a normative instrument to regulate the mechanism for preventing violence in schools. However, this regulation often faces implementation problems in the field, both due to a lack of socialization and weak enforcement at the level of educational units [54]. In this context, PBS-LEDS presents added value because it not only relies on normative rules but also provides a data-based framework that can serve as a reference for schools in fulfilling their concrete legal obligations. In other words, PBS-LEDS acts as a bridge that connects national regulations with daily educational practices, while ensuring that the principles of child protection are truly internalised in the education system.

Furthermore, this integrative approach has strategic significance for the national development agenda towards the Golden Indonesia Vision 2045. Education cannot be viewed solely as a process of knowledge transfer, but rather as an arena for socialising values, forming collective morals, and strengthening public civilisation [7, 18, 19]. The PBS–LEDS model addresses these challenges by offering a preventive mechanism that changes the paradigm of schools from simply being responsive to cases of violence to being proactive in building a culture of peace and collaboration. Socially, this strengthens the capacity of schools to produce a generation that is tolerant, empathetic, and has constructive conflict resolution skills. Meanwhile, legally, this model strengthens the position of education as an institution that not only produces competitive human resources but also ensures the protection of children's rights, in accordance with the constitutional mandate. Thus, PBS-LEDS is not only relevant as a pedagogical strategy but also as a public policy instrument that can integrate social and legal approaches to realise an educational system that is equitable, inclusive, and sustainable.

This research makes an important theoretical contribution to the development of educational, social, and legal literature. First, the integration of LEDS with PBS expands the conceptual framework of PBS, which has been more focused on individual behaviour strengthening strategies. By adding a diagnostic dimension of the learning environment, this model confirms that violent and prosocial behaviours are not only the result of individual interactions, but are products of the social structure of the classroom, learning climate, and patterns of relationships between students. Second, this study enriches socio-legal studies by presenting empirical evidence that educational interventions can function as an instrument for child protection, so that education is not only understood as a pedagogical practice, but also as an implementation of human rights principles in the realm of education. Third, these findings open up space for the development of multidisciplinary educational intervention theories, combining the perspectives of educational psychology, behavioural sociology, and child protection law in one integrative model.

From a practical perspective, this study emphasises the importance of a data-driven approach to support anti-violence policies in schools. First, LEDS can be used as a routine diagnostic tool that helps teachers, counsellors, and principals identify risk and protective factors in the classroom, allowing for more contextually and effectively implemented PBS interventions. Second, the results of this study support the implementation of national regulations, such as Permendikbud Number 46 of 2023 and Law No. 35 of 2014, by providing concrete mechanisms to bridge normative policies with daily educational practices. Third, the implementation of PBS-LEDS has the potential to strengthen the capacity of schools as agents of child protection, not only in the academic dimension, but also in the formation of morals, public civilisation, and

a culture of peace. Thus, this model can be a reference for policymakers, educational institutions, and civil society organisations in designing systematic, equitable, and sustainable violence prevention strategies.

4. Conclusion

This study confirms that the integration of the *Learning Environment Diagnostic Survey* (LEDS) with *Positive Behaviour Support* (PBS) is an effective preventive model in suppressing violent behaviour while increasing the prosocial behaviour of students. Through the mapping of the learning environment with LEDS, PBS interventions can be designed more contextually so that they are not generic, but according to the specific needs of the school. From a socio-legal perspective, PBS-LEDS not only functions as a pedagogical strategy but also as a child protection instrument that supports the implementation of national regulations, including *Law No. 35 of 2014 concerning Child Protection* and *Permendikbud Number 46 of 2023*. Thus, this model contributes to the creation of an education ecosystem that is safe, inclusive, and in line with the goals of developing the nation's character towards the Golden Indonesia Vision 2045.

Although it provides significant findings, the study has some limitations. First, the research was conducted within the scope of secondary schools in urban areas, so generalisation of the results to the context of rural schools or those with different socio-cultural conditions needs to be done carefully. Second, quantitative data placed more emphasis on measuring student behaviour through LEDS and PBS pre-post tests, while other variables, such as family roles, community factors, or social media influences, have not been explored in depth. Third, the duration of intervention implementation is relatively limited, spanning only one semester, so the long-term effectiveness of the PBS–LEDS model cannot be fully verified.

Further research is suggested to expand the scope by involving schools in various contexts, both rural and multicultural, in order to strengthen the external validity of the PBS–LEDS model. Additionally, it is necessary to incorporate new variables, such as family support, community involvement, and digitalisation factors, that currently influence student interaction patterns. Longitudinal research is also important to assess the sustainability impact of PBS–LEDS interventions in the long term. Furthermore, cross-country comparative studies can provide a global perspective on how this model is adapted according to different legal and cultural frameworks, so that PBS–LEDS can develop as a universal preventive framework in preventing violence and bullying in schools.

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