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A TRIPLE HELIX FRAMEWORK FOR COMBATING CYBERBULLYING: A POLICY-ORIENTED APPROACH IN INDONESIA

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ABSTRACT

Rapid technological advancement has transformed patterns of social interaction, creating both opportunities and new societal challenges, including the increasing prevalence of cyberbullying in Indonesia. While existing approaches primarily emphasize legal enforcement and victim protection, they often overlook the importance of multi-stakeholder collaboration and socio-cultural dynamics in addressing this issue. This study proposes a conceptual policy framework based on the Triple Helix of Shared Responsibility, highlighting the interconnected roles of government, academia, and industry in mitigating cyberbullying. Rather than conducting a systematic review, this study integrates relevant scholarly insights and policy perspectives to develop a comprehensive analytical framework. The analysis suggests that cyberbullying cannot be effectively addressed through isolated interventions. Instead, it requires coordinated efforts that combine regulatory measures, technological innovation, and educational initiatives. This study contributes to the literature by extending the Triple Helix framework into cybercrime policy discourse and offers practical implications for developing collaborative strategies to foster a safer digital environment in Indonesia.

KEYWORDS: Cybercrime, Cyberbullying, Criminal Policy.

1. INTRODUCTION

Cyberbullying has emerged as a significant social and cultural challenge in the digital era, particularly in developing countries such as Indonesia (Safaria & Ariani, 2024). The rapid expansion of social media platforms has transformed patterns of communication, enabling both positive interaction and harmful behavior, including online harassment. While cyberbullying has been widely discussed from legal, psychological, and technological perspectives, there remains a lack of integrative policy-oriented frameworks that address the issue through a multi-stakeholder lens.

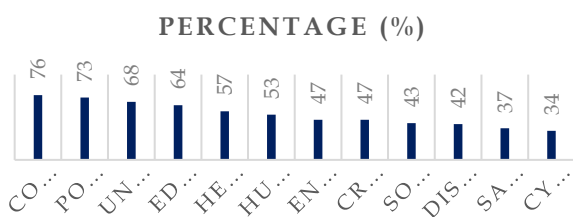


Figure 1. Socio-Economic Problems that the President Needs to Address Immediately in 2024 According to Young People (August-September 2023)

Source: Muhamad (2024)

Nazriani & Zahreni (2017) highlight that this issue presents a significant challenge for the development of information and communication technology. According to the Ministry of Communication and Information (Kemenkominfo), ninety percent of Indonesians actively use media, which provides a platform for abusive behavior, such as content that is offensive and blasphemous and that harms individuals or specific groups (Muzakir et al., 2022). In addition to causing psychological suffering, the impact on victims extends beyond the realm of physical harm. According to Laurensius et al. (2019), victims are subjected to a wide range of forms of harm, including offenses related to the deprivation of liberty, persecution, extortion, criminal threats, unpleasant acts, and public threats. Moreover, according to the data by Jayani (2019), as shown in percentages in Figure 2, the data demonstrates the diverse range of tactics employed by individuals in reaction to cyberbullying encountered on social media. 31.6% of individuals exhibit a preference for disregarding cyberbullying instances, demonstrating a passive stance towards addressing such occurrences. Merely 7.9% opt to immediately address the bullies, whilst a lesser proportion, 5.2%, opt to delete the unpleasant remarks. Only a small proportion of respondents, namely 3.6%, disclose instances of cyberbullying to authorities. In addition,

at least 0.7% employ alternative, undefined approaches to tackle the problem. These findings emphasize the diverse array of coping strategies employed by individuals confronted with cyberbullying on social media, underscoring the necessity for customized treatments and awareness efforts aimed at promoting more proactive and efficient reactions to online harassment.

Existing approaches tend to focus on regulatory enforcement or victim protection, often overlooking the complexity of social interaction and the shared responsibility among key actors in digital ecosystems. This limitation highlights the need for a more comprehensive analytical framework that goes beyond fragmented perspectives.

Therefore, this study aims to propose a conceptual policy framework for addressing cyberbullying in Indonesia by adopting the Triple Helix of Shared Responsibility approach, which emphasizes the collaborative roles of government, academia, and industry. By positioning cyberbullying as both a policy and socio-cultural issue, this study seeks to contribute to the development of a more integrated and sustainable strategy for digital safety.

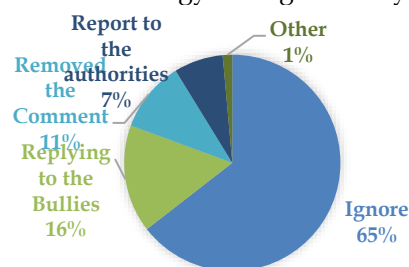


Figure 2. Response to Bullying on Social Media (%)
Source: Jayani (2019)

The legal framework includes *Undang Undang Nomor 19 Tahun 2016* (Law Number 19 of 2016), which amends *Undang Undang Nomor 11 Tahun 2008* (Law Number 11 of 2008) concerning Information and Electronic Transactions. This amendment aims to strengthen legal enforcement. According to Amandangi et al. (2023), this law makes it a criminal offense to distribute, transmit, or access information that violates fundamental human decency, including gambling, insults, defamation, extortion, or threats against individuals. Nevertheless, protecting victims is not merely a matter of concern. Additionally, it falls under the purview of *Undang Undang Nomor 31 Tahun 2014* (Law Number 31 of 2014), which is an amendment to *Undang Undang Nomor 13 Tahun 2006* (Law Number 13 of 2006) regarding the protection of witnesses and victims. The obligation to provide assistance and protection to victims is brought to light by this law. This article highlights the

importance of institutions such as LPSK in the process of protecting these rights. From a human rights perspective, cyberbullying is deemed a violation as stated in Article 9, paragraph 2 of Law Number 39 of the of 1999, which ensures the right to live in a secure and joyful environment. The Child Protection Law Number 35 of the of 2016 addresses the impact that cyberbullying has on children. Emphasizes the need for protection against forms of violence and abuse, including bullying (Nansi, 2024). Despite having regulations in place, Indonesia still grapples with the issue of cyberbullying. According to a survey conducted by APJII (Association of Internet Service Providers), around 49 percent of internet users are affected (Candra et al., 2021; Nansi, 2024). According to Wahanisa et al. (2021), there are shortcomings in existing regulations as they fail to define and specifically tackle forms of cyberbullying. The misuse of rights that allow perpetrators to hide behind anonymity and create accounts exacerbates the challenge of addressing cyberbullying (Alhakim et al., 2023). This significantly complicates efforts to combat this issue.

Therefore, it is crucial to minimize the negative impacts of information and communication technology through appropriate regulatory and social interventions (Nazriani & Zahreni, 2017). Cyberbullying in Indonesia is widespread and often involves ethnicity, religion, race, and other deeply rooted issues. This study builds upon research that has examined policies by Frensh et al. (2021) and Frensh & Mulyadi (2018), showed that relying solely on criminal policies has its limitations. Apart from recognizing the importance of values, cultural norms, and technological accountability, it highlights the moral responsibility we bear in combating cyberbullying. Various legal studies have extensively explored this topic, shedding light on the complexities of cyberbullying and the shortcomings of current regulations (Amandangi et al., 2023; Chakan & Millenio, 2023; I. O. Dewi, 2023; Ganefi & Hatikasari, 2022; Meinarni, 2019; Nansi, 2024; Nugraheni, 2021; Rasdi et al., 2021; 2018; Wahanisa et al., 2021). Furthermore, research focused on media has also contributed to our understanding of cyberbullying by providing insights into its forms. These attacks are often directed at individuals or groups, amplifying psychological harm through digital exposure (Audinia et al., 2023; Kurniasih et al., 2019; Rahman et al., 2022). However, from policy studies, perspective, research on cyberbullying remains limited. Therefore, this research aims to fill this gap by proposing an approach to combat cyberbullying in Indonesia from the point of view of

policy studies by adopting the triple-helix role.

This study fills a gap in Indonesian cyberbullying research by approaching the issue from a perspective, rather than solely legal or psychological frameworks. Previous works have focused on regulation gaps, victim protection, or media analysis, but few have systematically applied the triple helix model—government, academia, and industry—as a shared responsibility framework. By integrating this model, the study contributes both theoretically, by extending policy studies into cybercrime discourse, and practically, by offering a structured roadmap for stakeholder collaboration in Indonesia.

2. LITERATURE REVIEW

Cyberbullying is a prevalent societal issue that encompasses two distinct groups: cyberbullies and cyber victims. This differentiation aids in comprehending the responsibilities of individuals who perpetrate damage and those who experience the consequences of technology-facilitated harassment. Cyberbullies are those who deliberately and persistently inflict damage on others using electronic devices such as phones or computers. Cyber victims refer to those who encounter adverse conduct when utilizing technology, such as smartphones and computers (Nazriani & Zahreni, 2017). This study argues that cyberbullying is influenced by several causes, including five tightly interconnected characteristics. The determining element is the endorsement from peers, which exhibits a robust correlation with participation in cyberbullying (Apdillah et al., 2022). Furthermore, research conducted by Handono et al. (2019) has revealed that family members' opinions towards cyberbullying and problematic Internet use, as well as the support they provide for self-esteem, are significant variables associated with engaging in such activity. Cyberbullying transcends geographical and social boundaries, making it more complex to regulate and control.

Cyberbullying can occur in both digital realms. It refers to recurring acts or activities that aim to target individuals or groups as a means of avoiding confrontation or self-defense (Arifin et al., 2022). This description highlights the essence of cyberbullying and its ability to transcend boundaries. When we examine the forms of cyberbullying that occur online, we can categorize them into two types: direct and indirect cyberbullying (Sarna & Bhatia, 2017). Direct cyberbullying involves the transmission of content, such as text messages, photos, videos, or audio files, with the intent to harass or torment others. On the other hand, indirect cyberbullying employs a subtle

approach to harass or torment individuals. These behaviors include spreading rumors, sharing information, associating meanings with pictures, and purposefully excluding the victim from social interactions (Nufus, 2025; Nugroho & M. Sopyan, 2023). It is important to note that these actions specifically target an audience on media platforms and exacerbate the pain and humiliation experienced by the victim (Sarna & Bhatia, 2017). Cyberbullying must be addressed and mitigated by understanding actions and societal and technological factors. These factors interact to make cyberbullying difficult to combat. Understanding cyberbullying helps develop strategies and interventions to reduce its impact on individuals and society

3. RESEARCH METHODOLOGY

This study employs a qualitative conceptual approach to analyze and develop a policy framework for addressing cyberbullying in Indonesia. Rather than focusing on primary data collection, this research synthesizes existing knowledge and theoretical insights to construct a comprehensive understanding of cyberbullying as a socio-cultural and policy issue.

The analytical framework used in this study is the Triple Helix of Shared Responsibility, which emphasizes the interaction between government, academia, and industry. This framework is utilized to examine how each stakeholder contributes to the prevention and mitigation of cyberbullying within the digital environment.

The study draws upon relevant scholarly discussions, policy documents, and empirical findings from prior arguments as a basis for conceptual development. These sources are not treated as objects of systematic review, but rather as supporting materials to strengthen analytical arguments and theoretical positioning.

Through this approach, the study aims to move beyond descriptive analysis and provide a critical and integrative perspective on cyberbullying governance in Indonesia.

4. RESULTS

This study does not merely summarize existing findings, but seeks to reinterpret cyberbullying through a policy-oriented and multi-stakeholder perspective. By applying the Triple Helix framework, the analysis focuses on how interactions between government, academia, and industry shape both the challenges and potential solutions in addressing cyberbullying. According to the Scopus analysis by observing "Roles in Combatting Cyberbullying," it

emphasizes the importance of collaboration and shared responsibility among three groups: government, industry, and academia. This is illustrated in Figure 3. Therefore, we apply the helix approach in this context, drawing from policy studies (Dai *et al.*, 2023; Ranga & Etzkowitz, 2013). The Triple Helix of Shared Responsibility is a framework that involves a partnership between government, industry, and academia. It plays a role in our efforts to tackle cyberbullying in Indonesia. This triple helix has been previously discussed in policy studies (Lerman *et al.*, 2021; Porto *et al.*, 2012; Rodrigues & Melo, 2013; Tortia, 2018). Although the triple helix model has been widely acknowledged in Indonesia, its implementation and contribution remain relatively low, particularly in terms of national policy formation (Sunitiyoso *et al.*, 2012). This kind of approach also serves as a control mechanism for evaluating the efficiency and effectiveness of policy implementation (Amaral *et al.*, 2024; Jovanović *et al.*, 2022).

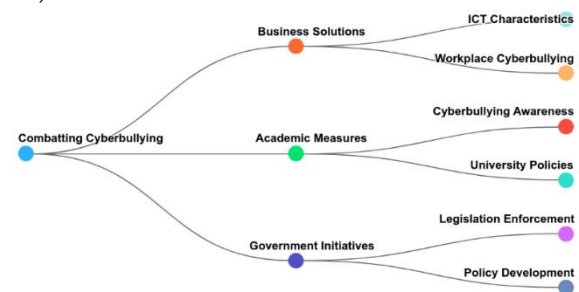


Figure 3. Concept Map of Strategy to Combat Cyberbullying

Sources: Scopus Analysis. (2024)

4.1. Government's Key Role: Cyberbullying Policy and Enforcement

One of the case studies is the issue of cyberbullying in West Kalimantan, which is a concern, among middle school students who lack knowledge and understanding about this problem due to limited resources, publications, and government initiatives dedicated to addressing cyberbullying in the region (P. S. Setiawan *et al.*, 2018). This highlights the need for government involvement and the formulation of policies to address the deficiencies in knowledge and resources. Although Indonesian law acknowledges cyberbullying concerning information and electronic transactions, there are shortcomings in the existing legislation. The amendments made in Law No. 19 of 2016 were insufficient in broadening the scope of regulations against cyberbullying. The argument states that these limitations are justified because the Criminal Code was established before technological

advancements occurred in Indonesia. Paradoxically, although the law recognizes cyberbullying as a phenomenon, it primarily focuses on incidents that occur in the world, disregarding the widespread impact of virtual victimization (Erliyani, 2022). This discrepancy raises doubts about whether the legal system addresses cyberbullying. Efforts to combat cyberbullying involve both nonpunitive approaches. Punitive efforts concentrate on implementing measures that impose penalties on wrongdoers to discourage offenses.

The legal basis for implementing these restrictions stems from the Indonesian Criminal Code (KUHP) and Law No. 11 of 2008, which deals with Information and Electronic Transactions. On the other hand, efforts that do not involve punishment aim to prevent cyberbullying by addressing the underlying factors contributing to such offenses. These non-punitive measures include promoting education, enhancing security in information and communication systems through technological means, fostering global cooperation for data access, optimizing government roles in regulating social media content, and emphasizing the media's role in reporting cyberbullying crimes (Mahendra et al., 2020). However, there are still shortcomings in the existing frameworks concerning cyberbullying that encompass both non-punitive actions. Law No. 11 of 2008, as amended by Law No. 19 of 2016, necessitates definitions of cyber harassment, cyberstalking, and sexting to establish punitive measures. Non-punitive approaches face challenges such as education, a lack of online cyber ethics, insufficient technology safeguards, and the need for global collaboration to enhance cybersecurity and law enforcement resources (Frensh, 2022).

The Regional Indonesian Child Protection Commission (KPAID) organization, in East Java, is taking the lead in initiatives to combat cyberbullying by offering child safety services with a focus on providing psychological support. They utilize therapy techniques to assist individuals in understanding, expressing, and managing their emotions. However, there are challenges arising from factors such as difficulties in identifying cyberbullying perpetrators due to their lack of cooperation, limited coordination with institutions, and varying levels of enthusiasm from youngsters receiving psychotherapy services. In order to overcome these challenges, it is crucial to pass laws that clearly outline the responsibilities and actions of KPAID (Hardiyanti & Indawati, 2023). Collaboration, among organizations vertically and horizontally, would also be essential. The police can

organize counseling sessions in areas, institutions, and schools as a preventive measure against cyberbullying-related crimes. Additionally, they can run awareness campaigns through media platforms such as the internet and magazines. These efforts aim to increase awareness, educate individuals, and create an environment (Sakban et al., 2018, 2019). Universities, government agencies, and private companies are involved. To combat cyberbullying online, reforms, community engagement, technological solutions, and government intervention are needed. Indonesia's cyberbullying framework must be improved. Law enforcement's proactive efforts also raise awareness and safety. Addressing cyberbullying requires stakeholder collaboration. The government creates and enforces policies.

4.2. Business Initiatives in Cyberbullying Prevention

With private and business sector participation, the importance of using ICT to combat cyberbullying is becoming clearer. Advocacy against inappropriate language must be part of these efforts. Content reporting is simplified, and adjustments can be made quickly for multiple languages and regional dialects. Language misuse prevention is essential for meaningful social media conversations. Cyberbullying detection is essential to online community building. Detecting and addressing instances of bullying requires analyzing word usage and categorizing phrases, as highlighted by Anindyati et al. (2019). Computational linguistics plays a role in improving the detection of cyberbullying in written content found on media platforms like Twitter and Facebook. The effectiveness in identifying and resolving cyberbullying incidents can be enhanced through the utilization of methodologies. However, there are challenges such as language barriers, varying interpretations leading to hate speech, and limited data availability that need to be addressed for system development and evaluation purposes.

The frequency of material is influenced by individuals' choices when creating content. It can be challenging for automated systems to identify hate speech, considering the variations in spelling and language usage. Traditional methods of data analysis are not sufficient for identifying and preventing cyberbullying due to their labor-intensive nature. Scholarly research has explored strategies, including machine learning, deep learning, and others, to combat cyberbullying (Al-Khowarizmi et al., 2023; Candra et al., 2021; Destitus et al., 2020; Febriana &

Budiarto, 2019; Maskat et al., 2020; Muzakir et al., 2022; Novalita et al., 2019; Sari et al., 2022). These studies highlight the importance of implementing an approach that incorporates advancements to enhance detection systems.

The Univy application serves as an example of efforts made to address cyberbullying by educating users about associated risks and behaviors. Extensive research was conducted in developing the Univy app (Wienaz & Kusumawati, 2021). The program also offers discussion forums, allowing users to gain an understanding of the nature of cyberbullying. It even has the ability to create illustrations. The effectiveness of the Univy app in addressing cyberbullying concerns while meeting user needs demonstrates the outcomes that can be achieved through research and development (Wienaz & Kusumawati, 2021). Companies should prioritize dealing with workplace cyberbullying despite the prevalence of social media interactions. Employers can prevent instances of cyberbullying within their organizations by using monitoring tools and reporting systems. By recognizing recurring patterns of cyberbullying behavior and implementing measures to mitigate its impact, these solutions can help employees analyze communication channels effectively.

Additionally, organizations have an opportunity to proactively cultivate a work culture by implementing training programs and awareness initiatives. Educating employees about the consequences of cyberbullying for individuals and the company as an organization can foster an environment that promotes respect and inclusivity. Human Resources departments play a role in creating and enforcing rules that specifically address workplace cyberbullying. It is essential to prioritize the use of technology and digital tools to effectively combat cyberbullying and ensure a working environment. Employing techniques, machine learning, and technological solutions can significantly improve the identification and prevention of cyberbullying incidents. As technology continues to advance, companies have a responsibility in leveraging information and communication technology (ICT) qualities for preventing cyberbullying.

4.3. Academic Insights and Educational Programs

Understanding the frequency and impact of cyberbullying is crucial for developing strategies to prevent and address this issue. A study involving 102 seventh-grade students revealed that a significant

majority reported experiencing cyberbullying on a regular basis. The findings of this research confirmed a link between being a victim of cyberbullying and experiencing distress among students (Safaria & Ariani, 2024). This underscores the importance of implementing targeted interventions to support the well-being of these victims. From a perspective, it is evident that there is a relationship between cyberbullying and self-concept (Paramita & Rachmawati, 2022). Increased instances of cyberbullying are directly associated with decreased self-concept, highlighting the effects on individuals who fall victim to the behavior. To effectively combat cyberbullying, it is vital to understand its consequences and prioritize providing mental health support for those affected. The study also identified parenting styles and peer relationships as factors influencing engagement in cyberbullying (Riany & Utami, 2025). It was found that an authoritarian parenting style characterized by punishment and limited parental involvement led to insecure peer connections, thereby increasing the likelihood of teenagers engaging in cyberbullying behaviors. The cultural tendency towards parenting in Indonesia is being questioned, suggesting that using strict approaches might be more effective in combating cyberbullying. It has been found that empathy, which is a trait, plays a role in teenagers becoming cyberbullies (Adiyanti et al., 2020; Ang & Goh, 2010; Schultze-Krumbholz & Scheithauer, 2009; Sticca et al., 2013; Yuliawanti & Adiyanti, 2018). When empathy levels decrease, cyberbullying rates tend to increase, highlighting the influence of characteristics on behavior. Recognizing the importance of empathy in reducing cyberbullying can provide insights for programs aimed at nurturing empathy among teenagers (Yuliawanti & Adiyanti, 2018). Various studies emphasize the significance of involvement and understanding when addressing cyberbullying. Effective prevention strategies should involve educating parents about the consequences of activities, recognizing signs of cyberbullying, and providing guidance on appropriate actions to take. Additionally, the impact of school peers is identified as a factor in cyberbullying, emphasizing the need for support to tackle such behavior. Preventive initiatives should encompass both offline and online aspects by engaging parents, schools, and community organizations focused on protecting individuals from harm.

The study emphasizes the importance of discussions about the advantages and disadvantages of the internet to build trust and better understand the consequences associated with cyberbullying (W.

V. Setiawan et al., 2020). Parents should carefully consider how technology affects their children's activities (Salsabila, 2025). While there is no evidence linking restricted access to negative online behaviors, research suggests that children who engage in more physical activities tend to exhibit more positive behaviors. It is crucial to strike a balance between outdoor activities and promoting behavior on the internet (Alotaibi et al., 2020). Teenagers are particularly susceptible to the impacts of advancements, highlighting the need for targeted initiatives that address cyberbullying among adolescents (Nazriani & Zahreni, 2017). Cyberbullying incidents are influenced by changes in norms. Blurred boundaries between what is considered morally acceptable and unacceptable. The lack of accountability due to the vulnerability of identities creates an environment for cyberbullying. Understanding the aspects of interactions is essential for effectively addressing cyberbullying (Martinelli et al., 2023).

The prevalence of cyberbullying is influenced by the environment within institutions. Schools that take measures to address cyberbullying have been found to achieve results, highlighting the importance of school involvement in preventative and supportive initiatives. Implementing psychological support programs and enforcing regulations against cyberbullying offenders are strategies for creating a safer school environment (Balakrishnan & Fernandez, 2018; Kusumawaty et al., 2021; Palermi et al., 2017). The use of smartphones in classrooms is recognized as a contributing factor to the occurrence of cyberbullying. Excessive smartphone usage, for academic purposes, increases the likelihood of engaging in cyberbullying. Understanding the connection between smartphone usage, cyberbullying, and its negative impact on classroom focus underscores the need for approaches to regulate smartphone use in settings (Simangunsong, 2020). Research has shown that English learners in school contexts often participate in cyberbullying for entertainment purposes. The ease of engaging in activities and unrestricted language use challenges the establishment of a conducive learning environment. While cyberbullying can be viewed as a form of expression its harmful effects, on the process necessitate thorough analysis and careful evaluation of its consequences (Hamuddin et al., 2019).

Schools should organize and enforce cyberbullying prevention programs. A program must include reporting mechanisms and cyberbullying education for teachers, students, and

parents. Persistent efforts, such as integrating cyberbullying awareness into the curriculum and establishing platforms for discussion, play a role in fostering a constructive educational environment (Rasdi et al., 2021). Schools can contribute to reducing the risks associated with cyberbullying by incorporating literacy instruction across academic and extracurricular activities. By offering support to families and enhancing the integration of platforms within schools, we can create a framework that prioritizes children's well-being. Collaboration among institutions, parents, and mental health professionals is essential to ensure the provision of education and assistance related to cyberbullying (Azizah, 2023). It is crucial to highlight how working together between schools, parents, and mental health professionals can effectively combat cyberbullying. Counseling services and educating individuals about the harms of media that promote these platforms can significantly mitigate the impact of cyberbullying on adolescents. Mental health professionals have a role in providing support while raising awareness about the suicide risks associated with cyberbullying (H. A. Dewi et al., 2023). Hence, to tackle the issues brought about by cyberbullying, it is crucial to focus on raising awareness and launching campaigns that enhance understanding of this problem. Moreover, the implementation of policies in institutions plays a role in combating cyberbullying. Understanding the aspects that contribute to cyberbullying is vital for devising intervention and prevention strategies that truly work. Collaborating with schools, parents, and mental health professionals is essential for developing an approach to address cyberbullying and foster a supportive learning environment.

4.4. Analytical Insights: Linking Theory and Comparative Perspectives

Beyond descriptive findings, the roles of government, business, and academia in combating cyberbullying can be interpreted through established theoretical frameworks and comparative perspectives.

From the government's role, Indonesia's reliance on the ITE Law and related regulations illustrates the tension between top-down and bottom-up policy implementation approaches. While national legislation provides a formal structure, weak local enforcement and limited grassroots awareness hinder effectiveness. This gap underscores the need for hybrid implementation strategies that combine central regulation with community-level initiatives.

For the business sector, the adoption of ICT tools to detect and prevent cyberbullying resonates with

innovation diffusion theory. The spread of machine learning applications, reporting systems, and workplace monitoring tools depends on perceived advantages, compatibility, and ease of use. In Indonesia, diffusion is slowed by linguistic diversity and limited datasets, whereas countries such as the UK and Australia have accelerated adoption through stronger institutional support and explicit cyberbullying regulations.

Within academia, the role of schools and universities aligns with social learning theory and empathy development frameworks. Peer dynamics, parenting styles, and empathy deficits strongly influence cyberbullying behaviours. Educational programs that foster empathy, digital literacy, and critical reflection, therefore, serve as preventive strategies. Comparative insights show that in Australia, cyberbullying prevention is embedded into national curricula, while Indonesia's efforts remain fragmented across schools and NGOs.

By linking findings to theory and contrasting Indonesia's regulatory gaps with international practices, this study moves beyond description to critical interpretation. It demonstrates both the theoretical contribution—extending the triple helix model into cybercrime policy studies—and the practical contribution—offering pathways for reform and innovation in Indonesia's cyberbullying framework.

5. CONCLUSION

This study demonstrates that addressing cyberbullying in Indonesia requires a coordinated and multi-stakeholder approach. The Triple Helix framework—comprising government, academia, and industry—provides a structured lens for understanding shared responsibility and designing effective interventions in the digital era. Rather than relying solely on legal enforcement, this study

highlights the importance of integrating regulatory measures, technological innovation, and educational initiatives to address the complexity of cyberbullying.

5.1. Theoretical Contribution

This research extends the application of the Triple Helix framework beyond its traditional domain of innovation and economic development into the field of cybercrime policy studies. By conceptualizing cyberbullying as a socio-cultural and governance issue, this study contributes to the development of interdisciplinary perspectives that bridge policy studies, digital culture, and cybersecurity discourse.

5.2. Practical Contribution

From a practical standpoint, this study offers a policy-oriented roadmap for stakeholders. For the government, it emphasizes the need for hybrid policy implementation that combines national regulation with community-based initiatives. For the business sector, it highlights the importance of leveraging information and communication technology (ICT), including machine learning and content moderation systems, to detect and prevent cyberbullying. For academia, it underscores the role of educational institutions in promoting digital literacy, empathy development, and cyberbullying awareness programs.

5.3. Implications and Future Research

This study suggests that collaborative governance is essential for building a safer digital environment. However, as a conceptual study, it is limited by the absence of primary empirical data. Future research is therefore encouraged to incorporate empirical approaches, such as surveys or case studies, to evaluate the effectiveness of the proposed framework and to adapt strategies in response to evolving digital trends.

REFERENCES

- Adiyanti, M. G., Nugraheni, A. A., Yuliawanti, R., Ragasukmasuci, L. B., & Maharani, M. (2020). Emotion Regulation and Empathy as Mediators of Self-Esteem and Friendship Quality in Predicting Cyberbullying Tendency in Javanese-Indonesian Adolescents. *International Journal of Adolescence and Youth*, 25(1), 251–263. <https://doi.org/10.1080/02673843.2019.1614079>
- Al-Khowarizmi, Sari, I. P., & Maulana, H. (2023). Detecting Cyberbullying on Social Media Using Support Vector Machine: A Case Study on Twitter. *International Journal of Safety and Security Engineering*, 13(4), 709–714. <https://doi.org/10.18280/ijssse.130413>
- Alhakim, A., Girsang, J., & Wadhi, G. Y. (2023). Kajian Yuridis Sanksi Pidana Terhadap Tindak Pidana Hate Speech Cyberbullying di Indonesia. *Legalitas: Jurnal Hukum*, 15(2), 158–165. <https://doi.org/10.33087/legalitas.v15i2.449>
- Alotaibi, T., Almuhanna, R., Alhassan, J., Alqadhib, E., Mortada, E., & Alwhaibi, R. (2020). The Relationship between Technology Use and Physical Activity among Typically-Developing Children. *Healthcare*, 8(4), 488. <https://doi.org/10.3390/healthcare8040488>

- Amandangi, W. S., Novita, I., Herdianti, S. A. A., & Nugraha, R. (2023). Perlindungan Hukum terhadap Korban Cyberbullying Berdasarkan Hukum Positif di Indonesia. *Lex Suprema*, 5(1), 238–252. <https://doi.org/10.12345/lexsuprema.v5i1.689>
- Amaral, M., Cai, Y., Perazzo, A. R., Rapetti, C., & Piqué, J. M. (2024). The Legacy of Loet Leydesdorff to the Triple Helix as a Theory of Innovation. *Triple Helix*, 10(2), 161–187. <https://doi.org/10.1163/21971927-12340014>
- Ang, R. P., & Goh, D. H. (2010). Cyberbullying Among Adolescents: The Role of Affective and Cognitive Empathy, and Gender. *Child Psychiatry & Human Development*, 41(4), 387–397. <https://doi.org/10.1007/s10578-010-0176-3>
- Anindyati, L., Purwarianti, A., & Nursanti, A. (2019). Optimizing Deep Learning for Detection Cyberbullying Text in Indonesian Language. *2019 International Conference of Advanced Informatics: Concepts, Theory and Applications (ICAICTA)*, 1–5. <https://doi.org/10.1109/ICAICTA.2019.8904108>
- Apdillah, D., Isnaini, N., Lubis, L. K. A., Azura, P., & Siagian, Z. A. (2022). Misuse of Digital Technology to The Use of Telecommunication Industry Technology Devices Used by Children. *JOURNAL OF HUMANITIES, SOCIAL SCIENCES AND BUSINESS*, 1(3), 27–34. <https://doi.org/10.55047/jhssb.v1i3.145>
- Arifin, R., Wedhatami, B., Alkadri, R., & Nte, N. D. (2022). The Internet Gang of Violence: Trend of Cyberbullying on the Internet. *AIP Conference Proceedings*, 040012. <https://doi.org/10.1063/5.0109805>
- Audinia, S., Maulina, D., Novrianto, R., Sudewaji, B. A., & Lotusiana, I. A. (2023). The Development of Cyberbullying in Social Media Scale. *JP3I (Jurnal Pengukuran Psikologi Dan Pendidikan Indonesia)*, 12(1), 80–92. <https://doi.org/10.15408/jp3i.v12i1.24142>
- Azizah, F. E. N. (2023). The Role Strengthening Digital Literacy in Educational Institutions Indonesia to Overcome the Dangers Cyberbullying. *Edumaspul: Jurnal Pendidikan*, 7(2), 5185–5192. <https://doi.org/10.33487/edumaspul.v7i2.7123>
- Balakrishnan, V., & Fernandez, T. (2018). Self-Esteem, Empathy and Their Impacts on Cyberbullying Among Young Adults. *Telematics and Informatics*, 35(7), 2028–2037. <https://doi.org/10.1016/j.tele.2018.07.006>
- Candra, A., Wella, & Wicaksana, A. (2021). Bidirectional Encoder Representations from Transformers for Cyberbullying Text Detection in Indonesian Social Media. *International Journal of Innovative Computing, Information and Control*, 17(5), 1599–1615. <https://doi.org/10.24507/ijic.17.05.1599>
- Chakan, A., & Millenio, M. F. (2023). Protection of Cyberbullying Victims in Indonesia (An Overview of Law and Victimology). *Semarang State University Undergraduate Law and Society Review*, 3(1), 1–26. <https://doi.org/10.15294/lsr.v3i1.53757>
- Dai, X., Yusoff, M. N., Dai, X., Yang, Y., Liu, M., & Zhu, B. (2023). A Review of Cyberbullying Detection Techniques and Exploration of Governance Strategies. *2023 2nd International Conference on Machine Learning, Cloud Computing and Intelligent Mining (MLCCIM)*, 314–321. <https://doi.org/10.1109/MLCCIM60412.2023.00051>
- Destitus, C., Wella, W., & Suryasari, S. (2020). Support Vector Machine VS Information Gain: Analisis Sentimen Cyberbullying di Twitter Indonesia. *Ultima InfoSys: Jurnal Ilmu Sistem Informasi*, 11(2), 107–111. <https://doi.org/10.31937/si.v11i2.1740>
- Dewi, H. A., Suryani, S., & Sriati, A. (2023). relationship between cyberbullying and the risk of suicidal ideation in adolescents. *Jurnal Keperawatan Padjadjaran*, 11(2), 118–123. <https://doi.org/10.24198/jkp.v11i2.2259>
- Dewi, I. O. (2023). Pengaturan Tindak Pidana Cyberbullying di Indonesia. *UNES Law Review*, 6(2), 4533–4539. <https://doi.org/10.31933/unesrev.v6i2.1169>
- Erliyani, R. (2022). Examining Religious and Justice System in Indonesia to Prevent Cyberbullying. *International Journal of Cyber Criminology*, 15(2), 112–123. <https://doi.org/10.5281/zenodo.4766548>
- Febriana, T., & Budiarto, A. (2019). Twitter Dataset for Hate Speech and Cyberbullying Detection in Indonesian Language. *2019 International Conference on Information Management and Technology (ICIMTech)*, 379–382. <https://doi.org/10.1109/ICIMTech.2019.8843722>
- Frensh, W. (2022). Kelemahan Pelaksanaan Kebijakan Kriminal terhadap Cyberbullying Anak di Indonesia. *Indonesia Criminal Law Review*, 1(2), 87–99. <https://scholarhub.ui.ac.id/iclr/vol1/iss2/3/>
- Frensh, W., Ablisar, M., & Mulyadi, M. (2021). Criminal Policy on Cyberbullying of Children in Indonesia. *International Journal of Cyber Criminology*, 15(2), 44–59. <https://doi.org/10.5281/zenodo.4766542>
- Frensh, W., & Mulyadi, M. (2018). Criminal policy on cyberbullying toward children. *E3S Web of Conferences*, 52, 00050. <https://doi.org/10.1051/e3sconf/20185200050>

- Ganefi, G., & Hatikasari, S. (2022). The Impact of Covid-19 Outbreak on Banking Policies in Indonesia. *Jurnal Scientia Indonesia*, 8(1), 1–36. <https://doi.org/10.15294/jsi.v8i1.35944>
- Hamuddin, B., Syahdan, S., Rahman, F., Rianita, D., & Derin, T. (2019). Do They Truly Intend to Harm Their Friends? *International Journal of Cyber Behavior, Psychology and Learning*, 9(4), 32–44. <https://doi.org/10.4018/IJCBPL.2019100103>
- Handono, S. G., Laeheem, K., & Sittichai, R. (2019). Factors related with cyberbullying among the youth of Jakarta, Indonesia. *Children and Youth Services Review*, 99, 235–239. <https://doi.org/10.1016/j.childyouth.2019.02.012>
- Hardiyanti, K., & Indawati, Y. (2023). Perlindungan bagi Anak Korban Cyberbullying: Studi di Komisi Perlindungan Anak Indonesia Daerah (KPAID) Jawa Timur. *SIBATIK JOURNAL: Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, Dan Pendidikan*, 2(4), 1179–1198. <https://doi.org/10.54443/sibatik.v2i4.763>
- Jayani, D. H. (2019). *Survei APJII: 49% Pengguna Internet Pernah Dirisak di Medsos*. Databoks.
- Jovanović, M., Savić, G., Cai, Y., & Levi-Jakšić, M. (2022). Towards a Triple Helix based efficiency index of innovation systems. *Scientometrics*, 127(5), 2577–2609. <https://doi.org/10.1007/s11192-022-04304-x>
- Kurniasih, N., Kuswarno, E., Yanto, A., & Sugiana, D. (2019). Media Literacy to Overcome Cyberbullying: Case Study in an Elementary School in Bandung Indonesia. *Library Philosophy and Practice (e-Journal)*, 3564, 1–8. <https://scholarworks.sjsu.edu/libphilprac/3564/>
- Kusumawaty, I., Yunike, Y., Elviani, Y., & Arifin, H. (2021). Contributing Factors of Cyberbullying Behavior among Youths During Covid-19. *Jurnal Ners*, 16(1), 54–59. <https://doi.org/10.20473/jn.v16i1.24751>
- Laurensius, Situngkir, D., Putri, R., & Fauzi, R. (2019). Cyber Bullying Against Children in Indonesia. *Proceedings of the International Conference on Social Sciences, Humanities, Economics and Law*. <https://doi.org/10.4108/eai.5-9-2018.2281372>
- Lerman, L. V., Gerstlberger, W., Ferreira Lima, M., & Frank, A. G. (2021). How Governments, Universities, and Companies Contribute to Renewable Energy Development? A Municipal Innovation Policy Perspective of the Triple Helix. *Energy Research & Social Science*, 71, 101854. <https://doi.org/10.1016/j.erss.2020.101854>
- Mahendra, P. A., Hartiwiningsih, & Pratiwi, D. E. (2020). Kajian Etiologi Kriminal terhadap Kasus Cyber Bullying di Indonesia. *Recidive: Jurnal Hukum Pidana Dan Penanggulangan Kejahatan*, 9(3), 252–258. <https://doi.org/10.20961/recidive.v9i3.47417>
- Martinelli, I., Yohana, Venessa, C., & Nandaswa, M. V. (2023). Alterasi Etika Individu Masyarakat Indonesia Secara Online Terkait Cyber Bullying di Era Digitalisasi. *Jurnal Serina Sosial Humaniora*, 1(1), 221–226. <https://doi.org/10.24912/jssh.v1i1.24545>
- Maskat, R., Faizzuddin Zainal, M., Ismail, N., Ardi, N., Ahmad, A., & Daud, N. (2020). Automatic Labelling of Malay Cyberbullying Twitter Corpus using Combinations of Sentiment, Emotion and Toxicity Polarities. *2020 3rd International Conference on Algorithms, Computing and Artificial Intelligence*, 1–6. <https://doi.org/10.1145/3446132.3446412>
- Meinarni, N. P. S. (2019). Tinjauan Yuridis Cyber Bullying Dalam Ranah Hukum Indonesia. *Jurnal Ilmu Sosial Dan Humaniora*, 2(1), 299–308. <https://jayapanguspress.penerbit.org/index.php/ganaya/article/download/225/220/440>
- Muhamad, N. (2024). *Masalah Sosial-Ekonomi yang Mendesak Ditangani Presiden 2024 Menurut Anak Muda*. Databoks.
- Muzakir, A., Syaputra, H., & Panjaitan, F. (2022). A Comparative Analysis of Classification Algorithms for Cyberbullying Crime Detection: An Experimental Study of Twitter Social Media in Indonesia. *Scientific Journal of Informatics*, 9(2), 133–138. <https://doi.org/10.15294/sji.v9i2.35149>
- Nansi, W. S. (2024). Cyberbullying Formulative Problems Against Child Protection in Indonesia. *Constitutional Law Review*, 2(2), 113–128. <https://doi.org/10.30863/clr.v2i2.5593>
- Nazriani, D., & Zahreni, S. (2017). Adolescent Cyberbullying in Indonesia : Differentiation between Bullies and Victim. *Proceedings of the 1st International Conference on Social and Political Development (ICOSOP 2016)*. <https://doi.org/10.2991/icosop-16.2017.68>
- Novalita, N., Herdiani, A., Lukmana, I., & Puspandari, D. (2019). Cyberbullying identification on twitter using random forest classifier. *Journal of Physics: Conference Series*, 1192, 012029. <https://doi.org/10.1088/1742-6596/1192/1/012029>
- Nufus, A. Z. (2025). Framing Analysis of News Coverage of Bullying Cases in Undip Anesthesia Specialist

- Doctor Program (PPDS) on Kompas.com and Detik.com. *Journal of Creativity, Media, and Communication Studies*, 1(2), 87–96. <https://doi.org/10.66324/jcmcs.v1i2.42>
- Nugraheni, P. D. (2021). The New Face of Cyberbullying in Indonesia: How Can We Provide Justice to the Victims? *The Indonesian Journal of International Clinical Legal Education*, 3(1), 57–76. <https://doi.org/10.15294/icclev3i1.36482>
- Nugroho, M. A. A., & M. Sopyan. (2023). The Influence of Using Instagram on Cyberbullying Behavior in Adolescents at Smk Negeri 18 Jakarta School. *JOURNAL OF HUMANITIES, SOCIAL SCIENCES AND BUSINESS*, 2(3), 556–570. <https://doi.org/10.55047/jhssb.v2i3.645>
- Palermi, A. L., Servidio, R., Bartolo, M. G., & Costabile, A. (2017). Cyberbullying and self-esteem: An Italian study. *Computers in Human Behavior*, 69, 136–141. <https://doi.org/10.1016/j.chb.2016.12.026>
- Paramita, K. R., & Rachmawati, M. A. (2022). Cyberbullying dan Konsep Diri pada Korban Remaja Pengguna Jejaring Sosial Usia 14–19 Tahun di Indonesia. *Jurnal Psikologi*, 15(1), 110–121. <https://doi.org/10.35760/psi.2022.v15i1.5273>
- Porto, C. F., Médicis, M. C., & Mônica, D. (2012). Health Universal Access and Innovation: the Triple Helix Approach in Action. *Procedia - Social and Behavioral Sciences*, 52, 236–245. <https://doi.org/10.1016/j.sbspro.2012.09.460>
- Rahman, J. B., Hidayat, S., & Desintha, S. (2022). *Perancangan Media Edukasi Anti-Cyberbullying bagi Penggemar K-Pop di Indonesia*. Universitas Telkom.
- Ranga, M., & Etkowitz, H. (2013). Triple Helix Systems: An Analytical Framework for Innovation Policy and Practice in the Knowledge Society. *Industry and Higher Education*, 27(4), 237–262. <https://doi.org/10.5367/ihe.2013.0165>
- Rasdi, Sumardiana, B., Wicaksono, S. S., & Ramada, D. P. (2021). Social Response of Legal Prevention for Cyberbullying to Children (A Comparative Studies on Cyberbullying to Children of Indonesia and Thailand). *South East Asia Journal of Contemporary Business, Economics and Law*, 24(1), 83–90. https://seajbel.com/wp-content/uploads/2021/02/SEAJBEL24_233.pdf
- Riany, Y. E., & Utami, F. (2025). Cyberbullying Perpetration among Adolescents in Indonesia: The Role of Fathering and Peer Attachment. *International Journal of Bullying Prevention*, 7(1), 13–27. <https://doi.org/10.1007/s42380-023-00165-x>
- Rodrigues, C., & Melo, A. I. (2013). The Triple Helix Model as Inspiration for Local Development Policies: An Experience-Based Perspective. *International Journal of Urban and Regional Research*, 37(5), 1675–1687. <https://doi.org/10.1111/j.1468-2427.2012.01117.x>
- Safaria, T., & Ariani, I. H. (2024). The Role of Self-Control, Authoritarian Parenting Style, and Cyberbullying Behavior Among Junior High School Students. *Journal of Technology in Behavioral Science*, 10(1), 121–131. <https://doi.org/10.1007/s41347-024-00422-w>
- Sakban, A., Sahrul, Kasmawati, A., & Tahir, H. (2019). Police Preventative Against Cyber-Bullying Crimes in Indonesia. *International Journal of Scientific & Technology Research*, 8(12), 1532–1534. <https://www.ijstr.org/final-print/dec2019/Police-Preventative-Against-Cyber-bullying-Crimes-In-Indonesia.pdf>
- Sakban, A., Sahrul, S., Kasmawati, A., & Tahir, H. (2018). The Role of Police to Reduce and Prevent Cyberbullying Crimes in Indonesia. *Proceedings of the 1st International Conference on Indonesian Legal Studies (ICILS 2018)*. <https://doi.org/10.2991/icils-18.2018.7>
- Salsabila, J. H. (2025). The Influence of Parenting on Adolescent Emotional Intelligence. *International Journal of Pedagogical, Humanities and Social Studies*, 1(2), 81–85. <https://doi.org/10.66324/ijphss.v1i2.85>
- Sari, T. I., Ardilla, Z. N., Hayatin, N., & Maskat, R. (2022). Abusive comment identification on Indonesian social media data using hybrid deep learning. *IAES International Journal of Artificial Intelligence (IJ-AI)*, 11(3), 895–904. <https://doi.org/10.11591/ijai.v11.i3.pp895-904>
- Sarna, G., & Bhatia, M. P. S. (2017). Content based approach to find the credibility of user in social networks: an application of cyberbullying. *International Journal of Machine Learning and Cybernetics*, 8(2), 677–689. <https://doi.org/10.1007/s13042-015-0463-1>
- Schultze-Krumbholz, A., & Scheithauer, H. (2009). Social-Behavioral Correlates of Cyberbullying in a German Student Sample. *Zeitschrift Für Psychologie / Journal of Psychology*, 217(4), 224–226. <https://doi.org/10.1027/0044-3409.217.4.224>
- Setiawan, P. S., Jambak, M. I., & Jambak, M. I. (2018). *Supervised Learning Model for Combating Cyberbullying: Indonesian Capital City 2017 Governor Election Case* (pp. 580–588). https://doi.org/10.1007/978-3-319-76348-4_56

- Setiawan, W. V., Fitriana, V. E., Michellianouva, F., & Mayliza, C. S. (2020). Cyberbullying Phenomenon of High School Students: An Exploratory Study in West Kalimantan, Indonesia. *The Winners*, 21(1), 15. <https://doi.org/10.21512/tw.v21i1.5878>
- Simangunsong, E. (2020). Cyberbullying: Identification of Factors Affecting the Quality of Higher Education in Indonesia. *Education, Sustainability And Society*, 3(1), 15–29. <https://doi.org/10.26480/ess.01.2020.15.19>
- Siti Khairunnissa. (2018). Law on Cyberbullying in Indonesia, Malaysia, and Brunei Darusallam. *International Conference of ASEAN Perspective and Policy (ICAP); Vol 1 No 1 (2018): INTERNATIONAL CONFERENCE OF ASEAN PERSPECTIVE AND POLICY (ICAP)*. <https://jurnal.pancabudi.ac.id/index.php/ICAP/article/view/269>
- Sticca, F., Ruggieri, S., Alsaker, F., & Perren, S. (2013). Longitudinal Risk Factors for Cyberbullying in Adolescence. *Journal of Community & Applied Social Psychology*, 23(1), 52–67. <https://doi.org/10.1002/casp.2136>
- Sunitiyoso, Y., Wicaksono, A., Utomo, D. S., Putro, U. S., & Mangkusubroto, K. (2012). Developing Strategic Initiatives through Triple Helix Interactions: Systems Modelling for Policy Development. *Procedia - Social and Behavioral Sciences*, 52, 140–149. <https://doi.org/10.1016/j.sbspro.2012.09.450>
- Tortia, E. (2018). Conclusion: The Triple Helix, Social Impacts and Beyond. In *Entrepreneurship and Local Economic Development* (1st Editio, p. 13). Routledge.
- Wahanisa, R., Prihastuty, R., & Dzikirullah H. Noho, M. (2021). Preventive Measures of Cyberbullying on Adolescents in Indonesia: A Legal Analysis. *Lentera Hukum*, 8(2), 267–294. <https://doi.org/10.19184/ejll.v8i2.23503>
- Wienaz, J., & Kusumawati, Y. A. (2021). Univy: Comic Application to Againts Cyberbullying in Indonesia. *2021 3rd International Conference on Cybernetics and Intelligent System (ICORIS)*, 1–8. <https://doi.org/10.1109/ICORIS52787.2021.9649614>
- Yuliawanti, R., & Adiyanti, M. G. (2018). Cyberbullying in Relation to Empathy and Friendship Quality. *International Journal of Cyber Behavior, Psychology and Learning*, 8(4), 26–41. <https://doi.org/10.4018/IJCBPL.2018100102>