

Assistance In the Use of Technology As a Bullying Prevention Campaign Tool

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Abstract

Bullying is a serious issue that disrupts the educational atmosphere, harms students' welfare, and negatively affects the teaching and learning process. SMKN 9 Muaro Jambi, located in Jambi Province, faces the possibility of experiencing this problem. To address it, concrete actions are necessary, and the use of information and communication technology (ICT) presents an efficient and suitable solution for antibullying campaigns. The objective of this community service program was to provide training for intra- and extra-school organizations at SMKN 9 Muaro Jambi on utilizing ICT to combat bullying. This training aimed to enhance participants' understanding of the importance of ICT in preventing bullying while equipping them with the skills to implement effective antibullying campaigns using technology. The expected outcomes included increased awareness of the negative impacts of bullying and the participants' roles in prevention, as well as improved knowledge and practical skills in using ICT tools such as digital content creation and social media for spreading antibullying messages. The results indicated that participants significantly improved their understanding of bullying and demonstrated enhanced abilities in utilizing ICT for antibullying campaigns. Feedback indicated that participants felt more confident in applying the skills they had learned, which contributed to a safer and more inclusive school environment. This initiative aligns with the broader educational goals of using technology to improve the quality of learning and student well-being, suggesting that ICT-based approaches can be an effective and sustainable solution for addressing bullying in schools.

Keywords: Information Technology; Bullying Prevention Campaign

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INTRODUCTION

The issue of bullying in Indonesia is a serious problem that affects the physical, emotional, and psychological well-being of children in the school environment. Various studies and reports from reliable sources provide a clear picture of the complexity of this problem. A survey by PISA, included in the Ministry of Education and Culture Repository (1), found that in Indonesia, approximately 39% of students reported experiencing bullying several times at school by other students in the month preceding the PISA survey. As many as 34% of Indonesian students experienced social bullying, and 27% of students experienced physical bullying. As many as 22% of Indonesian students experienced both forms of bullying. These high numbers indicate that bullying remains a serious problem in Indonesian schools. Bullying can occur in various forms, including physical, verbal, and cyberbullying. The Indonesian Education Monitoring Network (JPPI) reported a significant increase in the number of bullying cases in 2024, reaching 573 cases, a sharp increase from 285 cases in 2023 and 194 cases in 2022, indicating an overall spike in bullying cases (2).

Bullying can have profound impacts on the psychological and social well-being of victims. Research by Olweus shows that victims of bullying are prone to stress, depression, anxiety, and even suicidal thoughts. These psychological impacts can persist into adulthood and affect an individual's quality of life (3). Although the Indonesian government has taken steps to address bullying through policies and legislation, greater efforts are needed to improve the effectiveness of bullying prevention and handling. Training for teachers and school staff, as well as the establishment of effective mechanisms for handling bullying cases, are essential steps that need to be taken (4).

Bullying is a complex and persistent problem in educational settings, influenced by several inhibiting factors that complicate prevention and management efforts. One major inhibiting factor is a lack of awareness and understanding of the negative impacts of bullying and how to address and prevent it. Research shows that low awareness of bullying can hinder the process of identifying, reporting, and handling bullying cases (5). Furthermore, the following inhibiting factors exist: a culture or environment that is tolerant of bullying behaviour can be a significant factor. This can make victims feel unsafe to report bullying cases or seek help, for fear of being perceived as weak or becoming further targets of the perpetrator (6). Lack of supervision and intervention from schools or educational institutions is also a significant inhibiting factor. Research indicates that a lack of involvement from school staff and a failure to take action against bullies can prolong the duration and intensity of bullying (7). Bullying victims often experience stigma and fear in reporting their experiences. They may feel embarrassed or afraid of retaliation from the bully. This stigma can hinder the case handling process and leave victims feeling isolated (8).

In some cases, bullying behaviour may be legitimised by certain factors, such as physical strength or peer popularity. This can hinder efforts to address bullying cases due to resistance or a refusal to acknowledge that the behaviour constitutes a form of bullying (9). Factors outside the educational environment, such as family and social conditions, can also influence the occurrence of bullying. Emotional instability, lack of supervision, or unsupportive parenting at home can increase the risk of bullying behaviour at school (10,11).

Based on the analysis of the inhibiting factors above, it can be concluded that addressing the problem of bullying in the educational environment requires a holistic and sustainable approach, as well as the involvement of all relevant parties, including schools, families, and the broader community. Therefore, one of the crucial things is to

carry out an antibullying campaign by utilising information and communication technology, so that it can attract and spread widely across all aspects that influence bullying actions (12).

The partner in this community service is SMKN 9 Muaro Jambi. Based on observations and interviews with school administrators, there are issues related to anxiety in efforts to prevent bullying in educational institutions. Intra- and Extracurricular Organisations at SMKN 9 Muaro Jambi face limitations in accessing and utilising information and communication technology (ICT). This can be caused by limited technological infrastructure, limited funds to purchase the necessary devices and software, and a lack of technical knowledge and skills. Sometimes, intra- and Extracurricular Organisations at SMKN 9 Muaro Jambi are less aware of the potential of information and communication technology in preventing and handling bullying. They may not understand how to effectively use technology to monitor and intervene in bullying cases, as well as utilize social media and online platforms to disseminate antibullying messages.

Selecting and implementing appropriate ICT solutions to prevent and manage bullying can be challenging for schools. They need to consider various factors, including their specific needs, resource availability, and technical readiness. Furthermore, they must ensure that the chosen solutions align with the educational values and principles. Intra- and extracurricular organisations at SMKN 9 Muaro Jambi require additional training and technical support in understanding and utilising ICT solutions for preventing and managing bullying. Without adequate training, the implementation of ICT solutions may be suboptimal and ineffective in addressing bullying issues.

METHODS

This study utilized a community service approach to support the use of Information Technology (IT) for antibullying campaigns at SMKN 9 Muaro Jambi. The research design involved a multi-phase intervention focusing on practical application and evaluation. Participants included school administration staff, teachers, and students, with data collected through pre- and post-training surveys, feedback forms, and observation checklists. The study followed five stages: planning, implementation, presentation, evaluation, and reporting. Data analysis was conducted using descriptive statistics to assess improvements in knowledge and skills. Ethical considerations, including informed consent and confidentiality, were ensured in line with the Declaration of Helsinki.

Study design and setting

This study adopts a community service approach, involving both students and lecturers as active participants in providing support for the use of Information Technology (IT) as a medium for an antibullying campaign at SMKN 9 Muaro Jambi. The study design consists of a multi-phase intervention with an emphasis on practical application and evaluation. The community service activity was conducted at SMKN 9 Muaro Jambi in Jambi Province.

Population, samples and sampling

The population for this community service activity includes the school administration staff, teachers, and students at SMKN 9 Muaro Jambi. The total sample comprises these groups, with a focus on involving both intra- and extracurricular organisations. Sampling was based on active participants in school activities, with no specific

inclusion or exclusion criteria beyond their willingness to participate in the training program. The study also examined the skills and knowledge acquired by the participants through the training provided.

Instruments and criteria

The instruments used in this study include pre- and post-training surveys, participant feedback forms, and observation checklists. These instruments were designed to assess the knowledge and skills gained in using ICT for antibullying campaigns. The surveys and feedback forms were designed to capture the effectiveness of the training, including the clarity of the content and the practical applications of ICT tools, such as Google Suite, for campaign management. Reliability was ensured through pilot testing of the instruments and expert validation.

Procedure and data collection

The study was implemented in five stages: planning, implementation, presentation, evaluation, and reporting. The planning phase involved coordinating with school administrators and preparing the necessary data collection tools and materials. The implementation phase focused on providing training to staff and students on the effective use of IT for antibullying campaigns. In the presentation phase, results were shared, and feedback was collected. Evaluation occurred through periodic assessments of knowledge gain and campaign effectiveness. Data were collected through surveys and observations during and after the training sessions.

Statistical analysis

Data analysis involved the use of descriptive statistics to summarise the results of the training, including improvements in both knowledge and practical skills. The study was conducted using software such as SPSS or Excel. The community service team, including lecturers and students, was responsible for collecting and analyzing the data. The statistical methods used focused on comparing pre- and post-training results to determine the effectiveness of the intervention.

Ethical considerations

The study was conducted in accordance with the principles outlined in the Declaration of Helsinki. Ethical approval was granted by the Ethics Committee of the University of Jambi (approval institution). All participants provided informed consent, and their participation was voluntary. The confidentiality of participants' responses was maintained throughout the study.

RESULTS

SMKN 9 Muaro Jambi is a state vocational school located on Jl. Sungai Dayut, Pematang Gajah, Jambi Luar Kota District, Muaro Jambi Regency, Jambi Province. With the following information:

NPSN	: 69788560
Status	: Negeri
Bentuk Pendidikan	: SMK
Status Kepemilikan	: Pemerintah Daerah
SK Pendirian Sekolah	: 474 Tahun 2011
Tanggal SK Pendirian	: 11-12-2011
SK Izin Operasional	: 450/Kep.Bup/Disdik/2013
SK Izin Operasional	: 08-08-2013

Table 1. PTK and Student Data (PD).

Description	Teacher	Educational staff	PTK	PD
Man	14	4	18	379
Woman	25	6	31	135
Total	39	10	49	514

Community Service Activity Objectives

This community service activity is expected to address the current challenges of utilizing technology as a medium for antibullying prevention campaigns. It also contributes to our partners, in this case, SMKN 9 Muaro Jambi, improving their competency in the effective and efficient use of information and communication technology. This will support the achievement of the school's vision and mission, as well as the implementation of the regulations and policies stipulated in the Minister of Education and Culture Regulation (Permendikbud) No. 82 of 2015 concerning the Prevention of Bullying in Schools. Institutionally, this activity is expected to support the University of Jambi's mission of developing and disseminating science, technology, and the arts through education, research, and community service. Furthermore, this community service is expected to support the achievement of the University's Core Competency Index (KPI), strengthen institutional capacity, optimise human resources, and enhance institutional performance at the study program level.

Priority Issues

Based on the several issues outlined above, the community service team and partners agreed to intervene to address the priority issue: the lack of awareness among intra- and extra-school organizations at SMKN 9 Muaro Jambi of the potential of information and communication technology in preventing and addressing bullying. They may not yet understand how to effectively use technology to monitor and intervene in bullying cases, or how to leverage social media and online platforms to disseminate antibullying messages. Therefore, the community service team and its partners agreed to conduct Community Service Programs (PPM) activities focused on utilising information and communication technology to prevent bullying in both intra- and extracurricular organisations at SMKN 9 Muaro Jambi.

By hosting this community service, it is hoped that it will provide benefits for Partners in achieving the school's vision and mission, as well as implementing the rules and policies outlined in Minister of Education and Culture Regulation (Permendikbud) Number 82 of 2015 concerning the Prevention of Bullying in Schools. Institutionally, this activity is expected to support the University of Jambi's mission, which is to develop and disseminate knowledge in science, technology, and the arts through education, research, and community service. In addition, it is hoped that this community service will support the achievement of the University's KPIs, strengthen institutional capacity, and optimise human resources, ultimately accelerating institutional performance down to the study program level.

Solution

This community service activity is designed for both intra- and extracurricular organisations at SMKN 9 Muaro Jambi. This community service activity was carried out collaboratively by lecturers and students from the Faculty of Teacher Training and Education at Jambi University as an alternative solution to the technical challenges of utilising information technology as a medium for antibullying campaigns, which are still underutilised.

Based on the partner's problems, including technical issues related to the use of information technology as an antibullying campaign medium that is still underutilised. An analysis of solutions to address current problems was conducted, and the solution proposed is to provide training and education for staff, teachers, and intra- and extracurricular organisations at SMKN 9 Muaro Jambi on the use of information technology as a medium for an antibullying campaign. This includes learning about the use of social media, creating relevant and engaging digital content, adopting safe and ethical internet practices, and conducting an awareness campaign among staff, teachers, and students about the importance of using information technology as a medium for an antibullying campaign.

Targeted Outcomes

The targeted outcomes of this community service are: Increased Awareness. Training participants are expected to gain a better understanding of the negative impacts of bullying and the importance of their role in preventing it, thereby increasing their knowledge and Skills. Participants will gain practical knowledge and skills in using information and communication technology to create effective antibullying campaigns, including the development of Digital Campaign Materials. Participants will create antibullying campaign materials in the form of digital content, such as posters, videos, and written content, which can be disseminated through various social media platforms, enabling the implementation of the Antibullying Campaign. SMKN 9 Muaro Jambi will implement a technology-based antibullying campaign developed by the training participants, involving all intra- and extra-school organizations at SMKN 9 Muaro Jambi.

Planning Stage

Lecturers from the Faculty of Teacher Training and Education (FKIP) at Jambi University collaborated with SMKN 9 Muaro Jambi to identify problems and coordinate training delivery, as well as develop activity plans (materials, schedules, and resource persons).



Figure 1. PPM Planning by the Team

Regarding the partner problems above, to overcome the challenges faced by SMKN 9 Muaro Jambi through the community service program (PPM), lecturers from the Faculty of Teacher Training and Education (FKIP) at Jambi University collaborated

with SMKN 9 Muaro Jambi to provide training on implementing a technology-based antibullying campaign.

Implementation Stage

The community service activities carried out at SMKN 9 Muaro Jambi proceeded according to plan, involving the school organization (students), the principal, teachers, and educational staff. The implementation process involved several stages: planning, implementation, presentation of results, and evaluation.

During the implementation phase, participants received:

1. Socialization and education regarding the urgency of bullying prevention, including an understanding of its adverse impacts on students' mental, social, and academic health (Olweus, 2013; Rigby, 2003).
2. Training in using digital design applications (Canva and AI tools) to create engaging and communicative antibullying campaign posters.
3. A social media management workshop focusing on strategies for effectively publishing antibullying messages.
4. Assistance in producing digital content, such as posters, short videos, and educational articles, which were then published on the school's social media platforms.

The participants' enthusiasm was evident in their active participation in creating digital content. Students not only mastered the technical aspects of design but also delivered a powerful moral message regarding antibullying.



Figure 2. Implementation of Training

Evaluation Phase

The results of this activity indicate that utilizing information technology can be an effective strategy for preventing bullying in schools. An ICT-based approach can overcome traditional limitations, such as limited face-to-face socialisation, by expanding the reach of messages through social media platforms. This finding aligns with research confirming that technology-based campaigns can create a more positive school climate (6, 7). Furthermore, student involvement as key actors in building digital campaigns strengthens a sense of ownership of antibullying issues. This strategy has been shown to increase campaign effectiveness because messages are delivered peer-to-peer, which is more easily accepted by other students (8).



Figure 3. Evaluation of Training Implementation

Despite this, several obstacles were encountered, including limited access to digital devices for some students and low initial skills. However, these obstacles were overcome through group work, collaboration between students, and intensive mentoring from a team of lecturers and students. Overall, this community service activity successfully improved digital literacy and fostered collective awareness of the importance of bullying prevention at SMKN 9 Muaro Jambi. With the program's sustainability, it is hoped that the school can integrate the antibullying campaign as part of a comprehensive and inclusive school culture.



Figure 4. Closing of Training

Then, through this training, it is hoped that there will be positive changes in the attitudes, knowledge, and actions of the staff, teachers, and students of SMKN 9 Muaro

Jambi in combating bullying, as well as creating a safer, more inclusive educational environment that cares about the welfare of all individuals.

CONCLUSIONS

Community service activities in the form of mentoring in the use of Information and Communication Technology (ICT) as a means of antibullying campaign at SMKN 9 Muaro Jambi have succeeded in increasing students' understanding of the dangers of bullying and simultaneously improving their skills in creating straightforward digital content, such as posters, videos, and articles, which are then published through the school's social media. These findings suggest that methods involving participation and collaboration among lecturers, students, teachers, and student organisations are effective in raising awareness and producing products that the school can directly utilise. The strengths of this program lie in the suitability of the material, active participation of participants, and tangible results that can be immediately utilised. However, several weaknesses are present, including the lack of ICT devices, the absence of clear quantitative evaluation indicators, and the absence of plans for long-term sustainability. For further development, improvements in data-driven evaluation (such as through pre- and post-tests or social media monitoring), providing more inclusive access to Information and Communication Technology (ICT) devices and spaces, integrating the program into the curriculum or extracurricular activities, and developing standardised training modules that can be implemented in other schools are needed.

Furthermore, building broader relationships with parents, the education office, and the community will support the program's sustainability. Further research, employing mixed methods, could assess the long-term effects of the ICT campaign on bullying. Through improvements in evaluation, infrastructure, and institutions, the program has the potential to produce a more visible and sustainable impact on creating a safe and inclusive school environment.

CONFLICT OF INTEREST

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

DECLARATION OF ARTIFICIAL INTELLIGENCE USE

"This study used artificial intelligence (AI) tools and methodologies in the following capacities (CHOOSE & EDIT AS APPROPRIATE):

1. **Data analysis and modelling:** Machine learning algorithms, including [specific algorithms or techniques], were used to analyze the dataset and predict outcomes. These were implemented using [software/tools, for example, Python, Scikit-learn, TensorFlow].
2. **Data preprocessing:** AI-assisted techniques [state the method(s)] were applied to clean, select, and transform the data, thereby preparing the dataset for analysis.

PLUS

We confirm that the authors critically reviewed all AI-assisted processes to ensure the integrity and reliability of the results. The authors solely made the final decisions and interpretations presented in this article."

This declaration does not apply to the use of basic tools for checking grammar and spelling (such as Grammarly), references (EndNote, Zotero, etc.), SPSS. If there is nothing to disclose:

"We hereby confirm that no artificial intelligence (AI) tools or methodologies were utilized at any stage of this study, including during data collection, analysis, visualization or

manuscript preparation. All work presented in this study was conducted manually by the authors without the assistance of AI-based tools or systems".

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