

## Enhancing Legal Awareness on Occupational Safety Crimes among SMK Students through IT-Based Educational Media for Pre-Employment Mitigation

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### Abstract

This study presents the outcomes of a community service program aimed at strengthening the legal awareness of students at SMK Negeri 1 Indralaya Utara concerning occupational safety and health (OSH) crimes. The initiative utilized information technology-based educational media, including Canva-designed materials and a digital pocket book, as learning innovations to promote pre-employment legal literacy. A pre-test and post-test design measured students' comprehension before and after counseling. Results showed a 4% improvement (47%–51%), indicating modest yet meaningful progress in understanding OSH laws and reporting procedures. Qualitative feedback revealed high engagement and improved awareness of legal mitigation practices. The program highlights that IT-assisted legal counseling effectively fosters preventive awareness among vocational students and serves as a replicable model for similar initiatives in other educational institutions.

**Keywords:** *Education, Information Technology, Legal Awareness, Occupational Safety, Vocational Students*

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### 1. Introduction

Indonesia's industrial sector remains one of the largest contributors to national employment. According to the Central Statistics Agency (BPS), more than ten million workers are employed in both micro and macro industries in 2024 [1]. This significant number also correlates with the high incidence of workplace accidents. The Ministry of Manpower recorded 462,241 cases of occupational accidents in 2024, an increase of 19% compared to 370,747 cases in 2023 [2]. These data indicate that occupational safety and health (OSH) remains a critical issue requiring comprehensive preventive efforts.

Occupational Safety and Health encompasses two interrelated components: safety, which aims to prevent work-related accidents, and health, which maintains workers' physical and mental well-being [3]. Accidents in the workplace are generally caused by unsafe acts, unsafe conditions, and unavoidable external factors [4].

To address these, Indonesia has established a strong legal framework for OSH implementation, including Law No. 1 of 1970 on Occupational Safety, Law No. 13 of 2003 on Manpower, and Government Regulation No. 50 of 2012 concerning the OSH Management System [5]. However, in practice, OSH compliance remains inconsistent. Several industrial cases, such as the unreported accidents at PT Obsidian Stainless Steel in Southeast Sulawesi, demonstrate weak enforcement of reporting obligations stipulated under the K3 Law [6].

Within this context, the lack of legal awareness among workers—particularly young prospective workers—regarding OSH-related rights and obligations remains an urgent concern. Workers' limited understanding of legal mitigation and accident reporting procedures often results in underreporting and delayed justice. Therefore, preventive legal education becomes crucial, particularly for vocational students who will soon enter the workforce. Vocational schools (SMK)

play a strategic role in shaping competent and law-aware industrial workers.

South Sumatra, particularly the Ogan Ilir Regency, represents a rapidly growing industrial region with a large number of vocational school graduates entering the workforce each year [7]. However, the province continues to record a persistently high number of work accidents—6,931 cases in 2024, nearly identical to the previous year [8]. These realities highlight the necessity of strengthening OSH legal education at the pre-employment stage.

To respond to this issue, a community service program was implemented by the Faculty of Law, Universitas Sriwijaya, aimed at enhancing students' legal awareness of occupational safety and health crimes through the development of information technology-based educational media such as Canva-assisted visual modules and a digital pocket book. This initiative seeks to equip students with preventive legal literacy before entering industrial internships or employment.

However, many workplace accidents are not reported in practice. One such case is at PT Obsidian Stainless Steel (PT OSS) in Southeast Sulawesi, where 113 accidents occurred, but PT OSS only reported eight cases to the Southeast Sulawesi Manpower Office [8]. Conversely, Article 11 of the K3 Law and Ministry of Manpower Regulation Number 1 of 2020 regulate the reporting of workplace accidents [9].

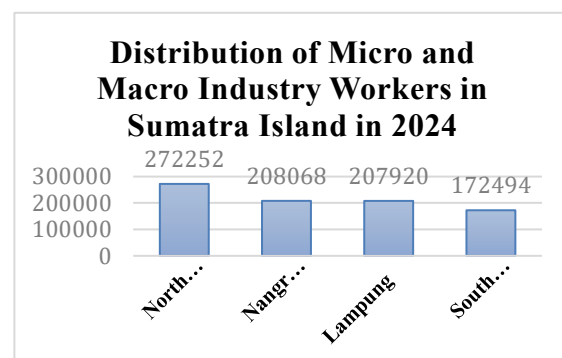
Based on this, companies can be subject to criminal sanctions if workers experience workplace accidents. According to PT Indo She, a consulting and training company specializing in occupational health and safety, there are various factors that cause workers not to report workplace accidents, including [10]:

- 1) Pressure due to power relations;
- 2) Not wanting to be involved in the investigation process;
- 3) Categorizing the accident as a minor accident;
- 4) Fear of negative stigma regarding the implementation of OSH in their division;
- 5) Lack of understanding regarding the legal mitigation of workplace accidents.

In this case, the concern is the lack of knowledge about how to prevent workplace accidents. If workers have sufficient knowledge about legal mitigation of

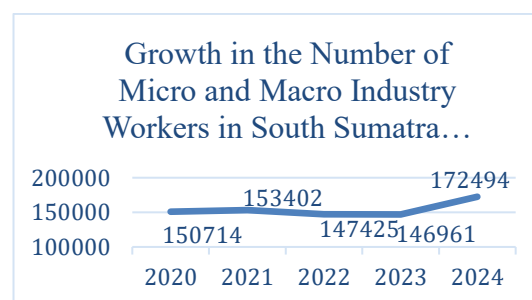
workplace accidents, the possibility of negligence in the implementation of K3 by companies can be reduced. Therefore, steps need to be taken to reduce the number of workplace accidents in Indonesia. One way to do this is to provide workers with training on how to avoid workplace accidents.

One effective and sustainable implementation is through a structured community service program, which in this case is carried out in the Ogan Ilir Regency, North Indralaya District, South Sumatra Province. In terms of the distribution of micro and macro industrial workers, South Sumatra ranks fifth in terms of the highest number on the island of Sumatra, as shown in the following graph [11]:



Graph 1.1. Distribution of micro and macro industrial workers in South Sumatra in 2024

In the same year, South Sumatra Province was considered successful in increasing the growth rate of the workforce in the micro and macro industrial sectors over the past five years, as shown in the following graph:



Graph 1.1. Growth in the number of workers in the micro and macro industries in South Sumatra over 5 years

In addition, South Sumatra Province is a province that has experienced significant industrial development, one of which is the Tanjung Api-Api industrial area and

the Special Economic Zone. In 2023, the South Sumatra BPS stated that the role of the manufacturing industry in the South Sumatra economy was 17.84%. In this case, the industrial categories consist of companies or industrial businesses that produce goods or services, large-scale manufacturing industries, and medium or small industries [12]. The distribution of companies domiciled in South Sumatra Province can be seen in the following table:

| Regency/City   | KBLI 3 Digit Code |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      | Number |
|----------------|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|
|                | (1)               | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) |        |
| OKU            | 3                 |     |     | 1   |     |     |     |     |     |      |      | 1    | 4    |      |      |      |      |      |      | 1    |      |      | 10     |
| OKU            | 13                |     |     |     |     | 1   |     |     |     |      |      | 1    |      |      |      |      |      |      |      |      |      |      | 15     |
| Muarasin       | 9                 |     |     |     | 1   | 1   |     | 2   |     |      | 2    | 1    |      |      | 1    |      |      |      |      |      |      |      | 15     |
| Lahat          | 3                 |     |     |     |     |     |     |     |     |      | 2    |      |      |      |      |      |      |      |      |      |      |      | 5      |
| Musi Rawas     | 11                |     |     |     | 2   |     |     |     |     |      |      | 2    |      |      |      |      |      |      |      | 1    |      |      | 16     |
| Musi Banyuasin | 21                |     |     |     | 1   |     |     |     | 1   |      | 2    |      |      |      |      |      |      |      |      | 1    |      |      | 26     |
| Banyuasin      | 30                | 17  | 1   |     | 3   | 3   |     | 1   | 4   |      |      | 14   | 5    |      | 6    |      |      |      | 1    | 4    | 1    |      | 90     |
| OKU-Sel        | 2                 |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      | 2      |
| East OKU       | 6                 |     |     |     |     |     |     |     |     |      |      | 2    | 1    |      |      |      |      |      |      |      |      |      | 9      |
| Ogan Ilir      | 16                |     |     |     | 4   |     |     | 1   | 2   |      | 1    | 2    |      |      | 1    |      | 1    |      |      |      |      |      | 28     |
| Empet          |                   |     |     |     |     |     |     |     |     |      |      | 1    |      |      |      |      |      |      |      |      |      |      | 1      |
| Lawang         |                   |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |        |
| Maruta         | 6                 |     |     |     | 1   |     |     |     |     |      |      | 1    | 1    |      |      |      |      |      |      |      |      |      | 9      |
| Palembang      | 35                | 1   | 4   | 5   | 6   | 1   | 3   | 1   | 5   | 1    | 13   | 2    | 1    | 4    | 1    | 1    | 1    | 5    | 2    | 2    |      |      | 94     |
| Pretaman       | 1                 |     |     |     |     |     |     |     | 1   |      |      |      |      |      |      |      |      |      |      |      |      |      | 2      |
| Pagar Alam     | 1                 |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      | 1      |
| Luhak          | 6                 |     |     |     |     |     | 1   |     |     |      |      |      |      |      |      |      |      |      |      |      | 1    |      | 8      |
| Lingsan        |                   |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |        |
| South Sumatra  | 160               | 19  | 5   | 6   | 18  | 6   | 4   | 6   | 12  | 1    | 37   | 20   | 2    | 11   | 2    | 2    | 2    | 2    | 13   | 3    | 2    |      | 331    |

Table 1.1. Data on the Number of Large and Medium-Sized Industrial Companies Based on KBLI Codes in South Sumatra in 2024

The table shows that the largest number of large and medium-sized manufacturing industries in South Sumatra Province are located in Palembang City with 35 industries, followed by Banyuasin Regency with 30 and Musi Banyuasin with 21. This also has an impact on the distribution of labor working in the industrial sector, particularly in the South Sumatra Province. Of course, each company operating in the industrial sector is required to have K3 mitigation measures in place, and this is regulated by laws and regulations at the city and regency levels.

In this regard, workplace accidents are considered to be a frequent occurrence and difficult to avoid. In 2024, South Sumatra recorded 6,931 workplace accidents [13]. This number is almost the same as the number in 2023, which was 6,962 workplace accidents [14]. One of the workplace accident cases in South Sumatra that attracted national attention was the death of a worker at PT Pupuk Sriwijaya (PT Pusri) who fell from a height of 10 meters in early 2025 [15]. Another case occurred in mid-2025, where a coal truck accident owned by PT Royaltama Mulya Kontraktorindo South Sumatra resulted in the death of one of the company's workers [16]. Both cases are suspected to have occurred due to negligence in the implementation of K3 by the company, so that South Sumatra Province is considered

still unable to reduce the number of work accidents that occur.

To reduce this number, a preventive measure was taken in the form of socialization regarding legal mitigation when work accidents occur. In this community service, the target area for community service activities was Ogan Ilir Regency, South Sumatra. In addition to being an area with potential for development around Sriwijaya University, this regency is experiencing significant growth in the industrial sector, particularly in natural resource-based industries such as plantations, agricultural processing, and energy. Ogan Ilir Regency borders Palembang City, the main economic center in South Sumatra, making it a strategic area for the preparation of a ready workforce.

More specifically, the target of this community service program is the State Vocational High School (SMK) 1 Indralaya Utara. This vocational school offers strategic vocational majors such as Mechanical Engineering, Light Vehicle Engineering, and Electrical Power Installation Engineering. This potential makes the school a producer of skilled workers who are ready to enter the industrial workforce. In addition, SMK is considered an appropriate target, as one of the largest numbers of job seekers in South Sumatra is from SMK, as can be seen in the following table:

| Highest Level of Education Completed        | Number of Registered Job Seekers by Highest Level of Education and Gender (Persons) |       |                 |
|---|---|-------|-----------------|
|   | Male  | Women | Male and Female |
|   | 2024  | 2024  | 2024            |
| No/Never Attended School                    | 3   | 2     | 5               |
| Did not/has not completed elementary school | 293   | 131   | 424             |
| Elementary School (SD)                      | 336   | 55    | 392             |
| Junior High School (SMP)                    | 423   | 141   | 564             |
| Senior High School (SMA)                    | 3,356   | 2,027 | 5,383           |
| Vocational High School (SMK)                | 2,605   | 2,074 | 4,679           |
| Diploma I/II/III/Academy                    | 2,118   | 1,943 | 4,061           |
| University                                  | 2,449   | 1,780 | 4,228           |
| Total                                       | 11,578  | 8,159 | 19,736          |

Table 1.2. Number of Job Seekers in South Sumatra Based on Education Level in 2024 [17].

Overall, this table from the South Sumatra Provincial Statistics Agency shows that many job seekers in this province still have a relatively low level of education, with males dominating the number of job seekers. Improving education and skills is key to reducing the number of registered job seekers and increasing labor absorption, especially for those who have completed lower secondary education. Meanwhile, efforts to encourage women's participation

in the workforce or job seeker registration are also important to prevent gender gaps in the labor market.

Ultimately, the core objective of this activity is to provide an understanding of legal mitigation or legal measures that can be taken by students of SMK Negeri 1 Indralaya Utara in the event of a work accident.

Based on the background above, the research problems are formulated as follows:

- 1) How do students of SMK Negeri 1 Indralaya Utara respond to legal counseling on Occupational Safety and Health (OSH) crimes?
- 2) To what extent do students understand legal mitigation procedures and criminal liability related to OSH violations in Indonesia?

The objectives of this community service program are to:

- 1) Increase the legal awareness of SMK Negeri 1 Indralaya Utara students regarding OSH-related crimes and reporting mechanisms.
- 2) Introduce and implement IT-based learning media (Canva + digital pocket book) as innovative tools to enhance students' understanding of OSH laws.
- 3) Strengthen preventive legal literacy as part of students' readiness for industrial internships and employment in the industrial sector.

## 2. Methods

This community service activity adopted a visitation-based legal counseling model, in which the Legal Counselor Team from the Faculty of Law, Universitas Sriwijaya, directly visited SMK Negeri 1 Indralaya Utara. The target participants were 60 students from three vocational programs—Automotive Light Vehicle Engineering, Industrial Electronics, and Computer and Network Engineering. The activity aimed to enhance students' understanding of occupational safety and health (OSH) crimes and their associated legal implications before entering industrial internships.

The counseling process employed a participatory educational approach combining interactive lectures, discussions, and pre-test and post-test assessments. Educational materials were developed into two primary media:

- 1) A pocket book titled *Let's Get to Know Occupational Safety and Health (K3) Laws*, containing simplified legal explanations and visual

examples of OSH violations and reporting procedures; and

- 2) Digital learning materials, including slides and infographics, designed using Canva, an IT-based creative platform to improve accessibility and engagement.

The implementation took place on November 14, 2025, from 9:00 a.m. to 12:00 p.m. The entire session was structured into three phases:

- 1) Orientation and Pre-Test Phase – Measuring students' initial understanding of OSH concepts, laws, and reporting mechanisms;
- 2) Interactive Legal Counseling – Delivering materials using digital and printed media, accompanied by open discussions; and
- 3) Post-Test and Reflection Phase – Evaluating improvement in comprehension and gathering student feedback.

The pre-test and post-test each consisted of 10 multiple-choice questions related to the K3 Law (Law No. 1 of 1970), company responsibilities, and criminal liability for OSH violations. Data were collected and analyzed descriptively to determine the level of knowledge improvement among participants.

The participants of this awareness-raising activity were limited to students of SMK Negeri 1 Indralaya Utara, specifically 20 students from the automotive light vehicle technology program, 20 students from the industrial electronics technology program, and 20 students from the computer and network technology program, totaling 60 students who participated in the awareness-raising session.

## 3. Results and Discussions

### Occupational Safety and Health (OSH) Crimes

Indonesia is a constitutional state (*rechstaat*), not based on power (*machstaat*) [18] guarantees the constitutional rights of every citizen to obtain recognition, guarantees, protection, and legal certainty that is fair and equal treatment before the law. One of these rights is that workers or laborers are also entitled to protection, including safety and health in carrying out their work. The right to occupational safety and health is also part of human rights as regulated in international

legal instruments, namely in Article 7 letter b of the International Covenant on Economic, Social and Cultural Rights [19].

The implementation of occupational safety and health (OSH) is very important as a preventive measure against accidents in the workplace. This measure aims to create a safe, comfortable, and healthy work environment, while reducing the risk of accidents and work-related illnesses. However, achieving this goal will be difficult if OSH is not yet part of the work culture that is routinely implemented in the workplace.

Occupational Safety and Health (OSH), according to *the World Health Organization* (WHO), encompasses all conditions and health aspects related to work for both workers and others in the workplace. Regulations concerning OSH are stipulated in Law of the Republic of Indonesia Number 1 of 1970 concerning Occupational Safety, which defines a workplace as a room or field, enclosed or open, mobile or stationary, where workers work. A workplace includes all rooms, fields, yards, and surrounding areas that are part of or related to the workplace [22].

One of the legal issues that often arises in the industrial sector is negligence in the implementation of occupational safety and health (OSH) protection, which can result in serious accidents and even the death of workers. This situation raises questions about the legal responsibility of the parties involved, especially employers, in carrying out their obligations related to K3. Legal accountability for employers who fail to fulfill these obligations is an important issue, given that the lack of law enforcement against K3 violations provides opportunities for employers to ignore their responsibilities, thereby causing negative impacts on workers. The importance of implementing K3 is not only seen from a humanitarian perspective, but also because good protection of occupational safety and health can increase productivity and the overall welfare of society. However, in practice, there are still many companies that do not prioritize K3.

Criminal responsibility (*criminal responsibility* or *toekenbaarheid*) determines whether a perpetrator can be punished for their actions. A person can only be held responsible if their actions fulfill the elements of a crime, are unlawful, and there are no justifiable or exculpatory reasons for the unlawful nature of the act. Only individuals who have the capacity to be

consciously responsible can be held criminally responsible [23].

Criminal responsibility is a central concept in criminal law related to the doctrine of fault, whether intentional (*opzet*) or negligent (*culpa*). This doctrine, known in Latin as *mens rea*, emphasizes that a person can only be considered guilty if there is malicious intent. Criminal liability is used to assess whether a suspect or defendant can be held responsible for the crime they have committed [23].

A suspect or defendant can only be held criminally responsible if there is fault in their actions. Criminal liability assesses an individual's ability to act differently and is a legal mechanism for responding to violations of social norms that prohibit certain acts [25].

A person can be punished if they have committed an act that is against the law, has committed a mistake, and has the capacity to be held responsible. The existence of certain psychological (inner) conditions in a person who commits a criminal act and the relationship between these conditions and the act they have committed in such a way that they can be blamed for it is considered a mistake. Therefore, two things must be considered before committing a criminal act: the existence of certain psychological (inner) conditions and the relationship between these conditions and the act committed in such a way that it can be condemned by the perpetrator [26].

The English term *strafbaarfeit* means criminal act, offense, punishable, and criminal event. *Strafbaarfeit* literally means part of a punishable reality, while *feit* means part of a reality [27]. In the Criminal Code, every criminal act has subjective and objective elements. Subjective elements are elements inherent to the perpetrator or related to them, such as what is in their heart. Objective elements are elements related to the circumstances in which the perpetrator's actions must be carried out [28].

An accident is an unplanned and unexpected event. The meaning of "unexpected" is that there is no element of intent, especially planning, behind the event. Events related to sabotage or legal violations that are not related to workplace accidents. Because accidents are accompanied by losses or suffering ranging from the mildest to the most severe, they are not anticipated. An accident is an unwanted event that occurs directly and

unexpectedly and can cause losses to individuals, companies, communities, or the environment. Accidents related to employment relationships in companies are referred to as work-related accidents [29].

The factors that cause work accidents are human factors, material factors, materials or equipment, hazard factors or sources of danger, and factors encountered [30]. Work accidents can be caused by human factors (*unsafe actions*) and environmental factors (*unsafe conditions*) [31]. Based on the above classification, the multiple classifications reflect the reality that work-related accidents are rarely caused by a single factor, but rather by many factors. Classification based on type describes the events that directly cause an accident, explaining how an object or substance can cause an accident to occur, which is then seen as the key to further investigation of the cause [32].

Criminal liability related to work accidents arises when the implementation of Occupational Safety and Health (OSH) for workers/laborers is not in accordance with procedures and causes the risk of accidents. The implementation of OSH serves as a preventive measure to create a safe and healthy work environment. In this context, the ability of the perpetrator to be held responsible for negligence in the implementation of K3 is an important element in criminal liability. This is because corporations have the ability to be held responsible and can also be found guilty of criminal acts and punished. The ability of corporations to be held responsible takes into account the following [33]:

- 1) Criminal acts committed by corporations must be based on the theory of functional perpetrator (*functioneel daaderschap*) or the theory of identification, because corporations can only commit criminal acts through their administrators.
- 2) As a first consequence, corporations have the capacity to be held liable.

The imposition of criminal penalties for criminal acts that endanger workers is very appropriate for corporations that do not implement occupational health and safety (OHS) protection in the workplace, because in many ways this is very detrimental to workers [34]. The implementation of the Corporate Criminal Law related to negligence in implementing Occupational Health and Safety (OHS) protection for workers is still not optimal. As a result, the K3 Law is difficult to enforce, and most workplace accident cases more often use articles from the Criminal Code or other specific laws as the basis for charges and prosecutions [35].

Case No. 107/PID.C/2021/PN.KIS against the defendant Nanang Budi Yono shows the application of the OSH Law against a company that caused the death of a worker. The employer was found negligent for failing to inspect and test the transport aircraft in accordance with OSH requirements, resulting in a fatal accident. In the context of criminal liability, corporations can be sanctioned based on the theory of functional or identification perpetrators, while individual managers can be prosecuted under Article 359 of the Criminal Code for negligence resulting in the death of workers [36].

The application of the K3 Law to workplace accidents is sometimes ineffective because the amount of fines stipulated when the law was enacted is no longer relevant to the current value of the rupiah. As a result, many cases use other laws to prosecute suspects or defendants. Work accidents are unexpected events, so companies are obliged to create safe and healthy working conditions. Criminal liability can be applied if the legal elements are fulfilled, and workers who experience accidents are entitled to compensation and damages.

### Pre-Test and Post-Test Results Analysis

The comparative results of the pre-test and post-test revealed an increase of 4% in overall comprehension levels—from 47% to 51%. Although the numerical improvement appears modest, this increment reflects a positive change in students' conceptual grasp of OSH-related legal frameworks.

Several factors are believed to have influenced the limited improvement rate:

- 1) **Prior Exposure to OSH Topics**  
According to information from SMK teachers, students had previously received K3-related content in their 10th and 11th grades. This pre-existing knowledge base meant that the pre-test scores were already moderately high, thus leaving limited room for dramatic percentage growth post-counseling.
- 2) **Time Constraints and Session Duration**  
The total counseling duration of approximately three hours was relatively short to cover both theoretical and applied aspects of OSH criminal law. A longer intervention period or multi-session model could potentially yield a more significant improvement.
- 3) **Cognitive Load of Legal Terminology**  
The legal terminology used in explaining OSH crimes—such as “corporate criminal liability,” “negligence,” and “strict liability”—was unfamiliar to most students with technical rather than legal

backgrounds. This might have affected comprehension during the first exposure.

#### 4) Learning Modality

Although Canva-based digital media successfully increased engagement, some students reported difficulties focusing on textual information presented through slides rather than interactive case simulations. Future implementations could integrate gamified quizzes or scenario-based discussions to improve retention.

Despite the modest quantitative improvement, qualitative feedback collected through brief post-session interviews demonstrated strong engagement and awareness growth. Students expressed increased confidence in identifying potential OSH violations and understanding the procedures for reporting workplace accidents, which indicates an enhancement in applied legal literacy rather than mere factual recall.

These findings align with Sher Azim and Khan's (2012) argument that authentic assessment methods—such as scenario-based learning and reflective discussions—can enhance student understanding beyond test scores [22]. Therefore, while the numerical gain may appear limited, the counseling achieved its intended outcome of initiating behavioral awareness and legal sensitivity among vocational students.

### Strengthening the Link Between Theory and Practice

Previous versions of this paper placed heavier emphasis on theoretical legal discussions, particularly on criminal law doctrines such as *mens rea* and *strict liability*. While these theoretical foundations remain essential, the current revision redirects focus toward practical implications of OSH law within the industrial education context.

By applying the experiential learning model, this activity bridged the theoretical understanding of K3 legal norms with practical awareness of workplace safety obligations. Students not only learned the textual provisions of the law but also explored how negligence in industrial safety can result in criminal prosecution under Article 359 of the Criminal Code and Law No. 1 of 1970 [35]. This integrative approach aligns with the core objective of community service—to translate complex legal principles into applicable preventive behavior among young pre-workers.

Furthermore, the use of Canva-based IT media and a digital pocket book introduces a novel dimension to legal literacy programs, representing a pedagogical innovation in community engagement. It allows students to revisit materials after the session through QR code access, fostering self-paced learning and

continuous exposure—key components for sustainable knowledge retention.

### Socialization of OSH Mitigation and OSH-Related Crimes through Information Technology Based Educational Media for Students of SMK Negeri 1 Indralaya Utara

High-quality human resources are crucial for national development. In Indonesia, improving the quality of human resources is done through improving the quality of education. According to Article 1 paragraph 1 of Law No. 20 of 2003 concerning the National Education System, education is a conscious and planned effort to create a learning atmosphere that enables students to develop their potential, including spirituality, personality, intelligence, noble character, and skills that are beneficial to themselves, society, the nation, and the state [37].

Indonesia has enormous potential to grow and develop into a prosperous nation. In addition to its rich natural resources, Indonesia has an abundant workforce. In order for this potential to become a resource for development, quality and relevant education is needed. In line with this, the involvement of the world of work, particularly the business/industrial world, must continue to be developed in the implementation of vocational education system management policies. The implementation of the Dual Education System (PSG) as an implementation of the Link & Match policy is proof of the active involvement of the business/industrial world in the management of vocational education.

Article 15 of the National Education System Law states that vocational education is secondary education that prepares students primarily for work in specific fields. The role of vocational schools in preparing skilled mid-level workers still needs to be improved. This is because not all vocational school graduates can meet the demands of the job market in accordance with their specializations. This occurs because there is a gap between the skills possessed by vocational school graduates and the skills required in the business world. In addition, there are still many vocational high school students who are not fully prepared for work. This is certainly a challenge for vocational high schools to play a greater role in improving the skills of their graduates so that vocational high school graduates can be absorbed as workers in the business world/industrial world. The main mission of vocational high schools (SMK) is to prepare students as prospective workers who are ready to enter the world of work. Work readiness is an individual's ability to complete a job according to specifications without experiencing difficulties or obstacles, achieving maximum results

with predetermined targets. Work readiness is formed from three supporting aspects, namely knowledge mastery, work attitude mastery, and work skill mastery possessed by vocational high school students [38].

Before entering the industrial world, there are four things that students of SMK Negeri 1 Indralaya Utara must prepare before undertaking internships or working in industry after graduation. *First* is personal and mental preparation, *second* is administrative readiness, *third* is technical readiness, *fourth* is technical readiness, and *fifth* is K3 readiness.

Article 3 paragraph (1) of Law Number 1 of 1970 concerning K3, the potential internship sites for students of SMK Negeri 1 Indralaya Utara may have high potential for hazards and occupational accident risks, so students are required to meet occupational safety requirements, such as providing complete personal protective equipment (PPE), ensuring the availability of fire extinguishers, first aid kits, and providing a workplace that is decent and in accordance with the criteria. The implementation of OSH standards in accordance with the provisions of Law Number 1 of 1970 is not only to comply with legal requirements, but also as an effort to create a safe, healthy, and productive work environment, as well as to protect workers' rights to OSH within the company. This is not only intended to protect workers' rights, but also contributes to the sustainability of company operations because a safe and healthy work environment can support the company's productivity and stability in the long term [41].

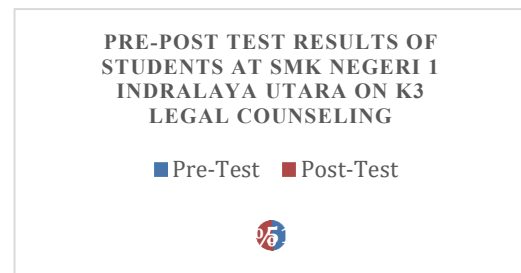
Companies as legal entities are required to implement Occupational Safety and Health (OSH) to protect workers and improve welfare and productivity. Companies that fail to implement the OSH Management System (SMK3) may be subject to sanctions in accordance with laws and regulations. In the context of employment, the sanctions that can be imposed are limited to administrative and criminal sanctions [40].

Specifically regarding criminal sanctions, companies or leaders who are negligent may be subject to fines or imprisonment. Law No. 13 of 2003 concerning Manpower regulates criminal sanctions in Articles 183 to 189, which include fines ranging from a minimum of IDR 100,000,000.00 to a maximum of IDR 500,000,000.00 and imprisonment for one to five years.

Based on Article 35 paragraphs (2) and (3) in conjunction with Article 186 paragraph (1) of Law No. 13 of 2003, companies that employ workers/laborers are required to provide protection that covers welfare,

safety, and health from recruitment to job placement. Companies must not neglect their obligations; the implementation of the Occupational Safety and Health Management System (SMK3) increases workers' sense of security and confidence in carrying out their duties. If a company is negligent, the penalty imposed is a maximum of four years imprisonment and a maximum fine of IDR 400,000,000. These criminal provisions aim to deter and prevent actions that violate social order [41].

Previously, the Unsri FH outreach team distributed 10 (ten) basic questions regarding K3. The implementation of pre-tests and post-tests contributed significantly to efforts to improve the quality of outreach evaluation. The pre-test proved to be useful for teachers to make an initial diagnosis of the material before starting legal counseling. It is hoped that these results will be used as material for further research related to K3 law in the context of pre-workers such as vocational high school students. Meanwhile, the post-test results were used by counselors to measure the achievement of student competence and the effectiveness of the counseling method. A comparison of the pre-test and post-test provides valuable information about the improvement in students' abilities. Thus, it can be concluded that the application of pre- and post-tests contributes strategically to the quality of legal counseling through the identification of students, measurement of mastery levels, and feedback on legal counseling [42].



**Diagram B.1.** *Presentation Materials Used by the Counseling Team to Explain to Students at SMK Negeri 1 Indralaya Utara*

Diagram B.1 illustrates a comparison of the pre-test and post-test results of students at SMK Negeri 1 Indralaya Utara after participating in counseling on K3 law. Based on the data visualization of 75 counseling participants, it can be seen that the post-test score of 51% shows a slightly higher percentage compared to the pre-test score. This percentage difference shows an increase in the students' knowledge level after being given the counseling material, even though the increase

is relatively small. This slight increase indicates that the students' initial understanding of K3 law was already quite good, because based on an interview with one of the teachers at SMK Negeri 1 Indralaya Utara, since the 1st grade of vocational school, students have been given subject material about K3. Overall, this diagram illustrates that the counseling intervention has a positive impact, but its effectiveness can still be improved through more interactive learning strategies, emphasis on key OSH concepts, and a more in-depth evaluation of the factors that influence student absorption.



Figure B.1. The Cover of Pocket Book



Figure B.2. QR Code for Students to Access the Digital Pocket Book



Figure B.3. Personal Protective Safety (OSH) Warning Poster for Students

In addition, the activity was complemented by the distribution of pocket books in two formats: a digital version (soft file) in the form of a PowerPoint presentation and a printed version (hard file) that could be directly utilized by the participants. The outreach materials, pocket books, and OSH Educational Posters used in this program were entirely developed using Canva, an information technology-based design platform. The use of Canva demonstrates that this activity not only focused on enhancing students' understanding of OSH-related crimes but also contributed to the development of information technology-based educational media that are more engaging, accessible, and relevant for learners.

#### 4. Conclusions

Based This community service activity successfully enhanced the legal awareness of students at SMK Negeri 1 Indralaya Utara regarding occupational safety and health (OSH) crimes and legal mitigation measures before entering industrial internships. The pre-test and post-test results indicated a modest yet meaningful improvement of 4%, reflecting a strengthened conceptual and practical understanding of OSH regulations and legal responsibilities. The students demonstrated increased awareness of their rights and obligations under the K3 Law and were able to identify key forms of negligence that could lead to criminal liability in industrial contexts.

The counseling's integration of information technology-based learning media, particularly through Canva-designed digital materials and pocket books, represents a significant pedagogical innovation that improved accessibility, engagement, and knowledge

retention. This method not only enriched the learning process but also introduced a sustainable model for legal education tailored to vocational school environments. The program's impact was evident through students' active participation, improved legal comprehension, and enhanced readiness for industrial practice.

In conclusion, the initiative effectively addressed the research questions by fostering preventive legal literacy and demonstrating the potential of digital media to support community legal education. Future implementations are recommended to expand session duration, apply interactive case-based learning, and collaborate with industry practitioners to further strengthen students' applied understanding of OSH laws in real workplace settings.

## 5. Novelty Statement

This community service program introduces a novel approach to legal literacy and pre-employment mitigation through the integration of information technology-based media in legal counseling activities. Unlike conventional legal education models that rely solely on lecture-based delivery, this initiative incorporates Canva-assisted interactive digital materials and a digital pocket book accessible via QR code.

The innovation lies in the combination of pedagogical design and legal awareness promotion, which transforms complex statutory concepts into visual, student-friendly media. This approach not only improves comprehension of Occupational Safety and Health (OSH) laws but also fosters long-term engagement and independent learning among vocational students.

Furthermore, the dual-format strategy—combining printed and digital pocket books—offers an inclusive solution adaptable for hybrid and remote learning contexts. This model serves as a replicable framework for future community service initiatives seeking to disseminate legal literacy efficiently using information technology. The implementation demonstrates that integrating IT-based educational tools within legal counseling enhances both accessibility and retention, marking a significant contribution to the field of community legal education and pre-employment safety training.

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the community service activities at SMK Negeri 1 Indralaya Utara.

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| Name of Author         | C | M | So | Va | Fo | I | R | D | W |
|------------------------|---|---|----|----|----|---|---|---|---|
| Hamongan Albariansyah  | ✓ | ✓ |    | ✓  | ✓  | ✓ | ✓ | ✓ | ✓ |
| Mona Ervita            |   | ✓ |    |    | ✓  | ✓ | ✓ | ✓ | ✓ |
| Ainun Jiwanti          | ✓ |   |    | ✓  |    | ✓ | ✓ |   | ✓ |
| Nadillah Maudi Cahyani |   |   |    |    |    | ✓ | ✓ | ✓ | ✓ |

C : Conceptualization I : Investigation  
M : Methodology R : Resources  
So : Software D : Data Curation  
Va : Validation W : Writing - Review  
Fo : Formal analysis

## Conflict of Interest Statement

The authors declare that they have no known financial, personal, or professional conflicts of interest that could have influenced the work reported in this paper. The authors state no conflict of interest.

## Informed Consent

We have obtained informed consent from all individuals who participated in this study. All participants were informed about the objectives, procedures, and voluntary nature of their involvement, and their participation was conducted with full respect for privacy and confidentiality.

## Ethical Approval

The research involving human participants has complied with all relevant national regulations and institutional policies in accordance with the principles of the Helsinki Declaration. This study received ethical approval from the authors' institutional review board or an equivalent committee prior to its implementation.

## Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request. The data are not publicly available

due to privacy and confidentiality restrictions involving student participants.

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