



Executive Information System for the Prevention and Handling of Sexual Violence in School Environments

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Article Info

Article history

Received : Sep 29, 2025

Revised : Oct 18, 2025

Accepted : Oct 20, 2025

Keywords:

Dashboard;

Decision Making;

Executive Information System;

School;

Sexual Violencel.

Abstract

Sexual violence in schools is a serious issue that can negatively impact the mental and physical well-being of students. The lack of an integrated system for reporting and monitoring cases often results in suboptimal prevention and response efforts. This study aims to design and implement an executive information system that assists school management, especially decision-makers, in making data-driven decisions regarding the prevention and handling of sexual violence. The system development follows the waterfall method, consisting of requirements analysis, system design, implementation, and testing phases. The result of this research is a web-based system with an interactive dashboard that displays case reports, incident trends, and follow-up recommendations. The system was tested using usability testing and the results indicated that the system is user-friendly and effectively supports the decision-making process. The implementation of this executive information system is expected to enhance responsiveness, transparency, and effectiveness in addressing sexual violence within the school environment.

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1. Introduction

Just because each school has its own regulations doesn't mean it doesn't encounter various forms of violations. Violations of school regulations are frequently committed by students, and the world of education in Indonesia faces a variety of complex issues that require our attention. Every school uses information technology as a necessary tool to carry out its duties more effectively.

School regulations are provisions that govern daily school life and contain sanctions for violators. Student regulations are part of the school regulations, along with teacher regulations and administrative regulations. The obligation to comply with school regulations is crucial because they are part of the school system, not simply a school accessory. (Mohammad Taufan Asri Zaen : 2021 : 65).

SMK Sinar Husni is a vocational high school that still uses a manual system for handling sexual violence within the school environment, which involves recording all student violations in a book. The number of delinquency points is calculated and then followed up at various levels, starting with warning I, warning II, warning III, which involves summoning parents or guardians, and even at the highest level.

The highest level of delinquency is returned to parents or guardians with the highest number of violations. Most data entry is still done manually, which often leaves guidance and counseling (BK) teachers confused about finding students' personal and historical data. Furthermore, reports of student violations, including sexual violence, that should be submitted to homeroom teachers and guardians, are often delayed due to the time required.

The school categorizes violations into minor and serious violations. Each type of violation carries a specific point value. The more serious the violation, the higher the number of points awarded. In fact, teachers struggle to find historical data on student violations due to the sheer volume of recorded data. Based on the above discussion, a system is needed to assist teachers in preventing and handling sexual violence within the school environment.

To support the performance of guidance and counseling (BK) teachers in preventing and handling sexual violence in schools, a system is needed to facilitate guidance and counseling (BK) staff in documenting and monitoring student activities. Students can also monitor the number of violation points and sanctions received during their time at SMK Sinar Husni, enabling them to improve their behavior and enhance discipline.

To address these issues, researchers designed an Executive Information System for the Prevention and Handling of Sexual Violence in Schools to assist guidance and counseling teachers in determining appropriate sanctions for violations.

2. Research Methodology

This stage involves studying the basic theories that support the research, searching for, and collecting the necessary data. To gather the necessary data, researchers use several techniques. In completing this research, the researcher used two study methods:

1. Field Study

The designed system certainly requires data collection. The data collection process involved several methods. The researcher conducted a direct field study to collect data, namely:

a. Observation

Observation involves collecting data and information through direct observation at SMK Sinar Husni regarding the determination of student sanctions. This involved observing data on the prevention and handling of sexual violence within the SMK Sinar Husni school environment.

b. Interviews

This involves collecting data by asking questions about the prevention and handling of sexual violence within the SMK Sinar Husni school environment to sources related to the research problem.

2. Library Research

The researcher conducted a literature study to obtain data related to the thesis research from various sources related to theories on determining sanctions for student violations, decision support systems, and web application design.

3. Results and Discussion

SMK Sinar Husni, a vocational high school, still uses a manual system for handling sexual violence within the school environment, which involves recording all student violations in a book. The number of delinquency points is calculated and then followed up at various levels, starting with warnings I, II, and III, which involve summoning parents or guardians. At the highest level, with the highest number of violations, the data is returned to parents or guardians. Most data entry is still done manually, which often leaves guidance and counseling (BK) teachers confused about finding students' personal and historical data. Furthermore, reports of student violations, including sexual violence, that should be submitted to homeroom teachers and guardians, are often delayed due to the time required.

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recorded data. Based on the above discussion, a system is needed to assist teachers in preventing and handling sexual violence within the school environment.

Drill-down is a method for obtaining information where a problem solver can display a summary view and then successively display details at lower levels. One of the most useful capabilities of executive information systems is providing granularity to the information provided. The information provided to decision-makers will be a summary of the available data. With this technique, executives can gradually obtain more detailed information from the summarized information, according to their needs. Forecasting using this method is based on a projection of a data series smoothed with a moving average. The forecast value for a period is the average of the values of the last N periods of observations. The term moving average is used because each time a new observation becomes available, the value averages.

$$SMA = \frac{p1+p2+\dots+pn}{n} \quad (1)$$

Case study:

From the table above, the total number of cases of sexual violence prevention and management in schools is as follows:

Table 1. Case Data		
No	Month	Total
1	January	190
2	February	75
3	March	44
4	April	15
5	May	20
6	June	40
7	July	10
8	August	32
9	September	45
10	October	15
11	November	80
12	December	75

Based on the data above, the graph of case handling can be seen:



Figure 2 Case Handling Graph

In developing a program, a data model in the form of a diagram is required to explain the process flow of the system to be built. In writing this thesis, the author used the UML method, which

in this method the author applied the Use Case diagram. As a result, a Use Case diagram was drawn, as can be seen in Figure 2:

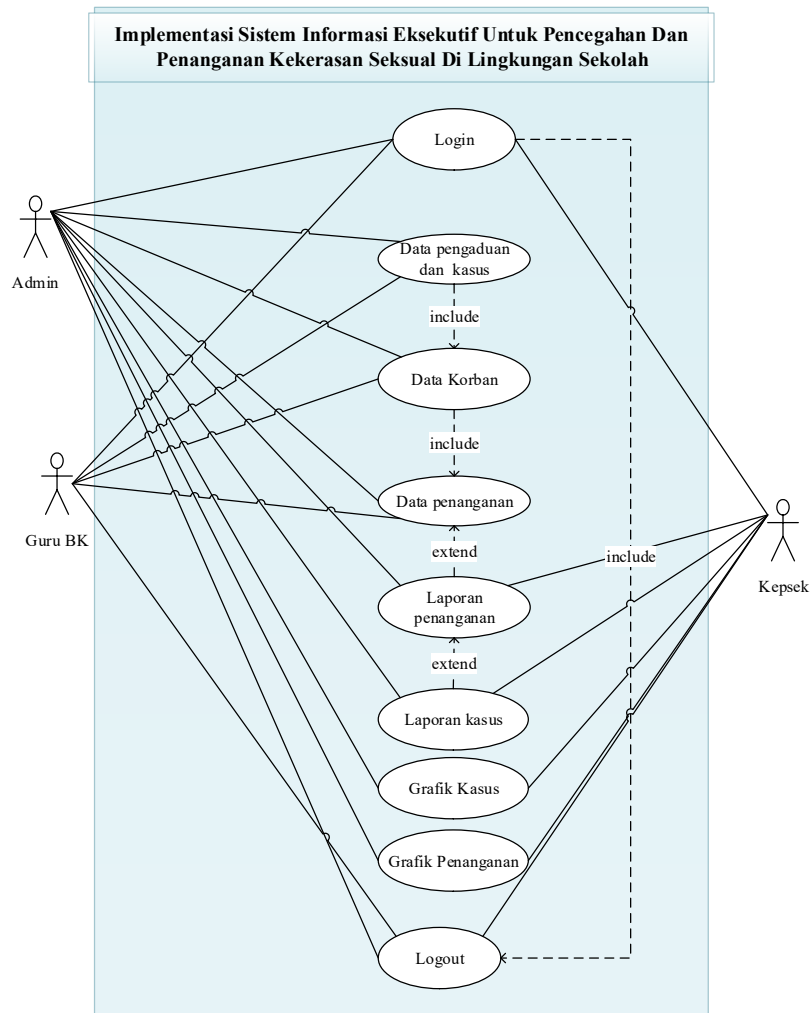
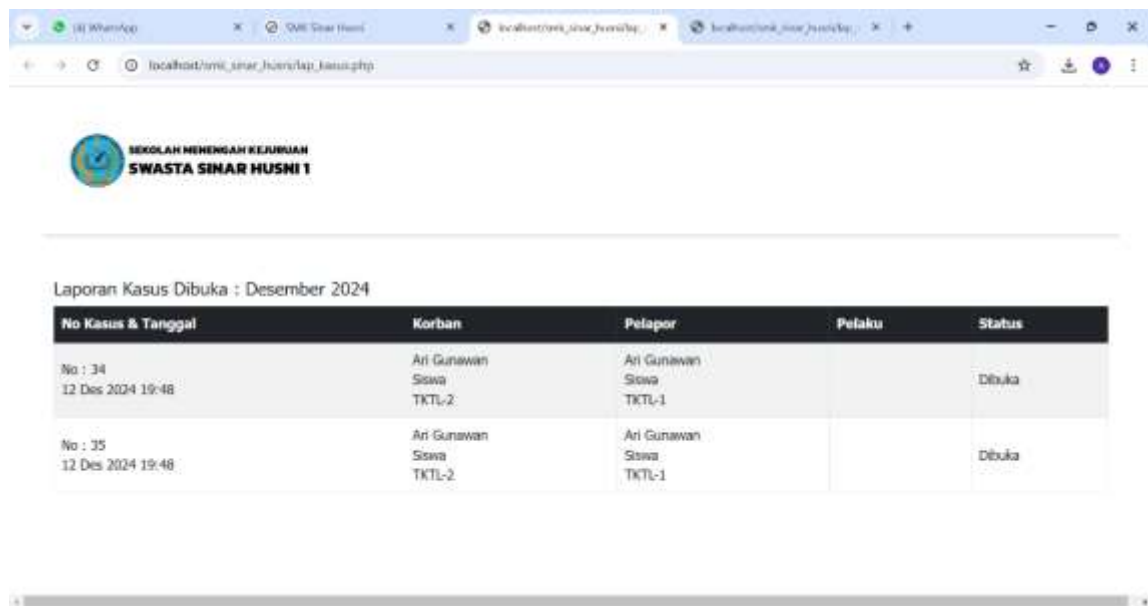


Figure 3. Use Case Diagram

This view displays the case report data input form, which is used to display case report data. The following image of the case report data form is shown in Figure 4

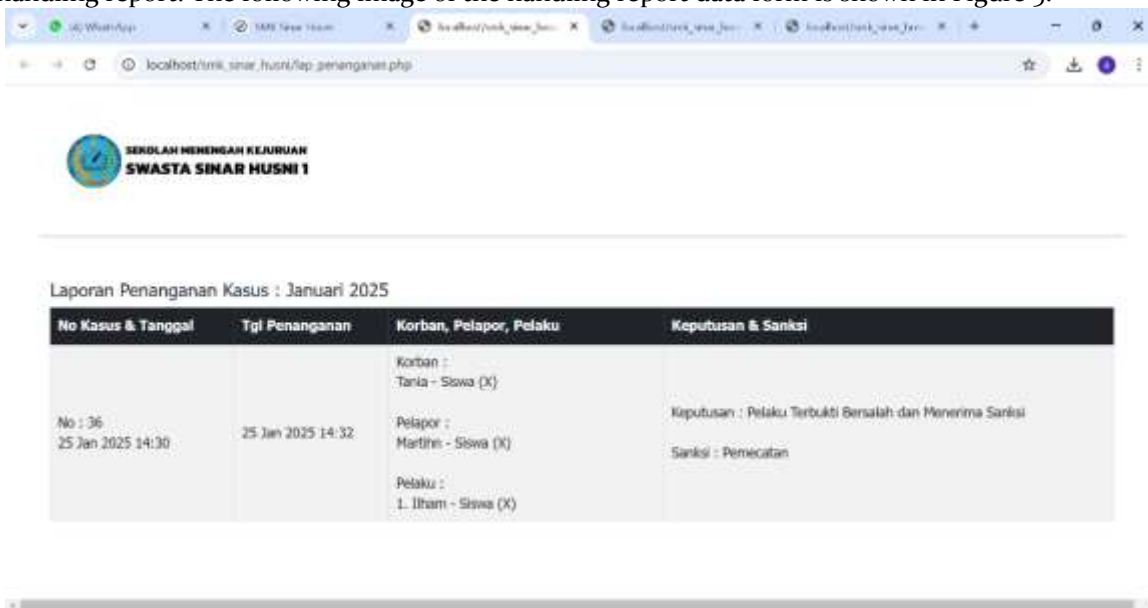


Laporan Kasus Dibuka : Desember 2024

No Kasus & Tanggal	Korban	Pelapor	Pelaku	Status
No : 34 12 Des 2024 19:48	Ari Gunawan Siswa TKTL-2	Ari Gunawan Siswa TKTL-1		Dibuka
No : 35 12 Des 2024 19:48	Ari Gunawan Siswa TKTL-2	Ari Gunawan Siswa TKTL-1		Dibuka

Figure 4. Case Report Data Form Display

This view displays the data input form for the handling report, which is used to display the handling report. The following image of the handling report data form is shown in Figure 5:



Laporan Penanganan Kasus : Januari 2025

No Kasus & Tanggal	Tgl Penanganan	Korban, Pelapor, Pelaku	Keputusan & Sanksi
No : 36 25 Jan 2025 14:30	25 Jan 2025 14:32	Korban : Tania - Siswa (X) Pelapor : Martini - Siswa (X) Pelaku : 1. Ilham - Siswa (X)	Keputusan : Pelaku Terbukti Bersalah dan Menerima Sanksi Sanksi : Pemecatan

Figure 5. Display of the Handling Report Data Form

This display is a display of the case graph form which functions to carry out the case graph process shown in Figure 6



Figure 6. Case Graph Form Display

This form displays a graphical data handling report. When the admin selects the graphical handling report, the program will display the graphical handling. A screenshot of the graphical handling form can be seen in Figure IV.10:

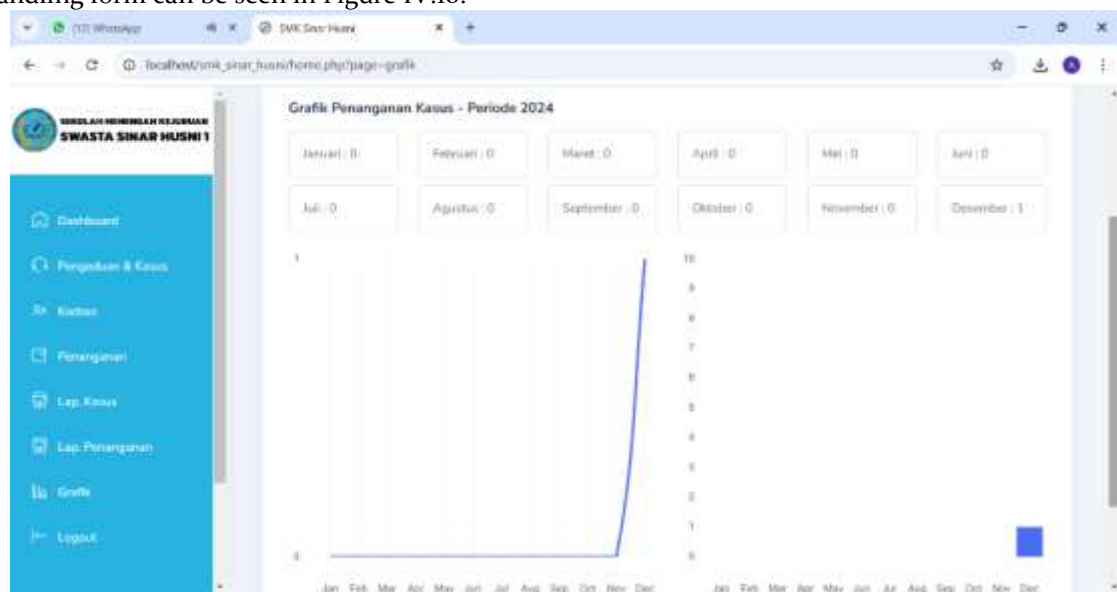


Figure 7. Display of the handling graphic form

4. Conclusion

The conclusions of the research report on the Implementation of an Executive Information System for the Prevention and Handling of Sexual Violence in Schools are as follows. The implementation of the executive information system has been designed to facilitate the reporting, handling, and monitoring of cases of sexual violence in schools in a more structured, expeditious, and accountable manner. This system enables schools, particularly the handling team and executives, to obtain up-to-date information on the number of cases, the status of their handling, and trends in violence. This allows for decision-making and policy development based on valid data. The anonymous and systematic reporting feature increases the courage of reporters to report cases without fear, and minimizes the occurrence of unaddressed violence. The implemented information system demonstrates that technology can play

a significant role in supporting efforts to prevent and handle sexual violence, while creating a safer and more responsive school environment.

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