

Training on CCTV Use and Maintenance at SLB Purnama Asih

HERTOG NUGROHO, USMAN B HANAFI, HANNY MADIAWATI, TAUFIK IRFAN, FERRY SATRIA, RIFA HANIFATUNNISA, NILA NOVITA SARI

Telecommunication Engineering Study Program

Politeknik Negeri Bandung

Email: nila.novita@polban.ac.id

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ABSTRACT

SLB Purnama Asih is a Special Education School in the Ciwaruga area, just behind the Bandung State Polytechnic campus. There are now 49 students and eight teachers, including the Principal. With a huge number of students and the situation of children who require special monitoring, a monitoring system that can assist instructors in monitoring students in their activities and interactions at school is required. It is important to design and construct a Closed Circuit Television (CCTV) security system at several school locations to address this. CCTV installation in schools can assist in increasing security and identifying possible threats or criminal activity. It can also assist the school in taking action in an emergency. The procedure that will be followed is installing and training the CCTV security system. The training strategy that will be used is to provide theoretical and practical information. The survey data from 12 respondents, using the Likert approach, revealed that this system was in the excellent range, with a percentage of 96.67%.

Keywords: security system, CCTV, and special education school.

1. INTRODUCTION

Education is everyone's right, therefore the government is promoting the Compulsory Education Program. However, it turns out that the rights and opportunities to learn are not enough for some children. They are people with disabilities, especially people with mental disabilities (Tenagrahita) or intellectual disabilities. The reality today, especially in West Java, is still very rare in the existence of Group C Special Schools (SLB-C). It is conceivable that several children with intellectual disabilities are waiting for a learning opportunity. They are entitled and obliged to obtain care, education, and training for their abilities and talents so that they can stand on their own and are no longer a burden to their families and communities.

Based on this background, a group of women from the Indonesian Ministry of Foreign Affairs Dharma Wanita Unit (Deplu) took the initiative to set up a foundation and raise funds to build representative education/coaching facilities. An SLB-C educational facility in the hilly area of Sarijadi, north of Bandung, in Ciwaruga Village, Cisarua District, Bandung Regency, whose use

was inaugurated by Mrs. Mochtar Kusumaatmaja, the wife of the former Minister of Foreign Affairs of the Republic of Indonesia (**Data Pokok Pendidikan, 2021**).

SLB Purnama Asih is a Special School located in the Ciwaruga area in the area behind the Bandung State Polytechnic campus (**Juwardi, 2015**). Currently, 49 students are attending special schools in Purnama Asih with 8 teachers including the Principal. All students enter the SLB C category, namely children who have below-average intelligence. Which consists of 5 students in grade 1 S, 6 students in grade 2 SD, 4 students in grade 3 SD, 9 students in 4th grade elementary school, 6 5th grade students, and 5 6th grade students. Junior high school students totaling 5 students and high school students totaling 9 students.

Based on the results of the initial survey by the community service team to partner locations, problems were found in the system security, where CCTV is needed in several school areas. In addition, the limited ability of school managers to supervise the behavior and activities of students who have special characteristics (with disabilities) while in the school environment, both inside and outside the room. In addition, it is also coupled with the difficulty of monitoring and recognizing people passing by around the school environment. With the availability of CCTV cameras in strategic places, some of the difficulties above, especially those that can record activities around the school, can be overcome. As shown in Figure 1, there are no CCTVs at the front of the school. The front of the school is the right location to monitor who enters and leaves the main door, then can monitor student activities when entering and leaving school and activities carried out when playing sports in the front yard.



Figure 1. Some parts of the school require CCTV installation

The use of CCTV systems to monitor the process of teaching and learning activities in schools has also been reported by several authors. Syaiful Bahri et al. (**Bahri, Ramadhani, & Edi Suprayetno, 2023**) reports Community Service activities at a high school in the city of Binjai, which tries to get input from CCTV training for students with the aim of increasing students' awareness and knowledge about CCTV installation and its benefits in creating a safe environment and supervised. The results show that CCTV installation training is effective in increasing students' awareness and knowledge about security. The same activity was also carried out by Atut Pindarwati et al. (**Atut Pindarwati, October 2022**), which is applied to Insan Cita Vocational School students. Meanwhile, Muhammad Yusro and Aodah Diamah (**Yusro & Diamah, 2022**), reported on CCTV training for teachers at SMKN 2 Bekasi City. The aim of the training is to provide teachers with equipment to install, use, maintain and repair CCTV. Yoyon Efendi et al. (**Efendi, Imardi, Edigan, Syaifullah, & Muzawi, 2020**) gathered representatives from students, teachers and education staff to attend training on CCTV. The same activity was carried out by Anggunmekha Luhur Prasasti et al. (**Prasasti,**

Novamizanti, Rochmawati, Fahrudin, & Dinimaharawati, April 2022) who takes the object of her dedication to Little Moslem PG and Kindergarten, Bojongsoang, Bandung. According to the type of school, the training object is focused on administrators, teachers and parents of students. Apart from CCTV installations, this activity also develops financial administration applications. In contrast to other activities, Akmaludin et al. (**Akmaludin, Sihombing, Rinawati, & Arisawati, 2023**) took the target of his dedication to the Citizens and Youth Organizations of Cikedokan Village, West Cikarang. The forms of activities are similar to others, such as installation of CCTV systems and training on how to use, maintain and repair CCTV. The activities above are covered by the Community Service program which is part of the Tri Dharma of Higher Education activities. These activities are incidental activities with a fairly limited budget. To determine the theme of the activity, very careful planning is required, intensive coordination with the Partners, and must consider the implementation time and budget which is quite limited. Therefore, the scope of activities is limited.

Apart from activities in the Community Service scheme, there is also the use of CCTV for various purposes, such as studying the impact of installing CCTV on the performance of teachers and students (**Behuku & Yulia, 2019**). The results concluded that teachers became more disciplined, but students still came late. The study conducted by Eci Sriwahyuni, and Muhammad Kristiawan (**Sriwahyuni & Kristiawan, 2019**) concluded that in implementing National Education Standards, one of the instruments that needs to be implemented is the CCTV system. Rabiah Al Adawiah in her paper (**Adawiah, 2019**) proposes installing CCTV to create an ideal educational (school) environment so that students can achieve the best performance and teachers can show their best performance. Meanwhile, Tatang Aulia Rahman et al. (**Rahman, Naela, & Mumlahanah, 2023**) reported the use of CCTV to shape student character through Duha prayers.

2. METHODOLOGY

The implementation method in this community activity is divided into three stages, namely preparation, installation, and training stages.

2.1 Preparation stage

Before starting the implementation, the proposing team conducted intensive coordination with the partner school to ensure that both parties have the same understanding regarding the objectives, scope, and schedule of activities. The proposed team will work closely with the school to identify areas of need intensive supervision, according to the concept described by (**Liu, 2017**) and (**Yudianto et al., 2019**).

At the next meeting, together with the CCTV system supplier team, they conducted a survey of the Purnama Asih SLB environment to determine priority points for installing CCTV cameras. This is necessary because of the limited budget available. From the results of the location survey, it was decided to have 3 CCTV installation points.

1. At the front of the school (Figure 2). The camera installed at the front of the school can monitor; the entry and exit activities of the main door; student activities when entering and leaving school; and activities carried out when exercising in the front court.



Figure 2. The front of the school

2. The second place is the school gate as shown in Figure 3. Here we can monitor people going in and out of the gate so that if there are strangers, they can be detected.



Figure 3. The school gate

3. The third place is the inside of the school as shown in Figure 4. This place concentrates all activities in the middle of the school building, all activities of teachers and students of Purnama Asih SLB students can be monitored properly.



Figure 4. The inside of the school

2.2 CCTV System Installation

Based on the results of the survey and needs analysis, the proposed team conducted a feasibility study of CCTV system installation by adapting the approach proposed by **(Fankem et al., 2018)**. This installation involves selecting the proper CCTV equipment, including cameras, storage devices, and software to be used to control the system. In addition, the installation must be carried out with due regard to safety and quality standards to ensure that the installed CCTV system will function properly and be effective in monitoring the school area.

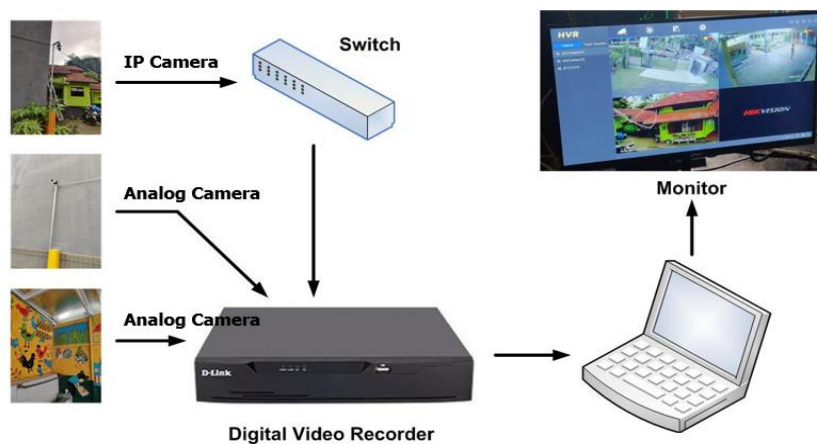


Figure 5. CCTV Block Diagram

Figure 5 shows a block diagram of the CCTV system deployed at Purnama Asih SLB. As a recording device, 2 analog cameras and 1 IP camera are installed which can be rotated. Analog cameras can be directly connected to the Digital Video Recorder, while IP cameras must pass through a switch that functions to amplify the signal. Digital Video Recorder is used to record and save video from up to 3 cameras. Data management (video storage, video display, controlling IP camera rotation) is done on a computer and the video results can be viewed on a monitor.

CCTV system installation was carried out in 2 days (30 May 2023 and 7 June 2023). Figure 6 shows the process of installing the CCTV system at the agreed points (as shown in Figures 2, 3, and 4). Figure 6 shows several CCTV installation points and video shows captured by CCTV cameras that can be monitored in real time.



Figure 6. Result of CCTV installation and monitoring in real-time

2.3 Training

Figure 7 shows the training stage, this is useful to ensure the security system continues to function properly. This training covers basic theory on the benefits of CCTV systems, the use of CCTV systems, best practices in CCTV maintenance, routine inspection steps, and how to solve common problems that may be encountered (Liu, 2017) (Pratiwi, et al., 2019). Training is carried out in the school environment, using the facilities and equipment available on-site. This allows trainees to get hands-on with the device they are managing.

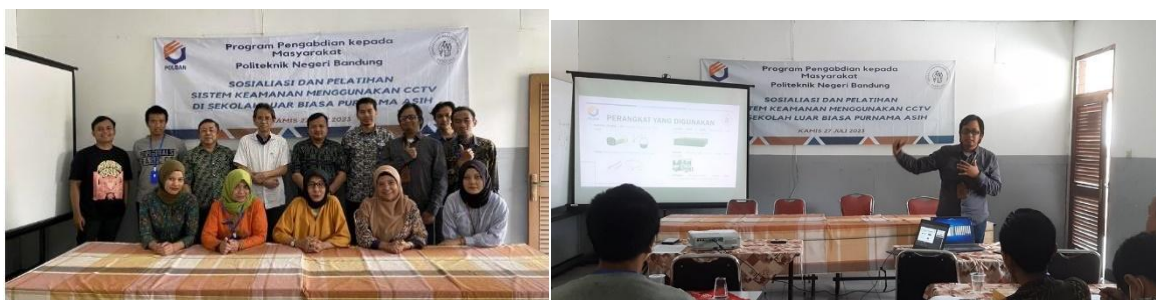


Figure 7. CCTV Usage Training

With the implementation of the security system installation and operation training stages, it is hoped that the installed security system can be used effectively by the school to keep students and staff safe.

3. RESULTS AND DISCUSSION

Participants were given surveys following the training and counseling program. This should allow them to express their thoughts about the event. The questionnaire has four questions. The questionnaire's intended audience consists of up to 12 teachers from SLB Purnama Asih. Table 1 lists the survey questions about the application's use. The survey data is analyzed using the Likert scale approach, which is used to calculate respondents' views or opinions about the application.

Table 1. Questionnaire result

No	Questions	Poor	Fair	Good	Very good	Excellent
1	Is the process of installing the CCTV system at SLB Purnama Asih going well?	0	0	0	2	10
2	Is the CCTV system functioning properly?	0	0	0	2	10
3	Is the training program on how to operate the CCTV system going well?	0	0	0	3	9
4	Does the cooperation between Polban and SLB Purnama Asih need to be continued in the future?	0	0	0	1	11
	Sum	0	0	0	8	40

From Table 1, the quality of answers is quantified into weights on a Likert scale as follows: Very Good: 5 with 40 respondents, Good: 4 with 8 respondents, Fair: 3 with 0 respondents, Poor: 2 with 0 respondents, Very poor: 1 with 0 respondents. Thus, the probability of the answer 'Very Good' $P(\text{Very Good})$ can be calculated as follows:

$$P(\text{Very Good}) = \frac{40 \text{ resp} \times 5}{0 \text{ resp} \times 1 + 0 \text{ resp} \times 2 + 0 \text{ resp} \times 3 + 0 \text{ resp} \times 4 + 40 \text{ resp} \times 5} \\ = 0,9667$$

Other information from the questionnaire demonstrates the respondent's enthusiasm for the CCTV system. All respondents stated that they saw the benefits of this CCTV system since it improves school security and allows them to monitor their special needs children.

Suggestions from respondents' results will be utilized to improve the application, including the following:

1. Adding units
2. Maintaining the system that has been built.
3. Optimizing the system

4. CONCLUSIONS

The program "Training on CCTV Use and Maintenance at SLB Purnama Asih" has been implemented effectively. This program was developed in response to observations made by one of the Polban Community Service teams, who noticed the need for the SLB Purnama Asih to install CCTV near the Polban location.

The planned CCTV system has been tested for direct use with Partners, and it has also received feedback in the form of a questionnaire, which will be utilized as an evaluation tool for the team to develop. The Likert approach was used to process survey data from 12 respondents, and the findings showed that this system was in a good category, with a percentage of 96.67%.

Training activities that have been carried out include;

1. Training on the benefits of using CCTV
2. Training in using the CCTV system
3. Training on CCTV system maintenance
4. Training on CCTV system repair

It is hoped that, with this knowledge, partners can independently utilize and maintain the CCTV systems that have been installed. Apart from that, because the partner's location is very close to the location of the community service team, if a problem occurs, it is easier to report it.

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