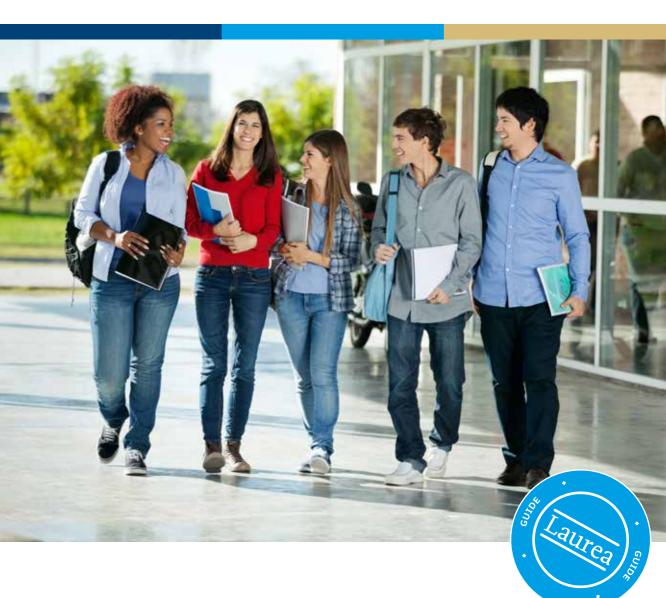
Laurea Julkaisut | Laurea Publications





Tiina Ranta & Soili Martikainen

SAFE SCHOOLS
THROUGH SAFETY WALKS



Copyright © authors and Laurea Univeristy of Applied Sciences 2017

Cover photo: Shutterstock Photos in pages 7, 9, 16, 26, 35, 36, 40 ja 49: Shutterstock

ISSN-L 2242-5241 ISSN 2242-5241 (painettu) ISSN 2242-5225 (verkko)

ISBN: 978-951-799-472-9 (painettu) ISBN: 978-951-799-473-6 (verkko)

Kopio Niini Oy, Helsinki 2017

Laurea Julkaisut | Laurea Publications | 84

Tiina Ranta & Soili Martikainen

SAFE SCHOOLS THROUGH SAFETY WALKS

TABLE OF CONTENT

INTRODUCTION	6
1. HISTORY OF THE CURRENT SAFETY WALK	. 8
2. SAFETY AT SCHOOLS AND HIGHER EDUCATION	
INSTITUTIONS	
2.1 What does safety refer to	
2.2 Safety and security management in an education organisation	
2.3 Escape behaviour from a safety walk perspective	12
3. TRAINING AS A PART OF PROACTIVE, RISK-BASED	
SAFETY PROCEDURES	
3.1 Framework of legally required safety training	
3.2 Employer obligation to exercise care	
3.3 Employee obligations	
3.4 Risks and their analysis	
3.5 Potential problems analysis	
3.6 'What if' technique	24
4. PLANNING THE SAFETY WALK	27
4.1 A few words on learning	27
4.2 Planning the safety walk as a process	27
4.3 Examples to support planning safety walks	- 29
4.4 Successful safety walk	33
5. IMPLEMENTING THE SAFETY WALK	35
5.1 Appropriate group size	
5.2 Safety walk themes	_
5.3 Examples of content of safety walk in specific building	42
5.4 Instructions for the safety walk facilitator	. 44
IN CONCLUSION	48
DEFEDENCES	50

INTRODUCTION

his guide is intended for the organisers of safety walks at schools and higher education institutions. A safety walk is a tour in a school, during which the members of the school community are familiarised with matters that promote the safety of the school in a guided and pre-planned manner (Finnish National Agency for Education 2012; Mannerheim League for Child Welfare (MLL) 2008.) These matters may include the building, premises, rescue equipment and supplies, passageways, assembly point, substitute premises, calling for help, operational procedures and risks.

The goal of the guide is to provide practical models and ideas for organising safety walks in your school as a part of safety training. Schools and higher education institutions are required by law to train the members of a school community on operational safety. This is an employer requirement and also a right of employees and members of the school community. Safety training does not mean that we just explain how safety is implemented or hand out a rescue plan for review. Ideally, safety training consists of working together and learning through it.

Safety walks are a part of the safety training of an educational institution and of proactive and risk-based safety work. They increase safety awareness and assuming responsibility for safety. Being goal-oriented and executing detailed pre-planning help ensure interest in participating in safety walks and learning and internalising safe behaviour and skills. A well-planned safety walk is an inspiring learning experience. It encourages everyone to participate according to their age-range and capabilities. It does not include unexpected turns and is a carefully planned and implemented solution for the target group. Ideally, it inspires the entire school community to participate in everyday safety activities also in the future. The most central message of the safety walk is that safety concerns the entire community - it is important for everyone.

The purpose of the safety walk is to provide information on the safety arrangements of the school to students, personnel and other individuals who work in the building.



During the safety walk, participants can also identify matters related to safety and report observed deficiencies. Observation is a risk assessment tool of a school or higher education institution, but does not replace systematic risk analysis. The ability to introduce new ideas that improve safety is a welcomed addition to safety walks. Observation is also not the primary tool for monitoring safety internally. When successful, a safety walk creates a 'memory imprint' for participants, which can also be referred to as a cognitive map. This means that safety walk participants form a type of mental map, which can be recalled in an emergency and leads to safe operating procedures. This requires continuous and well-led practise, so that the operational environment becomes familiar and safe.

Comments and feedback on the publication can be sent to the authors, Tiina Ranta (tiina.ranta@laurea.fi) and Soili Martikainen (soili.martikainen@laurea.fi).

1. HISTORY OF THE CURRENT SAFETY WALK

his section discusses how safety walks were originated. The discussion is necessary, as the reader forms a clear picture of the diverse opportunities safety walks present as a part of good safety practices. This guide also describes potential variations of safety walks in more detail to choose from, or you can use them to design an implementation that suits the needs of your school.

First steps of the safety walk

Safety walks have been implemented in many different ways and for different purposes for nearly 30 years in Finland. This is not a new concept, even though safety walks have started to become common in Finland as recently as the past few years primarily as a method of safety training.

The original idea of safety walks originated in Canada in 1989 when the primary goal was to use safety walks for assessments in order to improve the safety of mobility especially for women. The walks in Canada developed and were practically implemented in a manner where a small group of women were led by a coordinator for a walk in an area that was considered unsafe. Men were welcome to attend as observers. Women would observe the environment and evaluate how well they were seen and how effectively they could call for help in the prevailing conditions. Matters pertaining to fleeing and calling for help were also assessed, such as the condition of the area. After the walks, the observations were collected for authorities to take action on at a later time. (Metrac 2010.)

Safety walks in residential areas

Safety walks have also been used as a safety improvement method of urban residential areas. An example of this was in Gothenburg, Sweden, where the idea of safety walks was introduced. The main concept was that residents would be included in the development of a more resident-friendly city in a manner where mobility would be unrestricted and people would be safe everywhere and during all times. Implementing the walks was based on the residents getting together and promoting a common cause, safety, in a relaxed environment. The discussions focused on how residential areas could be developed to be safer. The safety walks implemented in Gothenburg led to many reforms and improvements, so that urban residential areas could be made truly safer. (Step by step for a safer and more secure Gothenburg 2008, 3.)

Adoption of the model from Gothenburg was started in Espoo, Finland. Sarka's (2010) practice-based thesis implemented safety walks in specific urban pilot areas in Espoo. The walks were based on guided tours organised for residents of selected residential areas in order to assess the safety conditions. This allowed observation and discussion to be used to better examine the problems of the area. Sarka emphasised the significance of pre-planning in the thesis. The route for the walks was carefully planned and the participant group was made as heterogeneous as possible with extensive representation from several different groups. The time of year and day were also considered to ensure that walks were carried out both during daylight hours and when it was dark. (Sarka, 2010,14 – 21).



Safety walk model by Finnish National Agency for Education

The Finnish National Agency for Education (2012) discusses the significance of regular safety walks in order to identify hazards and to increase the knowledge on safety technology. According to the Finnish National Agency for Education, safety walks can be either conducted in small groups or alone.

The Finnish National Agency for Education has defined safety walks as "safety walks examine the school's operational procedures, identified risks, passageways, safety equipment and the assembly point. The facilitator provides information to the students and asks questions on practical matters pertaining to safety. The participants learn about the safety culture of the building and how to identify risks and take the corrective action in different types of emergencies. A step counter may also be used to count the number of steps during the walk." (Finnish National Agency for Education 2012).

Current facility-specific safety inspections

The safety walk idea has also been implemented in facilities where participants are able to observe oversights or hazards pertaining to fire safety from a specific perspective, for example. These can be implemented following either a pre-planned model or based on free observation.

At Laurea University of Applied Sciences, they are implemented as a part of the campus-specific safety management inspection procedures. They measure self-reliant preparedness, physical premises, escape safety, technical equipment, procedure monitoring and oversight of legally required inspections. The campus safety representative is responsible for performing the inspection. The idea is that other members of the higher education institution community are requested to participate in the tours. This has been seen as an excellent opportunity to learn and share common safety-related matters with the entire community. The inspection tour is implemented following a ready model using a digital template to assist. Approximately 40 different safety-related items are described on this digital template. The items are reviewed during the tour conducted once a month. Every observed deviation is documented and it results in intervention, analysis or corrective action for the situation or matter. In addition to campus management, the results of the inspection are relayed to the safety and security director of the higher education institution. The director regularly reports on the observed deficiencies to the management team.

2. SAFETY AT SCHOOLS AND HIGHER EDUCATION INSTITUTIONS

his section focuses on defining what safety refers to. The subject is approached using different definitions of safety. There is also discussion on what does safety management in educational institution communities refer to. Another perspective of the section is on escape behaviour using a behavioural science framework. The section focuses on describing this important factor from a safety perspective. Safety walks have not been really covered before in the framework of escape behaviour.

2.1 What does safety refer to

The safety of both the learning and working environment is important for schools and higher education institutions. There are two different dimensions of safety; safety and security. Safety refers to the state of being safe and not being dangerous, and the ability to keep or to make somebody or something safe (Oxford Advanced Learner's Dictionary of Current English 1995, 1035–1036). Actions that endanger safety are made unintentionally(Reniers, Cremer & Buytaert 2011, 1240). Security is freedom or protection against an attack. It consists of measures which are taken to guarantee the safety of a person, building or country. Attack is an act of violence to hurt or kill somebody or to cause a harmful effect on something. Actions that compromise security are intentional, unauthorised actions that aim to cause harm or damage. (SFS-ISO 28000:2012, 11). Safety is usually perceived to be the opposite of danger and threat. Hazard is usually used in the context of activities that endanger safety without intent. It is a very likely possibility for an injury, harm or damage occurring or it may have already occurred (Vocabulary of Comprehensive Security

2014,67; SFS Guide 73:2011, 12). A threat is associated with intentionally endangering safety. It is a potential cause of an unwanted incident, which may result in harm to a system or organisation (SFS-ISO/IEC 27000:2010, 18).

The basis of safety and security management at schools and higher education institutions are the organisational values, the mission statement, vision and strategy (Kerko 2001, 44-48). Safety work planning should be a strategic task based on the mission statement of the school or higher education institution, which allows safety to be managed comprehensively based on the principles defined by top management (Ranta & Martikainen 2015, 9). Organisational safety and security refers to a state where risks associated with people, the environment, property, information and reputation are under control and harm can be proactively prevented (Lanne 2007, 12).

2.2 Safety and security management in an education organisation

Being prepared is central for safety and security management. Preparedness allows the school and higher education institution to manage their operational capabilities as well as possible in all normal, exceptional and threatening conditions (Vocabulary of Comprehensive Security 2014, 60: Preparedness and continuity management 2012, 4.) A requirement for operational continuity is a true and tried capability and preparedness to operate in all potential conditions (Martikainen & Ranta 2014, 34).

Safety walks and other exercises should be based on risks. Risk management supports the continuous development of the organisation. It is based on the best available information and is coordinated, event-specific and up-to-date (SFS-ISO 31000:2011, 22–24.) Risk management is a significant part of the safety management of schools and higher education institutions. In addition, it is a part of a good safety culture, which affects how important safety is perceived as and what is done to promote safety. (International Atomic Energy Agency 1991, 3-4; Reason 1997, 192–194.)

2.3 Escape behaviour from a safety walk perspective

You often hear how the content of safety walks are copied from other schools. They are implemented without giving them detailed thought. However, when planning evacuation, indoor sheltering and safety walk exercises, it is important to examine both the special characteristics of the specific operating environment and research information. Research results that pertain to behaviour of individuals in escape situations form a solid foundation for planning safety walks. Understanding the central rules regarding the behaviour of individuals and the group helps with the consideration of the special characteristics of the members of the school community, the building and the site when planning the exercises.

Very limited research on escape behaviour of individuals and groups has been conducted in Finland. In her master's thesis, Matikainen (2007, 72) describes behaviour

in an emergency situation in a social psychology framework. Although Matikainen does not discuss safety walks in her study, some of the typical phenomena for escape behaviour can be applied with planning them.

Stress also regulates behaviour

Stress typical for emergency situations affects our actions. It may become apparent in escape situations in a manner where an individual's attention is focused on non-essential matters. In addition, a matter or factor that is a requirement for a safe escape may not receive full attention or even be completely neglected. Stress is created by a nearby hazard, urgency and multi-faceted information. In contrast, stress is also considered vital, because it motivates an individual to take action in a crisis situation. The amount of stress varies for different reasons. Studies demonstrate that the severity of stress symptoms depends on the magnitude of the perceived losses. When an individual's probability of escape is suddenly drastically reduced and he or she realises that the situation is life-threatening, the level of stress increases and may result in panic. When a person is experiencing severe stress, they may no longer be able to process information in their environment rationally, which further limits the ability to consider different alternatives. This may result in an escaping individual not necessarily being able to select the safest route or read the exit signs or complex directions, for example. (Matikainen 2007, 75.)

Saari (2000) has described the first phase of the crisis, the psychological stress phase, where a majority of people are able to maintain their operational capability. It is typical for this phase that a person seeks cover and safety. It may appear to an outside that the person is taking action 'without emotion' in order to save themselves. Approximately 20 % of people may experience panic, become hysterical or 'freeze' and become apathetic. If the individuals perceive the accident or hazardous situation to be such that escape is possible, but the chance of escape is low, the number of people experiencing panic will increase. Saari mentions a fire in a crowd as an example of this type of situation. If the individuals perceive the conditions such that there is no chance of escape, the number of people who 'freeze' will also increase. (Saari 2000, 49.)

On the choice of escape route

According to Lo, Huang, Wang & Yuen (2006), one of the most important factors of the escape process is choosing the escape route. In a fire, where several people are simultaneously attempting to escape, the decision-making is also affected by the choices made by other people on the appropriate escape route. It is good to consider this when planning safety walks. Knowledgeable personnel are an asset both during exercises and in an actual emergency. (Lo, Huang, Wang & Yuen 2006, 366–368.)

According to research, the escape route choices made by family members and friends largely guide escape behaviour. The choices made by the majority of people also guide other people to choose an escape route during an emergency. When escaping,

13

people move toward familiar people and locations. According to studies, escapees with close psychological bonds appear to first assemble the people they are bonded to together and then attempt to escape as a group. Certain group compositions, such as a family or a group that entered at the same time and were there for a scheduled meeting are acceptable as groups. (Matikainen 2007, 74.)

Matikainen (2007,74) emphasises the significance of contact and how it is highlighted between members in different types of emergencies. For educational institutions, this can be interpreted so that students in the same grade, students taking the same course or people working in the same office do not leave until everyone has assembled, for example. It is good to address the existence of this phenomenon when safe operational procedures are created for the community. It is also good to consider this phenomenon when planning an indoor sheltering or escape exercise.

The familiarity of the routes is the foundation of all escape behaviour

Studies have indicated that individuals will select the door or route that they have used to enter the property as their escape route. Usually, it is the main entrance of the building. This choice is made even if it is not the safest alternative for acting in the emergency. Individuals and groups seem to seek the route that they use normally also when escaping. The reasons for this behaviour is stated to be that individuals feel that unknown alternatives increase the level of threat. For safety walks, this means that it is necessary to identify all the escape routes that are not used for every-day use already during planning and assign them a central role in the activities. The more often we get the opportunity to take this less familiar route during exercises, the more likely it is that we are able to use what we have learned during a potential emergency. Therefore, it is not sufficient to point out the routes during the safety walk; it is important to walk the routes from start to finish. This results in the routes that are otherwise unused becoming familiar to all members of the community.

The emergency expertise of personnel is the foundation

The authority of personnel also has a determining effect on the escape behaviour of individuals and the resulting success of an evacuation. If the personnel actions are well-practiced, logical and generate confidence, it has been demonstrated to have an impact on safer escape behaviour. The contribution of personnel who know the building well and have practiced in the premises in question cannot be over-emphasised in escaping safely and during indoor sheltering. Clear and logical instructions provided by them has been demonstrated to be an important factor for ensuring a safe escape. (Klem & Best 1982, 73.)

The doubts of escapees regarding unfamiliar routes may prove fatal

Pan (2006, 12) says that the planned directing of a person to an area using alternate routes may allow for better actions in an emergency. This increases the probability that these routes are used in an emergency. Matikainen (2007, 79) proposes reasons

for why some people will not use an emergency exit in an emergency: escapees suspect that the emergency exit is locked or that there is something else unexpected on the escape route. This has been explained with people not having sufficient experience on the escape routes at their workplace, for example. These routes simply are not used during everyday life or in worst-case scenarios, access to them is even restricted during normal conditions. (Matikainen 2007, 75.) The cornerstone of the entire safety walk concept is this perspective. When the members of the school community do not know the escape routes of their own facility sufficiently well and the perception of a safe escape is not reinforced during everyday life, one cannot be certain of a safe escape in an emergency. If those responsible for safety training at schools would develop their own exercises from this perspective and the awareness of the members of the school community on all the marked exit routes were to be increased, the typical narrow-minded approach would not prevail in an emergency.

Personnel must know every escape route at their workplace

Each emergency is different: the fire may have started in the lobby by the main entrance, which cannot be accessed due to heavy smoke. A major explosion may have occurred at a nearby chemical plant, which results in serious risk for the people in the local area. The social abilities and the significance of other members of the community are highlighted when escaping. No-one can decide in advance, for example, what escape route is available and will provide the best chance of survival. Therefore, it is extremely important that people are not forced to use specific routes during an evacuation or when indoor sheltering. It is essential that at least the personnel know and are familiar with all the possible routes that may assist with escape at the school premises. This is also a reason this guide was written - the intention is to reinforce how safety walks should be implemented.

Safety walks as a part of continuous safety training of personnel

Well-planned safety walks help educational institution communities prepare for the most challenging emergencies. During safety walks, the participants are led along the escape route to actually exit the building, which also reduces the assumption that unfamiliar routes would become threatening in an emergency. The more personnel members attend the safety walk, the more likely it is that they will be able to manage the situations that require escaping and are also able to assist others involved. Therefore, safety walks intended for personnel and implemented sufficiently frequently are crucially important and an easy way to implement safety training at every educational institution. No external experts are needed for implementation; instead, just a shared decision on implementing a safety walk between meetings, for example.



3. TRAINING AS A PART OF PROACTIVE, RISK-BASED SAFETY PROCEDURES

his section focuses on describing what legally required safety training refers to. First, we examine the legal requirements where the legally required safety training is defined and then we address the risks. Discussion of the risks focuses on identifying, assessing and addressing them.

3.1 Framework of legally required safety training

Legislation that addresses safety in a diverse manner promotes safety and security procedures by providing employees, students, school children and the employer with rights and obligations. According to the Constitution of Finland (731/1999), everyone has the right to integrity and security. School children and students have the right to a safe learning environment according to the Basic Education Act (628/1998), General Upper Secondary Education Act (629/1998), Polytechnic Act (932/2014) and the Act on Vocational Education (630/1998). The operations of schools and higher education institutions are subject to several laws regarding safety, such as the Occupational Safety and Health Act (738/2002), Rescue Act (379/2011) and the Chemicals Act (599/2013). They are all central laws when organising risk-based safety training.

3.2 Employer obligation to exercise care

According to the Occupational Safety and Health Act (738/2002) the employers are required to take care of the safety and health of their employees. The employer shall analyse and identify the hazards and risk factors caused by the work, work hours, the working premises, other aspects of the working environment and the working conditions and assess their consequences to the employees' safety and health. The

employer must also ensure the employee is provided sufficient information on the workplace's hazards and risk factors. The employee must also receive an orientation to the work, working conditions at the workplace, safe work practices, working and production methods, work equipment used in the work and the correct method of using it. In addition to the above, the employer must also provide employees with training and instruction in order to eliminate the hazards and risks of the work and to avoid any hazard or risk from the work jeopardising safety and health. Therefore, employees have the right to know the risks associated with their work assignments. Central to all these requirements is the planning and implementation of the safety training executed by the employer, in addition to ensuring they have been effective. (Occupational Safety and Health Act 738/2002; Ranta & Martikainen 2016, 17).

3.3 Employee obligations

The employee also has obligations. One of the most central obligations is that the employee must by available means take care of both their own and the other employees' safety and health. In addition, the employee must follow the orders and instructions given by the employer within his or her competence. Employees must also otherwise observe such order and cleanliness as well as care and caution that is necessary for maintaining safety. The employee also has the obligation to report any such faults and defects they have discovered in the working conditions or working methods, machinery or other work equipment, personal protective equipment or other devices which may cause hazards or risks. In addition, the employees must, in accordance with their experience as well as the instruction and guidance provided by the employer and according to their occupational skills and opportunities, eliminate such faults and defects they have discovered which cause evident hazards. (Occupational Safety and Health Act 738/2002; Ranta & Martikainen 2016, 17).

3.4 Risks and their analysis

The planning of safety walks is conducted based on risks, so that the walks meet the needs of the school or higher education institution. Risk refers to the impact of uncertainty on goals. It is usually described as a combination of the likelihood of an incident occurring and the resulting consequences. (SFS Guide 73:2011, 8.) This guide discusses undesired, negative risks, even though a risk can be both positive or negative in the guide.

Every organisation has vulnerabilities, internal characteristics that expose the organisation to risks and undesired incidents (SFS Guide 73:2011, 13). Risk management is used to lead the organisation and direct it regarding risks. Risk management is also a part of decision-making. It is coordinated, situation-specific, up-to-date and based on the best available information. In addition, risk management supports the continuous development of the organisation. (SFS-ISO 31000:2011, 22.) The risk management process is illustrated in Figure 1.

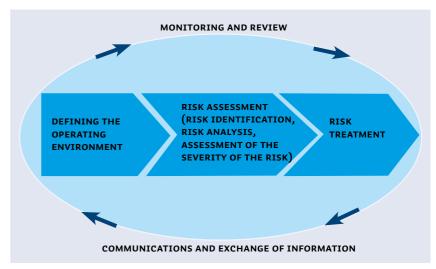


Figure 1. Risk management process (SFS-ISO 31000: 2011, 10)

Risk management is an overall process, which includes defining the operating environment, risk assessment and processing the risks. Risk analysis includes identifying the risks, risk analysis and evaluating the significance of the risks. Risk analysis is a process that aims to understand the nature of the risk and to define the level of risk. When assessing the significance of the risk, it is defined if the risk is acceptable or tolerable. Risk processing modifies the risk. Risk processing may include, for example, taking, preventing, sharing, mitigating, eliminating or preventing risk. Communication, exchange of information, monitoring and reviews are a significant part of the risk management process. (SFS Guide 73:2011, 14—15; SFS-ISO 31000: 2011, 10—20.)

Use the potential problem analysis (PPA) or the what-if technique to assess risks, for example. Identify and evaluate the risks of the undesired incident based on its probability and the severity of the consequences. Plan preventive and preparedness arrangements for each unacceptable risk and the action procedure if the risk event occurs.

Assessing probability

Assess the probability of the risk using Table 1:

Table 1. Assessing risk probability

LIKELIHOOD	CHARACTERISTICS OF LIKELIHOOD	
1 HIGHLY UNLIKELY	EVENT THAT OCCURS SELDOM OR IRREGULARLY	
2 UNLIKELY	EVENT THAT OCCURS EVERY NOW AND THEN, BUT NOT REGULARLY	
3 LIKELY	EVENT THAT OCCURS OFTEN OR REGULARLY	

Assess the probability of the risk on a scale of 1—3, where

- 1 is very likely,
- 2 is unlikely and
- 3 is likely.

Assessing consequences

Assess the consequences of the risk using Table 2:

Table 2. Severity of risk consequence

CONSEQUENCE	SEVERITY OF THE CONSEQUENCE
1 SLIGHTLY HARMFUL	THE INCIDENT CAUSES A TEMPORARY ILLNESS OR HARM. REQUIRES ABSENCE OF NO MORE THAN 3 DAYS.
2 HARMFUL	THE INCIDENT CAUSES MORE SERIOUS OR LONGER-LASTING CONSEQUENCES OR HARM WITH LESS THAN SEVERE CONSEQUENCES. REQUIRES ABSENCE OF 3 TO 30 DAYS.
3 VERY HARMFUL	THE INCIDENT CAUSES PERMANENT OR IRREVERSIBLE INJURY. REQUIRES HOSPITALISATION AND ABSENCE OF MORE THAN 30 DAYS.

The severity of the risk consequence is assessed on a scale of 1—3, where

- 1 is slightly harmful,
- 2 is harmful and
- 3 is very harmful.

Determining the risk level

Assess the risk level using the probability of the undesired event and the severity of the consequences. A risk may be insignificant, minor, moderate, significant or intolerable. You can calculate the risk value using the following formulas:

The formula for calculating the risk value

- event probability x severity of consequences; or
- event probability x severity of consequences² (if you want to highlight the severity of the consequences)

Assessing risk level

Assess the risk level using either your own table for the school or Table 3:

Table 3. Assessing risk level

LIKELIHOOD	SEVERITY OF THE CONSEQUENCE		
	SLIGHTLY HARMFUL (1)	HARMFUL (2)	VERY HARMFUL (3)
HIGHLY UNLIKELY (1)	INSIGNIFICANT RISK	MINOR RISK	MODERATE RISK
UNLIKELY (2)	MINOR RISK	MODERATE RISK	MAJOR RISK
LIKELY (3)	MODERATE RISK	MAJOR RISK	UNBEARABLE RISK

Risk level is assessed based on the results of the risk analysis and by comparing the results to the school's own risk criteria. If the risk criteria have yet to be defined, you can use Table 3. When assessing the significance of the risk, it is defined if the risk is acceptable or does it need to be addressed. (SFS-ISO 31000: 2011, 42; SFS Guide 73:2011, 13.) An acceptable risk refers to a risk level where the organisation fulfils both their legal requirements and their own safety principles (OHSAS 18001:fi 2007, 14). Accepting a risk is a conscious decision to assume the risk (SFS Guide 73: 2011)

3.5 Potential problems analysis

The analysis of potential problems is a risk assessment method. It is also abbreviated as PPA. Using the method, it is possible to identify different types of problems with different severities. It is completed in a small group where the members know the addressed site, function or task well. The PPA is started by selecting and limiting the object of the analysis. No problem types are limited from the scope of the analysis in advance. A requirement for completing the analysis is that the management of the organisation provides their support and grants the resources for conducting the analysis. The goal is to identify the most central problem areas of the site, function or work task and determine the accident factors associated with the most central hazards. (The Finnish Risk Management Association 2016a.)

Table 4 illustrates a PPA with a risk analysis, risk significance assessment and risk processing with five steps.

Table 4: PPA with risk analysis, risk significance assessment and processing

STEP	TASKS
PHASE 1: PREPARATION	THE FACILITATOR PREPARES FOR THE PPA DURING THE FIRST PHASE. THE FACILITATOR REVIEWS THE EXISTING MATERIALS, INVITES THE ATTENDEES FOR THE SMALL GROUP AND DRAFTS A TAILORED LIST OF KEY WORDS FOR THE EVENT THE SMALL GROUP FIRST DECIDES EXACTLY HOW THEY WILL ANALYSE THE SELECTED SUBJECT, WHO THE SUBJECT PERTAINS TO AND ALSO DEFINES THE POTENTIAL LIMITS TO THE SCOPE. DEPENDING ON THE SIZE AND COMPLEXITY OF THE OBJECT BEING EVALUATED, IT CAN BE DIVIDED INTO SMALLER COMPONENTS TO BE EVALUATED SEPARATELY.
PHASE 2: SILENT BRAINSTORMING	EVERYONE WRITES DOWN THE RISKS THEY IDENTIFIED USING FULL SENTENCES ON POST-IT NOTES, FOR EXAMPLE, AND ATTACHES THE NOTES TO A PLASTIC SLEEVE (PICTURE 1). A MAXIMUM OF THREE NOTES PER PERSON ARE WRITTEN ON THE FIRST ROUND AND AT THE END OF A ROUND EACH PERSON HANDS THEIR PLASTIC SLEEVE AND ITS NOTES TO THE PERSON SITTING ON THEIR LEFT. USUALLY ONE NOTE PER PERSON IS WRITTEN DURING THE FOLLOWING ROUNDS THE PLASTIC SLEEVES AND THE NOTES CONTINUE BEING PASSED ON TO THE PARTICIPANTS READING THE NOTES WRITTEN BY OTHERS USUALLY HELPS PEOPLE IDENTIFY NEW RISKS THE FACILITATOR ACTIVATES THE PARTICIPANTS OF THE BRAINSTORMING SESSION BY PRESENTING KEYWORDS ONCE PEOPLE ARE HAVING DIFFICULTY WRITING NEW NOTES THE SILENT BRAINSTORMING ENDS WHEN NEW NOTES ARE NO LONGER BEING WRITTEN.

STEP	TASKS
PHASE 3: BRAINSTORMING DISCUSSION	THE POST-IT NOTES ARE MOVED TO AN EASEL PAD THE NOTES ARE REVIEWED TOGETHER ENSURING THAT ALL THE PARTICIPANTS IN THE GROUP UNDERSTAND THEM IN THE SAME WAY IF NECESSARY, THE NOTES CAN BE SUPPLEMENTED TO MAKE THEM CLEARER. IF NEW RISKS ARE THOUGHT OF AT THIS POINT, THEY CAN STILL BE WRITTEN ONTO ADDITIONAL NOTES THE NOTES THAT COVER THE SAME TOPIC ARE PLACED TOGETHER IF THERE ARE TWO OR MORE NOTES WITH THE SAME CONTENT, THEY ARE PLACED ON TOP OF ONE ANOTHER. NO NOTES CAN BE DISCARDED ENSURE ONCE MORE THAT THE NOTES IN THE SAME GROUP ARE ASSOCIATED WITH ONE ANOTHER AND COVER THE SAME TOPIC SEE IF A TOPIC IS A REASON OR CONSEQUENCE OF ANOTHER TOPIC AND GROUP THE TOPICS ONTO THE EASEL PAD BASED ON THIS THE TOPICS ARE WRITTEN DOWN ONTO THE EASEL PAD ABOVE THE POST-IT NOTES
PHASE 4: RISK ASSESSMENT AND PROCESSING	CONDUCT A RISK ANALYSIS, WHICH DEFINES A RISK LEVEL FOR EACH RISK DEFINE THE RISK LEVEL BY DEFINING IF THE RISKS ARE ACCEPTABLE OR DO THEY NEED TO BE PROCESSED. IF NECESSARY, RISKS ARE PROCESSED BY PROPOSING AND AGREEING ON RISK MANAGEMENT METHODS. ALSO ASSESS THE REMAINING RISK LEVEL AFTER THE CORRECTIVE ACTIONS APPOINT OWNERS FOR THE RISKS AND PLAN THE SCHEDULES FOR THE POTENTIAL CORRECTIVE ACTIONS THE RESULTS ARE RECORDED ON THE FORM
PHASE 5: REPORTING	A GOOD FINAL REPORT INCLUDES AT LEAST THE FOLLOWING INTRODUCTION GOALS AND LIMITING OF SCOPE POTENTIAL ASSUMPTIONS AND THEIR REASONS THE DESCRIPTION OF THE OBJECT BEING ASSESSED AND THE PARTICIPANTS INITIAL INFORMATION AND ITS SOURCES THE USED RISK ASSESSMENT TOOLS AND TECHNIQUES, INCLUDING THE ASSUMPTIONS AND PRECISION/ DEMONSTRATING SUFFICIENCY RESULTS CONCLUSIONS AND RECOMMENDATIONS SUMMARY RISK REGISTER

Silent brainstorming session during PPA in progress in Picture 1.

- Implement the silent brainstorming of a PPA using Post-it notes.
- Attach the notes to a plastic sleeve, so that the adhesive on the notes remains usable.
- Attach the Post-it notes to the easel pad during the brainstorming discussion.



Picture 1. Silent brainstorming

3.6 'What if' technique

The 'what if' technique is a risk assessment method. It is a method in accordance with SFS-EN 31010: 2011, Appendix B.9, which is a systematic technique based on group work. At the meeting, the facilitator presents phrases and keywords that help participants identify risks. The facilitator discusses with the group how the deviations in behaviour and in normal operation affect the system, organisation or method. (SFS-EN 31010:2011, 70—74). A requirement for this method is that the management of the organisation provides its support and grants resources for assessing risks.

The perspective being assessed (for example, identifying hazards associated with the property) is defined and its scope carefully limited before starting to identify the risks. The facilitator uses discussion, documents, plans and drawings to assess both the internal and external operating environment. The facilitator also prepares a list of prompt words and phrases. Therefore, the group does not have to make a lot of preparations, but the group is required to have experience and expertise. Central stakeholder groups, who know the site being discussed, are needed in the group. (SFS-EN 31010: 2011, 70–74.)

The facilitator encourages participants to bring up and discuss known risks, previous events and experience, known and existing management methods, protection methods and legal requirements and limitations. The discussion is led by using 'What if' questions, such as 'What would happen if...', 'Could someone or something...', 'Has anyone or anything ever...'. (SFS-EN 31010:2011, 70—74.)

The questions can include the following, for example:

- What if an alarm fails?
- What if there is no electricity?
- What if person X is not present?
- What if the air conditioning cannot be shut off?
- What if we are missing information X?
- What if we do not have the keys?
- What if a door is left open?
- What if the public announcement system does not work?
- What if a mobile phone is not available?
- What if the information system does not work?
- What if there are distinguished guests present?

A summary is prepared on the risks. Then, the group confirms and records a description of the risks, reasons, consequences and existing management methods. The group evaluates if the management methods are sufficient and effective and adds management methods if necessary. They also assess the remaining risk level after the management methods. Additional 'What if' questions can be asked during the discussion in order to identify new risks. (SFS-EN 31010:2011, 70—74.)

The method can be applied to all types of systems, situations, conditions, organisations and functions. It only requires a bit of preparation from the group. It is relatively quick and the group is able to identify the greatest risks swiftly. It can be used to identify opportunities for improving processes and systems and for generally identifying actions that have a high possibility for success. The method creates a risk register and a risk processing plan can be drafted with a bit of additional work. (SFS-EN 31010:2011, 70-74.) The system, method, situation, condition and/or its change must be defined carefully before starting the use of the 'What if' technique. The facilitator must assess the external and internal operating environment using discussions, documents, plans and drawings. The preparation work has to be executed carefully, in order for the work group to use their time effectively. The facilitator must be experienced and knowledgeable. Some risks may not be identified if the work group members are not sufficiently experienced or if the work system is not comprehensively covered. For example, representatives of all stakeholder groups should participate in the work group. A top-level review does not necessarily highlight complex, detailed or inter-dependent problems. (SFS-EN 31010: 2011, 70-74.)



4. PLANNING THE SAFETY WALK

his section focuses on describing the steps of planning a safety walk. First, we discuss how good learning can be achieved for safety walks. Then the planning process of the safety walk is discussed in more detail.

4.1 A few words on learning

The goal of every safety walk to be implemented at your school should be that the members of your school community learn the most central principles of operating safely. When we want to achieve learning, only the most central content must be used as the basis for planning. You sometimes hear how content ha been planned for safety walks that simply cannot be adopted during one walk. None of us are able to learn and retain everything during a single session. This results in the critical content from an expertise perspective remaining insufficient or being buried under several other themes.

A safety walk is an ideal method if you are able to focus on only what is most essential for learning. There can be several safety walks for different purposes - being systematic, of course, is important and repeating the exercises sufficiently often. Also documenting the names of the participants, the participation date and content of the walk is important.

4.2 Planning the safety walk as a process

In order to plan the safety walk, it is important to appoint a responsible individual with a supporting team very early on. The goal of their work is to consider which of

the school's target groups is to be selected and what content will be offered to the target group. Adjusting the perspective to the goal and correct target group is to be executed based on risks. This means that the first focus should be on the most critical groups for safety of operations and the most risk-prone content. This type of safety walk could target teachers, for example, and the theme could be to identify and become familiar with all the escape routes of the school building within the escape behaviour framework and especially focus on the routes that are not in everyday use. The goal of this walk is to demonstrate that also the other, alternative routes are safe. It is vitally important for a teacher, for example, to be able to walk an unfamiliar route out of the building and experience that the doors along the way were not locked, allowing for unrestricted access.

The planning of a safety walk progresses through seven steps, in accordance with Figure 2.



Figure 2. Safety walk planning process (Mannerheim League for Child Welfare 2008; Tuisku & Arvonen 2006, 10)

As stated above, a responsible individual is assigned for the safety walk. The individual is responsible for the planning of the process. He or she also assembles the work group for planning. The work group determines the perspective and goals that the safety walk is to achieve. In addition, the route and topics are agreed on that are to be discussed and demonstrated during the walk. Next, the target group of the safety walk is determined. When planning the safety walk, the needs and potential limitations of the target group are to be considered. Safety walks can be for the entire school community or different types of safety walks can be planned for different target groups. (Mannerheimin Lastensuojeluliitto 2008; Tuisku & Arvonen 2006, 10.)

Next, the schedule for the safety walks is planned: when are the walks to be held and how long do they last. In addition, when is the safety walk organised for the people who were absent during the safety walk. Also the post-processing procedure is agreed on and when it is to be done. Then the tasks are assigned: Who are to serve as safety walk facilitators, who will record the participants of the safety walks, are there observers for the safety walks and is the walk recorded or photographed, for example. Future safety walks are communicated on to all members of the school community in advance. Legal guardians can also be informed of the matter. Once the safety walks have been completed, the results are communicated to the entire school community. (Mannerheimin Lastensuojeluliitto 2008; Tuisku & Arvonen 2006, 10.)

4.3 Examples to support planning safety walks

The Confederation of Finnish Industries (EK) renewed the organisational safety and security management model in 2016 (Figure 3), which organisations can use to manage all their functions. Using the model, the organisation also protects their important values, such as people, information, reputation, property and the environment. EK emphasises that safety and security management is a part of the normal management of an organisation in order to ensure operational safety and continuity and to ensure it meets the requirements. Safety is managed and developed in accordance with the Deming Cycle through the phases of planning, implementation, assessment and improvement. The foundation of safety work is the organisation's strategy, which provides the principles for risk management and, therefore, risk-based safety management. (The Confederation of Finnish Industries 2016, 2-3.)

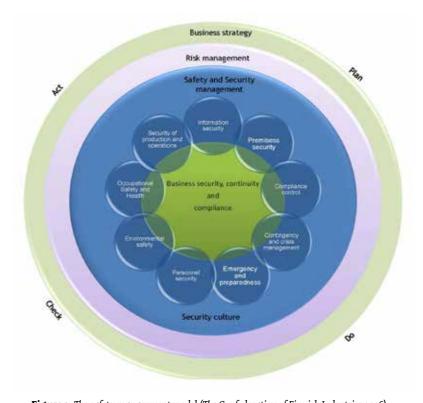


Figure 3. The safety management model (The Confederation of Finnish Industries 2016)

Safety is examined from the perspective of nine areas: 1) premises and property safety, 2) (service) production and operational safety, 3) occupational safety, 4) personnel safety, 5) rescue safety, 6) information security, 7) environmental safety, 8) management of misconduct and deviations and 9) preparedness and crisis management. It is important to note that the nine areas may partially overlap. (The Confederation of Finnish Industries 2016, 2-3.)

Table 5 lists the different areas of safety according to EK's (2016) safety management model and provides examples of what can be discussed during safety walks and what observations can be made during them.

Table 5: Examples of the content of safety walks divided by safety areas

SAFETY AREA	EXAMPLES OF SAFETY WALK CONTENT	
Premises and property safety	Access to the property and its premises Locking and key management Access control Unrestricted access Safety of classrooms Safety of meeting rooms Safety of work areas Storage of valuables Instructions on what to do in case of disruption Exit routes Emergency exits Address markings Signs that are placed on doors for evacuating premises that state 'Room inspected' Signs and markings Electrical centre, mains switch Water main shutoff Shutting off air conditioning Burglar alarm Security guards Property technology Sufficiency of lighting Shelters Location of temporary premises Environmental safety planning Construction and renovation projects	
Information security	 Information security instructions Identifying critical information and classification of information Storage of confidential information Limiting access to contact information (e.g. restricted release of personal information and addresses) Printing using printers and copy machines located in public areas Storage of passwords Processing of personal information Protection against malicious software Protection of terminal devices Updating software Backup copies Operational safety Phones and mobile devices 	

SAFETY AREA	EXAMPLES OF SAFETY WALK CONTENT
Rescue safety	 Procedures during a fire Fire extinguishing equipment Fire hose box Fire doors and fire containment Fire alarm system Fire alarm button Fire detectors Exit routes Emergency access roads Shutting off air conditioning Locking Signs that are placed on doors for evacuating premises that indicate the room has been inspected Signs and markings Assembly points Location of temporary premises Sufficiency of lighting Storage of hazardous substances Limiting access to contact information (e.g. restricted release of personal information and addresses)
Personnel safety	School safety representatives Backup arrangements and substitutions Personal protective equipment Encountering violence Safety instructions Travel instructions Communication links Alarm and monitoring services Insurance policies Limiting access to contact information (e.g. restricted release of personal information and addresses)
Environmental safety	 Processing and disposal of hazardous materials Sustainable development Energy efficiency Noise reduction Control of chemicals Waste management (sorting, recycling)
Occupational safety	 Occupational safety and health operational programme Traffic Obstacles in passageways Machine and equipment safety Safety of tools Physical factors Noise reduction Use of personal protective equipment Handling of hazardous materials Encountering violence Who provides first aid Location and contents of first aid cabinet Location of defibrillator Insuring

31

SAFETY AREA	EXAMPLES OF SAFETY WALK CONTENT	
Safety of (service) production and operations	 Safety of internal products and services Event safety Security of payment traffic Logistics safety Subcontractors and service providers Contract management Storage of valuables Insuring 	
Management of misconduct and deviations	 Observation, analysis and prevention of harmful incidents Cooperation with authorities Procedure in case of crime Insuring 	
Preparedness and crisis management	Procedure in case of crime	

4.4 Successful safety walk

Table 6 has a summary of the factors that should be considered when planning safety walks. They are not all necessarily suitable for a single safety walk, but using them as the basis for consideration you are sure to achieve a successful safety walk experience for every participant.

Table 6: A successful safety walk is all this

PURPOSE OF A SAFETY WALK	INSTRUCTIONS FOR PLANNERS
Safety walk as a teaching method	The person responsible for planning safety walks understands walking as a pedagogic solution, a teaching method, which is used to train the selected target group to the desired action, task.
Safety walk as a method of risk-based safety training	The person responsible for planning it understands their own school community's needs, which are derived from risk-based thinking.
	For example:
	Scenario A) Our school may be threatened by a large fire nearby, which requires us to seek shelter indoors. We have identified the premises for this in advance and created plans and clear instructions. We practice evacuation to these premises using safety walks.
	Scenario B) Our school may be threatened by a fire that originated in the building and prevents the use of exit routes in everyday use. The individual and team responsible for planning study escape behaviour and carefully select the route of the safety walk. It focuses on identifying and then walking the routes out of the building, which have been marked as emergency exists. Stops are made at pre-planned spots along the route - such as stops to examine fire extinguishing equipment.
	Scenario C) The planning is to be completed for safety training for a specific target group. During planning, careful consideration is given to what the safety training for this target group should contain. For personnel, the employer is requires by law to state the hazards associated with operations and the preparations for them, among other things. Everyone must also be able to lead a safe exit from the building and indoor sheltering and calling for help. In addition, everyone must know how to report safety observations and deviations and near misses.
	Scenario D: Your school wants to include everyone in identifying potential safety needs and hazards associated with the building and operations that have not yet been identified. The group responsible for implementing the task plans the tour, selects the target group, the date and time and prepares to document the observations. Management commits to analysing the results and the potential corrective actions derived from them.

33

PURPOSE OF A SAFETY WALK	INSTRUCTIONS FOR PLANNERS	
Pre-planning is the most important step in the entire process	Safety walks require the content and route to be carefully preplanned, described, modelled and tested.	
Identifying the needs and expectations of the different groups participating in safety walks	Safety walks require that the different personnel, stakeholder and student groups are identified. Implementation is done by considering the special needs of every group and may require several, different types of implementations. It considers its target group - it is tailored with the age group and other characteristics of the participants in mind. Understanding that the same walk is simply not suitable for everyone, if the aim is that everyone learns.	
Continuous documen- tation is associated with safety walks	If a safety walk is implemented as a part of your school's safety training, it requires that every tour is documented stating both the content and the participants.	
Safety walks are pri- marily the personnel's responsibility	Safety walks involve especially the school's personnel: this is not a 'free period', participation is both a privilege and a responsibility. The safety expertise of personnel is crucial in every school community - it is not fatal if schoolchildren or students do not know what to do in an emergency. However, it is fatal if the personnel do not have sufficient and tested expertise in leading through a disruption.	
Nothing can replace the role of top management	The top management of the school demonstrates by example how important they feel the walks are - management participates in the walks and inspires others to participate.	
A positive atmosphere is created by talking	Safety walks affects participants through a positive message - pay attention to what and how you say things. A safety walk includes carefully limited content - it is good to consider the amount of talking and aim to involve attendees with acti- vating questions, for example. A well-formulated, activating question during the walk supports interest levels and being active. For example: "Which door would you use to exit now, as we stand in the main lobby?" "What would you do if you were not able to exit through the main entrance?"	
Scaring or startling people is not a part of safety walks	Safety walks do not include stories, hints or actions that may result in scaring or startling the participants - fear is rarely an effective tool for learning.	
The content of a safety walk has been considered and limited to minimum	A safety walk is like sampling delicious treats - you only sample enough to taste the content. Nobody is 'stuffed full'. Rather a little with high quality than a lot of poor quality.	
Successful interaction during implementation determines the results	A safety walk is to take place with a lot of interaction with the group - it is not a facilitator monologue. Instead, it inspires attendees to participate in a positive manner.	

5. IMPLEMENTING THE SAFETY WALK

his section focuses on describing how to get from planning the safety walk to implementation. The section discusses the size of the safety walk group and implementation based on different needs and goals.



5.1 Appropriate group size

It is necessary to define the size of the safety walk group already in advance. A suitable size for a group of participants is such that discussion is possible. This also allows the facilitator of the walk to use interaction to reinforce learning. A suitable group size is approximately 10-15 people. At least two facilitators are needed for larger groups.

Before the walk, the facilitator has communicated the goals and practical arrangements of the walk to the participants. The decision on, for example, starting the walk with a 20-minute information session in a specific room, has been communicated to participants well in advance. It is good to request that the group convenes early, so that the time allocated for the task at hand can be used as planned.

At the start of the walk, the facilitator explains the goals of the walk and asks participants to think of their, personal goals. The facilitator leads the group calmly along the pre-planned route. The route can be thought of as a path, along which there are pre-determined 'stops'. A 'map template' can be produced for the safety walk, which indicates both the routes and the stops. This can help the walkers prepare for the walk and anticipate the next stops.



What is done at each stop depends on what the goal of the walk is. As already discussed in this guide, the perspective and goals for the walk have to be defined already during very early stages in planning. Regardless of the content and goals, the walk can always include the goal to teach participants to pay attention to safety. A good facilitator is able to start a discussion on the theme right away. Today, every organisation needs a procedure for reporting safety observations. The observations may be incidents, accidents and near misses that compromised safety and other matters or factors that affect safety. Safety walks can be planned so that safety-related matters are observed along the 'path' and they are then recorded and collectively discussed at the end. These could include, for example, dark corridors, narrow pathways or an additional fire load along the route. It is good to end the walk with a summary that goes over the observations and results and decides on further actions. These could include, for example, filling out a safety deviation notification based on what was observed during the walk. The duration of a safety walk is approximately 40-60 minutes, depending on the size of the property, the selected route and the content of the walk.

Attendees of the safety walks are the groups that they were planned for in advance. Remember to especially consider representation from stakeholder groups. As it is good to include safety walks a part of statutory safety training, it should be offered at least once a year to all the members of your school community. These groups include all schoolchildren or student, the entire personnel of the school or higher education institution and all the other parties located on the property.

The facilitator of the safety walk knows the property and its safety arrangements and the other processes associated with operating safely. The facilitator also understands the significance of proactive safety work and the positive approach needed for safety walks. Intimidation of any kind is not a part of implementing a safety walk. Fear, either caused verbally or, in a worst-case scenario, as a result of an activity during the walk, will only lead to denial and reduced motivation.

Table 7 presents a collection of the central content for implementing safety walks.

 Table 7: Central content, activity and resources of safety walks

CENTRAL CONTENT	ACTIVITY	RESOURCE TO BE ALLOCATED
Facilitators, assistants and record keeper	The facilitator is a skilled safety expert. Knows the different actors at the site and the premises. Knows the script of the walk and is able to proceed with flexibility also when something does not go as planned. Is able to work with different types of groups and consider the expectations and requirements based on the age groups of the participants during implementation.	Facilitator, record keeper and assistants potentially needed at the stops
Group size	It is necessary to define the size of the safety walk group already in advance. A suitable size for a group of participants is such that discussion is possible. This also allows the facilitator of the walk to use interaction to reinforce learning. A suitable group size is approximately 10-15 people. At least two facilitators are needed for larger groups.	Advance information on group size
Room reserved for group	The facilitator of the walk greets all the walkers and asks them to sit down. Explaining the schedule (for example, 20 minutes for a general safety information session and 40 minutes for walking).	A suitable room for the information session
Discussing the goals of the safety walk	At the start of the walk, the facilitator explains and shows the goals set by the school for the walk and asks participants to think of their own, personal goals for the walk. TIP!! If there is time allocated for motivating the group, each participant can be asked to write one to three personal goals on Post-it notes. They are collectively attached to a 'here are my goals' wall and they are read by the facilitator. Once the walk has been completed, time is used to collect and document observations. Every walk participant is also asked to move the goal notes that were fulfilled during the walk to the 'goals achieved' wall. Engage in discussion on unachieved goals and consider collectively why that may have occurred. If everyone achieved their goals, a discussion is also had on this. The facilitator documents the goals and provides them to the planners of the next implementation.	Recorded goals for the walk Post-it notes

CENTRAL CONTENT	ACTIVITY	RESOURCE TO BE ALLOCATED
Progressing along the pre- planned route and stops	The facilitator leads the group calmly along the pre-planned route. The route can be thought of as a path, along which there are pre-determined 'stops'. What is done at each stop depends on what the goal of the walk is. As already discussed in this guide, the perspective and goals for the walk have to be defined already during very early stages in planning.	Route, path of safety walk Stops and their con- tent and potential supplies
Participants are handed out a picture of the route and stops	A 'map template' can be produced for the safety walk, which indicates both the routes and the stops. This can help the walkers prepare for the walk and anticipate the next stops.	Map template of walk for participants
Content and tasks at stops	What is done at each stop depends on what the goal of the walk is. As already discussed in this guide, the perspective and goals for the walk have to be defined already during very early stages in planning. Stops may be, for example, a part of a 'treasure hunt' path designed for children, where activities have been planned for the stops. There may be questions at the stops, which are associated with the selected theme and motivate participants to research, discover and resolve. TIP!! True learning is always achieved when a participant is able to try, do and participate in things for themselves. Try to allow for practicing things always when possible. For example, the use of a fire extinguisher is really only learned once you can try it for yourself.	Stops and their content and potential supplies
End of tour	The tour ends as agreed, which starts the process of reflection on the achieved results and goals and the potentially identified hazards, for example. The record keeper writes down the observations and other results. The participants are thanked and the potential delivery of the results to the participants is agreed on.	Record keeper Summary papers for recording results
Documenting the safety training	The name of participants, the main content of the walk and the implementation date is recorded as a part of the completion register of safety trainings.	An Excel file or a system acquired for documenting safety trainings
Proactive safe- ty communica- tion actions to be taken after the walk	The top management of the school demonstrates how important they feel the walks are by setting an example - a summary of the walk results, potential improvements and gratitude for participation are sent out signed by management.	Top management Information bulletins and summaries

39

Safe Schools through Safety Walks

5.2 Safety walk themes

A current theme for the school or higher education institution is selected as the content of the safety walk (Waiting 2014, 8). Ideally, the walk is an entity that provides the participant with sufficient information on the security of the site. If implemented well, it includes a carefully limited amount of content - you can often see the walk including several content and functional portions. However, people's capability to learn and retain is limited in this situation: it is a skill to select only the most essential as content and move the rest to a later time. Even creating confidence for participants that they are safe is a noble and sufficient goal to aim for. Examples of different types of safety walk themes are presented in Table 8.



Table 8: Safety walk example themes

WHAT	TARGET GROUP	HOW OFTEN	ноw	CONTROL	FULFILMENT OF HIGH- QUALITY LEARNING
Safety walk for learning and rehearsing escape routes	Primarily for school personnel and, with school resources allowing, for entire school community	At least once per school year, ideally once per semester	A pre-planned route, which focuses on the marked escape routes that are not in daily use	Every employee is to complete, which is documented	Implementation in small groups, where the route is walked with high-quality interaction with the fa- cilitator
Safety walk to become familiar with fire extinguishing equipment	Entire community participates	Once per school year according to training schedule	A pre-planned route with planned 'stops' at different fire extinguishing equipment	Every employee is to complete, which is documented	Implementation in small groups, where the route is completed in interaction with the facilitator - learning is reinforced with a test to be completed after the walk
A safety walk to identify the hazards associated with the property and operations	A group selected from the school community, which has representation from the personnel groups and students and stakeholders OR Only the student/personnel group	Once per year according to the training schedule	A pre-planned route, which focuses on a section, func- tion etc. of the school	Is voluntary Recommended to have top management representation to set an example The participants and content of the safety walk is documented	The achieved results are processed and communicated to the entire community Continuous monitoring of results
Time of year safety walk Safety walk organised outdoors. Safety matters are discussed for the time of year (Kytömäki, 2011)	Pre-selected target group	At suitable intervals as a part of the school's safety training schedule	During the walk, the nearby areas of the school are walked and observations are made on iden- tified hazards (Kytömäki 2011)	Participation is voluntary The participants and content of the safety walk is documented	Different types of hazards for different times of the year are considered during each stop. In addition to a facilitator, it is good to have a record keeper who can write down the identified hazards. (Kytömäki 2011)
Examples of walks on the school grounds may include play equipment or the route to school. The hazards in the areas are identified (Kytömäki, 2011)	Pre-selected target group	At suitable intervals as a part of the school's safety training schedule	Sites are stairs, roads and walk-ways, bodies of water, other non-motorised traffic, construction sites, near school exits, exercise areas and assembly points. (Kytömäki, 2011)	The participants and content of the safety walk is documented	Recording the hazards can also be completed so that every student group writes a risk that pertains to a specific time of year at the site onto a time of year table at each stop. This activates the students and also results in a written record of the results. Time of year tables and activating questions for hazardous sites as printed additional materials. (Kytömäki 2011)

5.3 Example of content of safety walk in specific building

This example presents a 'safety walk standard' developed and implemented for a specific site. This building-specific safety walk standard has identified the most important matters to be considered for each floor. Similarly, the sites that should be considered during the safety walk have been marked on each floor of the building.

a) Floor plan and an 'inspected' sign attached to the room's door

The building's floor plan is located in every room and it indicates the location of

the room to be inspected and the nearest marked exit route. The emergency number 112 and the school's address are stated on the floor plan. Each room also has a 'Room inspected' sign (Figure 2). During an evacuation, this door is attached to the door after ensuring that there are no people left in the room.

b) Signs, exit routes and fire containment

During the safety walk, the facilitator asks the participants to watch for different types of signs, so that everyone knows their meaning and is able to use the information if necessary. The facilitator shows the nearest escape routes on different floors and different rooms during the walk. In addition to the routes being pointed out, they are also walked. During the walk, the facilitator explains that individuals act very differently in emergencies. A reaction may be triggered by a past trauma, for example, which



may result in an escapee being unable to act in a state of panic. It is important that these individuals are especially considered in an emergency by helping, supporting and encouraging them.

The facilitator shows participants how they can recognise that the building has been compartmentalised for fires. The facilitator explains that the purpose of fire compartments is to prevent the fire and harmful smoke gases from spreading from one fire compartment to another and to secure people's safety and exit from the building, limit property damage, protect adjacent buildings and facilitate rescue and fire fighting efforts. The facilitator asks why it is also important to keep the compartment doors (fire doors) closed also during everyday activities.

c) First aid fire extinguishing equipment

During the safety walk, the facilitator shows the location of the first-aid fire extinguishing equipment and explains that the building has a fire alarm and sprinkler system. During the safety walk, the facilitator also explains that the correct use of the fire extinguishing equipment during the first few minutes of a fire in a systematic and immediate manner may significantly reduce the impact of the fire before firefighters reach the scene. A fire needs three elements, which are a combustible material, sufficient temperature and oxygen. A fire can be extinguished by removing at least one of the elements. Use instructions of fire hose box (Figure 3).



Picture 3. Use instructions of fire hose box

The facilitator explains that there is electricity in the equipment of IT labs, which is why a carbon dioxide extinguisher is to be used in them in case of fire. After this is explained, use of the fire extinguisher is also demonstrated. Use of the fire extinguisher is also practiced once a year in a manner where everyone can try it and extinguish a fire.

5.4 Instructions for the safety walk facilitator

Training material should be produced to support the safety walk facilitator in order to increase knowledge on the subjects covered in the walk.

1. Escape routes

Escape routes are marked on the floor plan. Use the nearest and safest route when escaping. Also note the routes that are used less frequently and the exits and emergency exits. Walk the group through them, so that it leaves a strong memory imprint.

2. Alternative escape routes

The locations of alternative escape routes are indicated on the floor plan. Note the locations of the routes and use them for escape during an emergency, if necessary. Escape through an alternative escape route can occur on one's own initiative or assisted by rescue personnel. Alternative escape routes may include windows, balconies, rescue ladders or fire escape ladders. (Fire and rescue terminology 2006).

3. Activity areas of students

Student activity areas, such a teamwork rooms or fitness centres are marked on the floor plan. Safe, self-reliant escape must be emphasised for these areas.

4. Cafeteria

Note that customers may include other people than just school personnel and students. Customers may include, for example, ageing people or those with limited mobility.

5. Fire hydrant

Locations of fire hydrants are marked on the floor plan. A fire hydrant is a collection point of water that is connected to the water distribution system and is used for extinguishing fires. Often, their location is the same regardless of which floor they are on. Note the location of fire hydrants on every floor. Picture 4 shows the content of a fire hydrant.



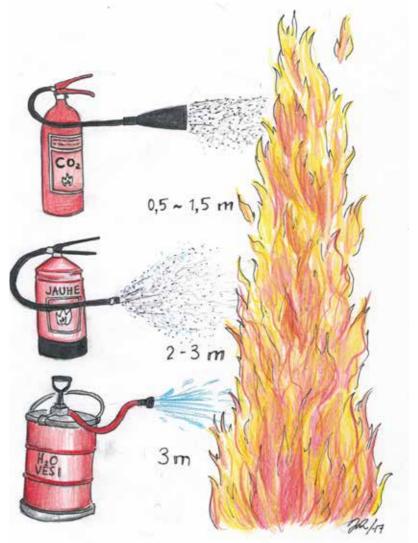
Picture 4. Fire hydrant content

6. Fire alarm button

Locations of fire alarm buttons are marked on the floor plan. An alarm of a starting fire is made by pressing the alarm button. Note the location of fire alarm buttons on every floor.

7. Handheld extinguisher

Locations of handheld extinguishers are marked on the floor plan. Note the location of handheld extinguishers on every floor. It is important to practise use of fire extinguishers during the safety walk by using the empty demonstration version of the extinguisher found at the school. The operating distances of the fire extinguisher are illustrated in Picture 5.



Picture 5. Operating distances of handheld fire extinguisher



Picture 6. Assembly point

8. First aid supplies

Locations of first aid supplies are marked on the floor plan. Note the location of first aid supplies on every floor.

9. Compartment doors (fire doors)

Note that fire doors are to remain closed at all times. They must not be wedged open. The personnel and all members of the higher education institution community are required to take initiative in ensuring that the fire doors remain closed. It is everyone's duty to close the door that is discovered to have been wedged open.

10. Direction of travel to assembly point

The direction of travel to assembly point is marked on the floor plan. Travel to the assembly point occurs from in front of the X through the personnel's parking lot. This allows us to also ensure that the rescue authorities have the ability to work without disruption, and avoid any other accidents.

11. Assembly point

Our assembly point is the exercise field (Figure 6).

Travel to the assembly point is completed in the same groups as when exiting the classroom. This allows us to ensure that the entire group is able to reach the assembly point safely and no one is left in the burning building. At the assembly point, groups are organised in a manner where the group that arrives first moves to the rear of the location.

12. Nurse

The nurse's reception is located on the first floor at the location indicated on the floor plan. Remember to consider contacting the nurse in different types of first-aid situations.

13. Lobby services

You can obtain information on safety of the school from the lobby services. They coordinate the school's safety activities during everyday conditions and in emergencies. All the members of our school community are to carry responsibility in the safety of our school on their own behalf.

14. Information point

The information point is located in the entrance lobby by the main doors. Information on the school premises and other practices is available there.

15. Defibrillator

The defibrillator is located on the first floor by the information point. The defibrillator is a device that is used to provide the subject to being resuscitated a direct-current electric shock to eliminate cardiac arrhythmia that caused the cardiac arrest. The device can reliably recognise this type of arrhythmia and provides instructions to the user on its correct and safe use.

16. Stairway

Ensure safe and unrestricted access in the stairway. Nothing unnecessary can be left there or even stored there temporarily. This also applies to bicycles.

17. Lifts

Lifts cannot be used during an emergency evacuation.

18. Indoor sheltering premises

The indoor sheltering premises of the school are located in the right wing of the second floor. There are safety boxes with safety vests, laminated quick guides and floor plans in each classroom. The premises are filled in order starting from classroom 234.

IN CONCLUSION

his guide is intended for all those who are interested in improving the safety of schools and higher education institutions. It has been created based on the need to offer different education organisations inspiring and activating methods to learn more about safety to supplement their safety training. The guide is based on the views and experiences of two safety and security experts and research information.

A safety walk is one learning method to implement safety training in any organisation. It can be implemented at a school or in its vicinity and is a guided walk, during which the members of the school community learn about factors that improve the safety of the school using a directed and pre-planned method. The perspective can also identify different types of hazards associated with operations and the learning and working environment and start processing the hazards.

The guide also touches on other important topics regarding the safety of schools and higher education institutions. How many of you have heard how understanding the rules governing the behaviour of individuals escaping an emergency may even help save lives in some situation? The behaviour of people has been found to be consistent in hazard situations. They typically try to use the same, familiar route they use daily to enter or exit a property also when escaping in an emergency. Research indicates people escape in groups. Could this hinder a safe escape at your school? The clarity of instructions and signs has also been demonstrated to affect how well people are able to remain functional in even the most challenging situations.



The school building itself also affects how people behave in an emergency. Therefore, the condition of the property, the number of floors and the structural and technical solutions of the property must also be considered. Other matters to be considered include the nearby risk sites, such as roads with heavy traffic, railways, industrial properties, petrol stations and power plants.

How logical the instructions provided in case of emergency are is essential for both the success of the safety walk and the action taken in a real emergency. This refers to how well personnel are able to demonstrate through their own actions that they have the knowledge and ability to act. The special characteristics of the members of the school community, such as age, health or operational capabilities, also determine the principles for planning emergency protection. For example, early education groups or children in special education set different safety requirements due to their age and development levels than older schoolchildren or students. Moreover, stakeholders, their needs and expectations, should not be forgotten either.

REFERENCES

Ammattikorkeakoululaki (932/2014). Viitattu 19.4.2017. http://www.finlex. fi/fi/laki/ajantasa/2014/20140932 (Available only in Finnish)

Elinkeinoelämän keskusliitto. 2016. Yritysturvallisuus. Viitattu 24.5.2017. https://ek.fi/wp-content/uploads/ yritysturvallisuus_2016.pdf (Available only in Finnish)

International Atomic Energy Agency.
1991. Safety Culture. Safety Series No. 75-INSAG-4. Vienna: International
Atomic Energy Agency. Viewed
on December 28, 2015
from http://www-pub.iaea.org/MTCD/publications/PDF/Pub882_web.pdf

Kemikaalilaki (599/2013). http://www.finlex.fi/fi/laki/alkup/2013/20130599 (Available only in Finnish)

Kerko, P. 2001. Turvallisuusjohtaminen. Jyväskylä: PS-kustannus. (Available only in Finnish)

Klem, T.J. & Best, R. 1982. Fire Journal, 76.

Kokonaisturvallisuuden sanasto. 2014. Sanastokeskus TSK ja Suomen Pelastusalan Keskusjärjestö. TSK 47. Viitattu 10.4.2017. http://www. spek.fi/loader.aspx?id=1c66e01da75e-4a9a-80ec-9816340ce752 (Available only in Finnish)

Kytömäki, L. 2011. Opas turvallisuuskävelyn järjestämiseen. Laureaammattikorkeakoulu. Viitattu 7.4.2017. http://docplayer.fi/2703056-Opas-turvallisuuskavelyn-jarjestamiseen.html (Available only in Finnish)

Laki ammatillisesta peruskoulutuksesta (630/1998). Viitattu 19.4.2017. http://www.finlex.fi/fi/laki/ajantasa/1998/19980630 (Available only in Finnish)

Lanne, M. 2007. Yhteistyö yritysturvallisuuden hallinnassa: Tutkimus sisäisen yhteistyön tarpeesta ja roolista suurten organisaatioiden turvallisuustoiminnassa. Väitöskirja. VTT Publications 632. Espoo: VTT. (Available only in Finnish)

Lo, S.M., Huang, H.C., Wang, P. & Yuen, K.K. 2006. A Game TheoryBased Exit Selection Model for Evacuation. Fire Safety Journal.

Lukiolaki (629/1998). Viitattu 19.4.2017. http://www.finlex.fi/fi/laki/ajantasa/1998/19980629 (Available only in Finnish)

Mannerheimin Lastensuojeluliitto. 2008. Turvallisuuskävely lasten kanssa. Viitattu 24.5.2017. http://www.mll.fi/@Bin/9650111/ Lapsen+turvaksi_k%C3%A4vely.pdf (Available only in Finnish)

Martikainen, S. & Ranta, T. 2014. Turvallisuusjohtamisen kautta arjen turvaa. Turvallisuus & Riskienhallinta 6/2014. s. 34–35. (Available only in Finnish)

Matikainen, K. 2007. Käyttäytyminen uhkatilanteessa – poistumisreitin valintaan vaikuttavat sosiaalipsykologiset tekijät tulipalossa. Helsingin yliopisto. Valtiotieteellinen tiedekunta. Sosiaalipsykologia. Pro gradu -tutkielma. (Available only in Finnish)

Metrac. 2010. Community safety program. Viitattu 23.05.2017. http://www.metrac.org/programs/safety/safety.htm

Opetushallitus. 2012. Opetustoimen ja varhaiskasvatuksen turvallisuusopas. Viitattu 13.4.2017. http://www.oph.fi/opetustoimen_turvallisuusopas/uhka_ja_vaaratilanteissa_toimiminen/pelastussuunnitelma/pelastussuunnitelman_toimeenpano (Available only in Finnish)

Oxford Advanced Learner's Dictionary of Current English. 1995. 5th Edition. Oxford: Oxford University Press. pp. 66, 1035-1036.

Palo- ja pelastussanasto. 2006. Helsinki: Suomen Palopäällystöliitto. (Available only in Finnish)

Pan, X. 2006. Computational Modeling of Human and Social Behaviors for Emergency Egress Analysis. Stanfordin yliopisto, ympäristö- ja yhdyskuntatekniikan laitos. Väitöskirja.

Pelastuslaki (379/2011). Viitattu 7.4.2017. http://www.finlex.fi/fi/ laki/alkup/2011/20110379 (Available only in Finnish)

Perusopetuslaki (628/1998). Viitattu 19.4.2017. http://www.finlex.fi/fi/ laki/ajantasa/1998/19980628 (Available only in Finnish) Ranta, T. 2016. Riskilähtöisen koulutuksen keinoin kohti tehtäväkohtaista osaamista. Teoksessa Martikainen, S. (toim.) 2016. Varautuva turvallinen koulu. Laurea Julkaisut 70. Laurea-ammattikorkeakoulu. s.46–55. Viitattu 18.4.2017. http://www.theseus.fi/bitstream/handle/10024/119138/Laurean%20julkaisut%2070.pdf?sequence=1 (Available only in Finnish)

Ranta, T. & Martikainen, S. 2015. Uutta puhtia oppilaitosten turvallisuusjohtamiseen. Teoksessa Martikainen, S. (toim.). 2015. Arjen ennakoiva turvallisuusjohtaminen oppilaitoksissa. Laurea Julkaisut 53. Laurea-ammattikorkeakoulu. s. 9 Viitattu 16.4.2017. http://www.theseus.fi/bitstream/handle/10024/114785/Laurea%20julkaisut%2053.pdf?sequence=1 (Available only in Finnish)

Ranta, T. & Martikainen, S. 2016. Turvallisuutta henkilökohtaisen kiinnostuksen kautta. Turvallisuus & Riskienhallinta. 3/2016. s. 16–17. (Available only in Finnish)

Reason, J. 1997. Managing the Risks of Organizational Accidents. Aldershot: Ashgate Publishing Company.

Saari, S. 2000. Kuin salama kirkkaalta taivaalta – kriisit ja niistä selviytyminen. Keuruu: Otava. (Available only in Finnish)

51

Sarka, P. 2011. Turvallisuuskävelyn suunnitteleminen ja toteuttaminen. Laurea-ammattikorkeakoulu. Opinnäytetyö. Viitattu 18.4.2017. https://publications.theseus.fi/bitstream/handle/10024/29490/Sarka.pdf?sequence=1 (Available only in Finnish)

SFS-ISO 28000:2012. Toimitusketjun turvallisuuden hallintajärjestelmät. Helsinki: Suomen Standardisoimisliitto. (Available only in Finnish)

SFS-ISO 31000: 2011. Riskienhallinta. Periaatteet ja ohjeet. Helsinki: Suomen Standardisoimisliitto. (Available only in Finnish)

SFS-ISO/IEC 27000:2010. Informaatioteknologia.Turvallisuus. Tietoturvallisuuden hallintajärjestelmät. Yleiskatsaus ja sanasto. Helsinki: Suomen Standardisoimisliitto. (Available only in Finnish)

SFS-opas 73: 2011. Riskienhallinta. Sanasto. Helsinki: Suomen Standardisoimisliitto. (Available only in Finnish)

Step by step for safer and more secure Göteborg. 2008. Göteborg stad. Viitattu 18.4.2017. http://www.tryggaremanskligare. goteborg.se/pdf/engelska/step_by_step.pdf

Suomen perustuslaki (731/1999). Viitattu 19.4.2017. http://www.finlex.fi/fi/laki/ajantasa/1999/19990731 (Available only in Finnish) Suomen Riskienhallintayhdistys. 2016a. Potentiaalisten ongelmien analyysi. Viitattu 19.4.2016. http://www.pk-rh.fi/uploads/poa-analyysi/potentiaalisten-ongelmien-analyysi-tietokortti.pdf (Available only in Finnish)

Suomen Riskienhallintayhdistys. 2016b. Yleinen avainsanaluettelo. Viitattu 19.4.2017. http://www.pk-rh. fi/uploads/poa-analyysi/poa-yleinen-avainsanaluettelo-tietokortti.pdf (Available only in Finnish)

Tuisku, E. & Arvonen, S. 2006. Turvallisuuskävely: Varautumiseen oppeja kokemalla. Suomen Palopäällystöliitto. (Available only in Finnish)

Työturvallisuuslaki (738/2002). Viitattu 7.4.2017. http://www.finlex.fi/fi/laki/ajantasa/2002/20020738 (Available only in Finnish)

Varautuminen ja jatkuvuudenhallinta kunnassa. 2012. Valtiovarainministeriö, Sisäasiainministeriö, Puolustusministeriö, Turvallisuus- ja puolustusasiain komitea, Huoltovarmuuskeskus & Suomen kuntaliitto. Viitattu 3.5.2017. https://www.defmin.fi/files/2088/Varautuminen_ja_jatkuvuudenhallinta_kunnassa_fi.pdf (Available only in Finnish)

Waitinen, M. 2014. Turvallisuuskävelyopas - Toiminnallinen turvallisuuskoulutus. Suomen Palopäällystöliitto. (Available only in Finnish)

52 Ranta & Martikainen Safe Schools through Safety Walks

53







Tiina Ranta & Soili Martikainen

SAFE SCHOOLS THROUGH SAFETY WALKS

The Safe Schools through Safety Walks guide focuses on safety training for schools and higher education institutions using safety walks. It is intended for anyone interested in improving the safety of schools and higher education institutions. Safety is not truly under control until the entire school community practices it together by planning, training and taking action in a true emergency.

Safety walks have been implemented in many different ways and for different purposes for nearly 30 years, although safety walks have started to become more common as a safety training method only during the past few years. Identifying and processing risks that threaten operations is one of the important tasks of a school or higher education institution. Safety walks are a part of risk-based safety work.

A current theme at the school or higher education institution is selected as the subject of the safety walk. The guide describes different types of safety walk themes and explains how the walk is to be planned and implemented. Ideally, the safety walk is an entity that provides the participant with sufficient understanding on the safety of the site. It is important to exercise restraint and focus on only the most essential things for learning. When implemented well, safety walks are an excellent method to improve the safety of the school.