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SHELTERING INDOORS IN EDUCATIONAL INSTITUTIONS

Laurea Julkaisut | Laurea Publications | 92

Tiina Ranta & Soili Martikainen

**SHELTERING INDOORS IN
EDUCATIONAL INSTITUTIONS**

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Sciences 2018

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ISSN-L 2242-5241
ISSN 2242-5225 (online)
ISBN: 978-951-799-484-2 (online)

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FOREWORD

Finnish schools have been practicing sheltering indoors for a few years now. The exercise scenario used has often been an external threat of violence targeted against the school. We have heard of shelter-in-place exercises, where primary school children have been escaping from the reach of a ‘man with a knife’ into the school premises. Schools also practice sheltering in case of shootings (Kouluissa harjoitellaan ampumisen varalta 2016). These exercises have been performed with the best of intentions. However, the threat of external violence is hardly among the most likely threats in a school environment, even though we know that Finnish schools have been under the threat of extreme violence. Therefore, we recommend that schools arrange exercises that promote safety from a risk-based point of view, which would give the exercises totally different starting points. We encourage the school staff to estimate which external threats could adversely affect the educational institution community in a situation where the school staff was unable to take the correct action. Our goal is that schools would primarily focus on practicing for the kind of events that could occur during a school day. All kinds of safety exercises are of course justified, but considering the likelihood of different scenarios, schools could reflect what kind of hazards they primarily practice for.

When estimating what kind of a serious situation in the area would require sheltering indoors, a fire or a chemical accident appear as the most probable incidents. Every one of us has read or heard through the media about a fire raging in the nearby area, spreading smoke that is dangerous to breathe into the surrounding areas. Often in such cases, the rescue authorities urge people in the surrounding areas to seek refuge indoors and close the windows and shut off ventilation. Practicing for the event of a fire or a serious chemical accident is well-founded, because, at worst, lack of competence may endanger the lives and health of all the members of the educational institution community. It may be necessary to seek shelter inside the school building also in case of fire, when it is no longer safe to go into the corridors, for example. Every member of the school community must be able to make the decision to stay indoors and close the door, and to inform rescue workers about the location



and number of people sheltered indoors and other relevant circumstances. Joint examination of this scenario and pre-paredness in the educational institution community are also part of a comprehensive, risk-based safety and security training. On the other hand, a well-planned shelter-in-place exercise with a view to a fire or a chemical accident also provides the members of the community with one potential model they can vary with a view to other scenarios, as necessary. There is no single mode of operation in case of an extreme act of violence against a school, but a single principle: always head away from the threat.

This guide was created in the course of ‘Safe and Secure School’ training, financed by the National Agency for Education and implemented by the Laurea University of Applied Sciences. The risk assessments the participants made for their own schools and the discussions during contact teaching made us recognise the need for a guide on sheltering indoors. This guide focuses on shelter-in-place exercises, the effectiveness of which is improved by means of good planning. The exercises need to be attended by the whole educational institute community: the staff, pupils or students and other stakeholders as well. The stakeholders working in the educational institute community play a central role in the everyday safety and security work in any case, providing catering, health, cleaning and property services. In many schools, their role has not yet been acknowledged from the perspective of everyday safety

and security work, even though this group of people is at the very core of the whole school's safety and security activities. In a true emergency, every member of the educational institute community must know how to collaborate with others, even though we sometimes hear that in terms of safety, for example, the providers of catering services would have their own rescue plans for the property in shared use. Safety work cannot be a separate function created separately by each operator, but it should rather be work that is managed and implemented in collaboration between all operators. Safety is not truly under control until the entire educational institution community practices it together by planning, training and taking action in a true emergency.

The first chapter of this guide highlights behaviour of individuals and the special features of the school and school building being protected. The second chapter contains principles of risk management and basics of risk-based training. The third chapter focuses on creating starting points for high-quality learning through functional methods. The fourth chapter describes instructions and practices designed for shelter-in-place exercises and actual emergency situations. The fifth chapter focuses on production of different additional material. The last, the sixth chapter, presents various equipment related to communications and provides examples of, for example, how to draw up instructions for giving public announcements.

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CORE CONCEPTS

Risk refers to the impact of uncertainty on the goals, often described as a combination of the likelihood of occurrence of an incident and the severity of its consequences (SFS-opas 73:2011, 8). In this guide, we only examine the negative, unwanted risks.

Risk-based approach refers to the kind of approach and decision-making method where the risks associated with the subject under study are examined from versatile perspectives before decision-making. Risk-based approach should be an integral part of every-day management and decision-making process. (Haimes 2015, 3-4.)

Sheltering indoors is a way of seeking shelter from hazard situations. People shelter indoors typically on the basis of a general emergency signal sounded because of an accident, such as toxic smoke coming from a major fire or a gas hazard situation. Radiation hazard or a threat of violence may also give rise for the need to seek refuge indoors. (Ministry of the Interior 2016; Finnish National Rescue Association SPEK 2016; Radiation and Nuclear Safety Authority 2016: Kreuz, J., Pelkonen, N., Ranta, T., Turunen, T. Viitanen J. & Vuoripuro, J. 2010.) Gas hazard situation may emerge when chlorine, ammonia or sulphur dioxide spreads into the environment with wind as a consequence of, for example, a traffic accident (Rescue Services 2016).

A **threat** is a probable, unpleasant event or development path which may result in harm to individuals, an organization or a system (Minister of Finance 2008, 122).

In chapter 1, we briefly highlight escape behaviour, which as yet has been studied only in a relatively limited scale in Finland. Even though the research results have largely focused on situations requiring evacuation, to a certain degree, they can also be applied to scenarios requiring sheltering indoors. One of the key observations concerns action taken by the staff: when emergency issues have been practiced regularly, consistently and in a confidence-building manner, it has been demonstrated to promote safer escape behaviour. Furthermore, the contribution of staff who know the property well and have practiced in the premises in question can never be over-emphasised for escaping or sheltering indoors safely.

1. ESCAPE BEHAVIOUR FROM THE PERSPECTIVE OF SHELTERING INDOORS

We often hear that the scenarios and other implementation of safety exercises is copied from other sites, which have already held similar exercises. They are carried out without giving it another thought, because “you need to have exercises”. However, when planning evacuation and shelter-in-place exercises, you should get acquainted with the special features of the operating environment of your own educational institution. You can also consult research papers and this publication to seek added value to exercises that support your own safety operations. For example, research results concerning the behaviour of individuals in situations where escaping is required create at the very least favourable starting points for planning an exercise and, at the same time, the whole evacuation process. Understanding the central rules regarding the behaviour of individuals and groups helps everyone involved in the planning of exercises understand the special features related not only to the behaviour of the members of the educational institution community, but also to the school building itself.

So far, very limited research on escape behaviour of individuals and groups in emergency situations has been conducted in Finland. In her master’s thesis, Matikainen (2007, 72) describes behaviour in an emergency in a social psychology framework. Although Matikainen does not discuss situations requiring sheltering indoors in her study, some of the typical phenomena for escape behaviour can also be applied when practicing indoor sheltering.

1.1 On the choice of escape route

Lo, Huang, Wang & Yuen (2006) underscore that 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. According to

researchers, another important subject for study is the dynamic escape process, where the choices of escape routes made by people escaping seem to affect the choices and behaviour of an individual. (Lo, Huang, Wang & Yuen 2006, 366–368.) It is also important for every one of us – there should be more research conducted on escape behaviour in Finland. That would create understanding of how the meaning of a group becomes emphasised in case of emergency.

The escape route choices made by family members and friends largely guide escape behaviour. The choices made by most people also guide other people to choose an escape route in an emergency. When escaping, people move toward familiar people and locations. According to studies, people with close mutual 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 between people and how it becomes highlighted 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 the premises 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 a shelter-in-place exercise.

Studies have indicated that individuals will select the door or route that they have used to enter the property as their escape route. Often, it is the main entrance of the building. This choice is made even if it were 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 reason for this behaviour is stated to be that individuals feel that unknown alternatives increase the feeling of threat.

1.2 Everyday example to confirm the theory

The research result described above could be verified by an evacuation exercise. The objective was to observe how members of a community behave, when their main entrance route to the building through the main entrance was prevented. In the exercise, the main entrance had been ‘blocked’ using smoke produced by a fog machine and a solid obstacle. The exercise began when the fire alarm went off, accompanied by public announcements. People working in the same office inspected the room and marked it as inspected using a note attached on the door. They began walking along a corridor as a group. They did not choose the closest route, marked as an exit, but began making their way towards the main entrance they use every day. In the large main lobby downstairs, close to the main entrance, they detected smoke produced by the fog machine. Because of this, they began climbing the stairs to the next (the second) floor of the building. Based on their daily travel in the building, the members of the group knew that there was another flight of stairs

there that would take them down again, close to the main entrance. Had this been a real situation, every one of them would have been in immediate mortal danger – climbing to a second floor in an open space would have been fatal to them in case of fire, since toxic fumes rise towards the ceiling first. In the group, everyone seemed to be working together towards a single goal: towards the main entrance at any cost. Even though the situation described above was related to an evacuation exercise, the group behaviour observed could be possible also in connection with sheltering indoors. A closely-bonded group gathers together, and if the members of the group lack a clear operating model adopted by everyone, the decisions they make do not promote finding an escape.

1.3 Stress and panic

Stress typical for emergency situations also 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 or sheltering may not receive full attention or may even be completely neglected. Stress is created by an imminent danger, urgency and ambiguous information. In contrast, stress is also considered vital, because it motivates an individual to take action in a crisis situation. (Matikainen 2007, 75.)

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 a state of panic. When a person is experiencing severe stress, he or she may no longer be able to process information in his or her 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, 49) 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 out-sider that the person is taking action ‘without emotion’ in order to save him- or herself. Approximately 20% of people may 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.)

It is good to take the possibility of panic into account already when planning an exercise scenario and its implementation. You could consider, for example, what kind of action should be taken if the need to shelter indoors was caused by an extremely serious cause. How would you handle a situation that might trigger panic among some of the people seeking cover? At the same time, you can familiarise yourself with the methods for minimising the possibility of panic erupting. Studies have shown that difficult and challenging events and premises are conducive to creating panic in emergencies. No standard solutions can be provided for evacuation and shelter-in-place situations due to various contributing factors. This is an important fact to remember, when you want to make exercises such as to serve the interests of the target location in the best possible way.

1.4 The authority status of personnel as an explanation for safe action in an emergency

The authority status of personnel also has a determining effect on the escape behaviour of individuals and the resulting success of an evacuation. If the actions of personnel are well-practiced, logical and confidence-building, it has been demonstrated to promote safer escape behaviour. The contribution of personnel who know the building well and have practiced in the premises in question can never be over-emphasised for escaping and sheltering indoors safely. Clear and logical instructions provided by them has been demonstrated to be an important factor for ensuring a safe escape. (Klem & Best 1982, 73.)

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 causes a serious risk for the people in the surrounding 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 in case of emergency. Therefore, it is extremely important that people are not forced to use specific routes during an evacuation or when sheltering indoors. Pan (2006, 12) says that (in a work community) the planned directing of a person to an area using alternative routes may allow for better actions in an emergency. He points out that this increases the probability of these routes being used in an emergency. Even though Matikainen focuses on escape behaviour from the perspective of evacuation safety, this gives a clear message with a view to preparing for any emergency. It is important that people have been given an experience of alternative routes, so that they would know how to take them in case of an emergency. The same also applies to sheltering indoors. If people have never sought their way to the in-place shelter, or no such premises have even been designated in the building, action in case of an emergency cannot run smoothly and as planned under such circumstances.

1.5 Safety walks as part of continuous safety training of personnel

Well-planned safety walks help educational institution communities prepare even 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, documented 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 expensive external experts are needed for implementation; instead, just a shared decision on implementing a safety walk between joint meetings, for example.

1.6 Summary of the behaviour of individuals in emergencies

It is also part of the planning of a good exercise to consider which routes the members of the educational institution community would probably use in case of emergency. Studies have shown that individual behaviour in threatening situations is consistent, and they typically use the same, familiar route even in an emergency. It is also good to consider already in the planning phases whether people form close groups within the educational institution community. 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.

How logical the instructions provided in case of emergency are is essential for both the success of the exercise and the action taken in a real emergency. This refers, for example, to how well the personnel can demonstrate through their own actions that they are competent and capable of taking action even in extreme situations. It goes without saying that this can only be achieved by means of systematic and continuous training. The special characteristics of the members of the educational institution community, such as age, state of 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. Moreover, stakeholders, their needs and expectations, should not be forgotten either.

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.

Chapter 2 addresses risks from the perspectives of the operation of the educational institution community and specifically the arrangement of different safety exercises. Risk-based training is based on the risks jointly identified by the educational institution community. In other words, the school practices for such incidents that have the highest probability of occurring.

This chapter introduces two risk assessment methods usable for educational institution communities that can be implemented collaboratively. They are suitable for all school functions and tasks.

2. RISKS AND RISK MANAGEMENT

This chapter highlights the principles of risk management. We also examine two different methods suited for risk assessment: the potential problem analysis (PPA) and the what-if technique.

Sometimes we get to hear that schools are holding exercises with a view to a serious violent attack targeted against the school. If the schools had identified, assessed and processed their risks, it is quite certain that a fire or toxic emission in the nearby area would appear as a much more likely incident than a fatal act of violence. The community knows and is familiar with the risks it is exposed to and can thus plan its operations in a risk-based manner. Through risks, schools can concentrate on what is essential in their safety work, and this may help dispel fears of highly unlikely incidents.

2.1 Risk management

Every organisation has internal characteristics, vulnerabilities, that expose the organisation to risks and unwanted incidents (SFS-ISO opas 73:2011, 13). Risk management is used for managing and guiding the organisation in relation to risks. Risk management is also part of decision-making. It is coordinated, situation-specific, up-to-date activity, which is based on the best possible data available. In addition, risk management supports the continuous improvement of the organisation. (SFS-ISO 31000:2011, 22.)

Risk refers to the impact of uncertainty on the goals. It is often described as a combination of the likelihood of an incident occurring and the resulting consequences. Even though a risk can be either positive or negative, in this guide we only examine the negative, unwanted risks. (SFS Guide 73:2011, 8.)

The risk management process is illustrated in figure 1.

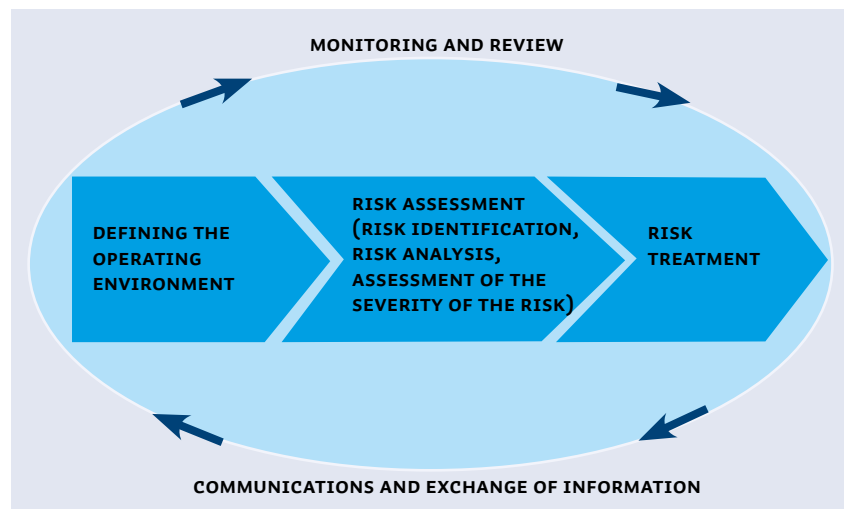


Figure 1. Risk management process (SFS-ISO 31000: 2011, 10)

Risk management is an overall process, which includes defining the operating environment, risk assessment and risk treatment. Risk assessment includes the identification of risks, risk analysis and the assessment of the severity of risks. Risk analysis is a process aimed at understanding the nature of a risk and assigning a risk rating for it. When assessing the significance of the risk, it is defined whether the risk is acceptable or tolerable. Risk treatment modifies the risk. Risk treatment may entail, for example, taking, preventing, sharing, mitigating, eliminating or preventing risks. Communication, exchange of information, monitoring and reviews are an essential part of the risk management process. (SFS-Opas 73:2011, 14—15; SFS-ISO 31000: 2011, 10—20.)

For assessing risks, use the potential problem analysis (PPA) or the what-if technique, for example. Identify and assess the risks of an unwanted incident based on its likelihood of occurrence and the severity of the consequences. Plan preventive and preparedness arrangements for each unacceptable risk and action to be taken if the unwanted risk materialises.

2.2 Assessing the likelihood of occurrence of a risk

Assess the likelihood of occurrence of a risk using table 1:

Table 1. Assessment of the likelihood of the occurrence of a risk

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 likelihood of the occurrence of a risk on a scale from 1 to 3, where 1 is highly unlikely, 2 unlikely and 3 is likely.

2.3 Assessing the consequences of a risk

Assess the consequences of a risk using table 2:

Table 2. Assessment of the consequences of a risk

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.

Assess the consequences of a risk on a scale from 1 to 3, where 1 is slightly harmful, 2 harmful and 3 is very harmful.

2.4 Assessing the severity of the consequences of a risk

Assess the severity of the consequences of a risk using table 3:

Table 3. Assessment of the risk rating

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

Assess the risk rating with the help of the likelihood of occurrence of the unwanted incident and the severity of the consequences. A risk may be insignificant, minor, moderate, significant or intolerable. You can calculate the risk rating using the following formulae:

- the likelihood of occurrence of an incident x the severity of its consequences; or
- the likelihood of occurrence of an incident x the severity of its consequences² (if you want to highlight the seriousness of the consequences)

2.5 Potential problem analysis

The analysis of potential problems is a risk assessment method. The abbreviation PPA is also used for the method. Using the method, it is possible to identify different types of problems with different levels of severity. It is performed in small groups the members of which are well familiar with the object, function or task being examined. The PPA begins with selection and delimitation of the object of analysis. No problem types are limited from the scope of the analysis in advance. The requirement for implementing the analysis is that the organisational management gives its support and grants the resources needed for performing the analysis. The goal is to find the key problem areas of the object, function or work task, and causes of accidents related to the key hazards. (The Finnish Risk Management Association 2016a.) Table 4 illustrates a PPA with a risk analysis, assessment of the severity of the risk and risk treatment with the help of five steps.

Table 4. PPA, complemented with a risk analysis, assessment of the severity of the risk and risk treatment (Finnish Risk Management Association 2016a; 2016b; SFS-ISO 31000: 2011, 10)

STAGE	TASKS
STAGE 1: PREPARATION	<ul style="list-style-type: none"> THE FACILITATOR PREPARES FOR THE PPA DURING STAGE 1. THE FACILITATOR REVIEWS THE EXISTING MATERIALS, INVITES THE ATTENDEES FOR THE SMALL GROUP AND DRAFTS A TAILORED LIST OF KEY WORDS FOR THE SESSION. 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 EXTENT AND COMPLEXITY OF THE CHOSEN SUBJECT, IT CAN BE DIVIDED INTO SMALLER PARTS, TO BE STUDIED SEPARATELY.
STAGE 2: SILENT BRAINSTORMING	<ul style="list-style-type: none"> 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 HIS OR HER PLASTIC SLEEVE AND ITS NOTES TO THE PERSON SITTING ON HIS OR HER LEFT. USUALLY ONE NOTE PER PERSON IS WRITTEN DURING THE FOLLOWING ROUNDS. THE PLASTIC SLEEVES WITH THE NOTES CONTINUE TO GO AROUND BETWEEN 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 KEY WORDS ONCE THE WRITING OF NOTES BEGINS TO SLOW DOWN. WHEN NO NEW NOTES ARE WRITTEN, THE SILENT BRAINSTORMING SESSION ENDS.

STAGE	TASKS
STAGE 3: BRAINSTORMING DISCUSSION	<ul style="list-style-type: none"> 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 TEXT ON THE NOTES CAN BE COMPLEMENTED FOR INCREASED CLARITY. 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. IT IS ENSURED ONCE MORE THAT THE NOTES IN THE SAME GROUP ARE ASSOCIATED WITH ONE ANOTHER AND COVER THE SAME TOPIC. THE GROUP CHECKS IF ONE TOPIC IS A REASON OR CONSEQUENCE OF ANOTHER TOPIC AND GROUPS THE TOPICS ONTO THE EASEL PAD BASED ON THIS. THE TOPICS ARE WRITTEN DOWN ONTO THE EASEL PAD ABOVE THE POST-IT NOTES.
STAGE 4: RISK ANALYSIS, ASSESSMENT OF THE SEVERITY OF THE RISK AND RISK TREATMENT	<ul style="list-style-type: none"> A RISK ANALYSIS IS MADE AND EACH RISK IS ASSIGNED A RISK RATING. THE SEVERITY OF THE RISKS IS ASSESSED BY DEFINING WHETHER THE RISKS ARE ACCEPTABLE OR WHETHER THEY NEED TO BE TREATED. IF NECESSARY, RISKS ARE TREATED BY PROPOSING AND AGREEING ON RISK MANAGEMENT METHODS. OWNERSHIP IS ASSIGNED FOR EACH RISK AND SCHEDULES FOR POTENTIAL CORRECTIVE ACTIONS ARE PLANNED. THE RESULTS ARE RECORDED ON A FORM.
STAGE 5: REPORTING	<ul style="list-style-type: none"> A GOOD FINAL REPORT CONTAINS AT LEAST THE FOLLOWING ISSUES: <ul style="list-style-type: none"> INTRODUCTION GOALS AND LIMITATION OF SCOPE POTENTIAL ASSUMPTIONS AND THEIR JUSTIFICATIONS THE DESCRIPTION OF THE OBJECT EXAMINED AND THE PARTICIPANTS INITIAL DATA AND ITS SOURCES THE RISK ASSESSMENT TOOLS AND TECHNIQUES USED, INCLUDING ASSUMPTIONS AND VERIFICATION OF ACCURACY/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 an easel pad during the brainstorming discussion.



Picture 1. Silent brainstorming

2.6 The 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 key words that help participants identify risks. With the group, the facilitator examines how deviations in behaviour and normal operations affect the system, organisation or method. (SFS-EN 31010:2011, 70—74.)

The perspective to be used for the assessment (for example, a situation requiring sheltering indoors) 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 it needs to have experience and expertise. The key stakeholder groups, who know the subject 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 experiences, known and existing management methods, protection methods, and legal requirements and limitations. The participants discuss presenting ‘What if’ style questions, such as “What would happen if...” “Could someone or something...”, “Has anyone or anything ever...”. (SFS-EN 31010:2011, 70—74.)

For example, the following type of questions can be presented:

- What if sounding the alarm fails?
- What if there is no electricity?
- What if person X is not present?
- What if ventilation cannot be shut off?
- What if we lack information X?
- What if there are no keys?
- What if the door is left open?
- What if the public announcement system does not work?
- What if there is no mobile phone available?
- What if the information system does not function?
- What if there are dignitaries present?

(SFS-EN 31010:2011, 70 - 74.)

A summary is prepared on the risks. Then, the group confirms and records a description of the risks, their causes and consequences, and the existing management methods. The group evaluates if the management methods are sufficient and effective, and adds management methods if necessary. Additional ‘What if’ questions can be asked during the discussion to identify new risks. (SFS-EN 31010:2011, 70—74.)

The method can be widely applied to all types of systems, situations, circumstances, organisations and functions. It only requires a bit of preparation from the group. It is relatively quick, and a group of people is able to identify the greatest risks swiftly. It can be used for identifying opportunities for improving processes and systems, and it can be generally employed for defining measures with high potential of success. The method produces a risk register and, with minor additional effort, a risk treatment plan. (SFS-EN 31010:2011, 70—74.)

The system, method, situation, circumstance and/or a change thereof must be defined carefully before starting the use of the what-if technique. The facilitator must establish the external and internal operating environment with the help of discussions, documents, plans and drawings. The preparation work must be executed carefully to ensure that the working group can use its time effectively. The facilitator must be experienced and competent. Some risks may remain unidentified if the group members are not sufficiently experienced or if the working method used is not comprehensive. For example, representatives of all stakeholder groups should participate in the work group. Analysis at the top-level of the organisation only does not necessarily highlight complex, detailed or inter-dependent problems. (SFS-EN 31010:2011, 70—74.)

Chapter 3 addresses the planning and implementation of the process from the perspective of achievement of high-quality learning. Safety exercises can be carried out using methods of functional learning, and training can be used for yielding positive influence on the development of the skills of participants both as individuals and as an educational institution community.

3. LEARNING

At best, the understanding of what high-quality learning entails is visible in the planning and later in the implementation of shelter-in-place exercises. This means that the factors enabling high-quality learning are observed already in the planning stages of the exercise. Studies have shown that these have a positive influence on the development of the skills of participants both as individuals and as an educational institution community. The principles of functional learning are well suited for shelter-in-place exercises.

Functionality can be used particularly well in different safety exercises. The traditional way of thinking is that the instructor acts as director of the work: he or she gives the instructions, monitors the exercise, and assists in processing and sharing the experiences. In a shelter-in-place exercise, the role of the instructor may well be assigned to the party in charge of planning the exercise.

3.1 Collaborative learning

In functional learning, the focus is on individual's active and unprompted work performance. At their best, functional learning and work methods also function as a kind of a springboard to high-quality learning through different exercises that enhance and maintain safety.

There are five principles pertaining to collaborative learning. Learning is successful, when the members of a community or a group are responsible for the learning of one another. The results of collaborative learning improve, when the members of the community feel that they are dependent on each other's learning in a positive sense. This creates positive interdependence, which is considered the most important principle of collaborative processes. With a view to effective operation of a group, other important principles include open and close interaction, and social skills, which are developed further through group work. Each member's responsibility for his or her

personal learning is also important. When developing collaborative learning and working, it is important that the group discusses and analyses its actions together after having completed the exercise. Therefore, reflecting on what has been learned and experienced is the fifth principle. All the principles of collaborative learning described above are suited as a basis for carrying out any safety exercise. This way, the educational institution community jointly supports collaborative learning, and the self-esteem, motivation and team work skills of the participants, as well as helping in the achievement of high-quality learning outcomes as regards exercises. (Sahlberg & Leppilampi, 1994, 71–76.)

3.2 Functional learning process

When using functional methods, the learning process takes place through the experiences gained by the learners and their own reasoning. The processing of experiences and own thoughts allows them to get acquainted with how they personally experience the world and how others experience it. A functional learning process often includes the following stages: 1) getting acquainted with one another, 2) setting goals together or, alternatively, the facilitator describes the goals, 3) warming up, getting tuned for and initiating collaborative action, 4) carrying out the exercise and 5) processing the exercise and further actions. (Opinpaja 2011.)

The outline for a shelter-in-place exercise can be successfully built upon the stages described above. The purpose of getting acquainted with one another, goal-setting and warming up is to create an atmosphere conducive to a good exercise. In such a case, the emphasis is on collaborative effort and motivating everyone to take part. The benefit of collaborative learning model is that it kind of sets the pace for the actual planning of training and helps those involved outline what is going to happen at any given time. Naturally, schools are not required to slavishly follow all the phases described above, but the purpose is simply to provide a model for outlining a good exercise conducive to learning.

There are situations, when the exercise does not proceed quite as planned, or some chosen element does not work as well as expected. The important thing, however, is to see even such experiences as significant with a view to learning. If no failures happened or actual mistakes were made during the exercise, one might ask whether the exercise had really focused on what was essential for improving safety at the school. At their best, well-planned exercises are occasions where every member of the community can experience minor and major failures as part of his or her own community. Therefore, creating a safe atmosphere based on trust plays a key role. Everyone is allowed to participate in accordance with his or her own skills and knowledge. People are rewarded for trying, and mistakes are seen as victories. No mistake or failure is attributed to one individual doing something or failing to do something, but all mistakes or failures are examined collectively, as a group, as a community.

External observers are also often used in exercises. Over the years, we have seen exercises, where such feedback as ‘positive’ and ‘negative’ have been recorded for the target site. Feedback has been given to those responsible for the exercise for ‘negative’ factors in particular, asking them to fix them and turn them positive. Positive and encouraging feedback plays a far greater role than many of us realise. Nobody wants to be named or singled out as a failure, when the starting point has been to act together for a common goal. When you want to give feedback on an exercise, it is important to consider the goals of the exercise: do you want the members of the educational institution community to be genuinely enthusiastic about the exercises in the future as well, or, by giving rough feedback, do you create a situation in which people the next time around do nothing more than the minimum assigned to them?

It should also be noted that the skills of functional working process need to be practiced. The element of functionality makes it possible that, when individuals experience and do things personally, they feel they are both meaningful and significant. It has been shown that personal experience helps people remember things and gives them new in-sights about themselves, other people and the surrounding world. At the same time, it can also build and strengthen the community spirit and feeling of togetherness within the group, and allows creation of a positive working atmosphere. When you succeed in creating a climate of trust and a relaxed atmosphere, the sense of being ‘us’, within the group learning together, even quite challenging issues can be addressed in connection with the exercise.

The criteria of high-quality learning to be observed in connection with a shelter-in-place exercise are agreed with the educational institution staff. The whole community is involved in the following phases:

- defining the exercise scenario together: what is possible and likely to happen in the vicinity of the educational institution?
- agreeing on the goals the parties involved want to set for the exercise: what is being practiced and why, when will the exercise take place?
- agreeing on what is being practiced – what the community wants to learn, revise, test. It is not possible to include everything possible into one exercise, so, the key tasks are selected for the exercise (implementing management responsibility, practicing a situation where the top management is absent; practicing with the power turned off; practicing having a group of visitors in the building; practicing that someone is suddenly taken ill in the shelter; etc.)
- identifying the stakeholders that are part of our everyday operations in any case – involving them in the planning and implementation of the exercise.
- defining the school premises that are suited as shelter rooms, when a fire is raging in the vicinity of the school or, for example, a chemical accident happens nearby. Preparing instruction cards, defining roles and preparing role cards, compiling safety boxes etc.

- planning the training to be provided to the staff on the causes and potential consequences of sheltering indoors, escape behaviour of individuals, and getting acquainted with the different roles within the school. This will be implemented well before the actual exercise.
- agreeing on how information about the exercise is given in advance and during the exercise, and how the results and feedback are distributed.
- agreeing on instructions to be given to those observing the exercise. It is recommended that everyone in an observer role provide assistance and support during the actual exercise, while also making observations on successes and targets for improvements.
- planning the evaluation of the exercise together – which matters should be evaluated, how the results should be verified, how the experiences are processed.
- what kind of a feedback session is to be organised and how self-reflection is included in the feedback – how to implement self-assessment, which channels are used for requesting feedback from participants and stakeholders as well, how the feedback received is processed.
- how to arrange the transfer of lessons learned from the exercise to the next exercise.
- how to document the whole training process from the beginning of planning to feedback.
- how to ensure that a good and constructive atmosphere can be created when implementing the exercise.



Chapter 4 focuses on practicing sheltering indoors in case of emergency. People shelter indoors typically because of a major fire in the nearby area or a gas hazard situation caused by a traffic accident. Chapter 4 provides instructions for planning training and highlights the various roles related to a shelter-in-place situation, with the relevant tasks.

4. SHELTERING INDOORS IN CASE OF AN ACCIDENT OR AN EMERGENCY

Sheltering indoors is needed in case of an accident or an emergency. Most typically, indoor shelter is sought on the basis of a general emergency signal sounded due to an accident situation, such as a major fire in the nearby area causing toxic smoke or a gas hazard caused by a traffic accident. (Ministry of the Interior 2016; Finnish National Rescue Association SPEK 2016.) Radiation hazard may also give rise for the need to seek refuge indoors, even though in Finland the likelihood of a radiation hazard situation is small (Radiation and Nuclear Safety Authority 2016). Furthermore, a threat of violence may give rise for the need to seek cover indoors (Kreus, Pelkonen, Ranta, Turunen, Viitanen & Vuoripuro, 2010).

4.1 Planning the training

Sheltering indoors requires not only pre-planning, but also continuous training and evaluation of the implemented training. In planning, mastering the scenario becomes emphasised. There are several viewpoints linked to sheltering indoors and its planning, implementation and assessment, such as the environment of the educational institution, the members of the educational institution community with their stakeholders, and the property. The matter can be approached through the topic entities presented in table 5.

Table 5. Planning, implementation and assessment of shelter-in-place training

TOPIC ENTITY CONCERNING PLANNING	ISSUE TO BE ADDRESSED	PERSON(S) IN CHARGE
ENVIRONMENT OF THE EDUCATIONAL INSTITUTION	WHAT COULD HAPPEN IN OUR VICINITY THAT WOULD REQUIRE SHELTERING INDOORS?	PLEASE NOTE THE HIGHER EDUCATION INSTITUTIONS, WHERE THE BODY IN CHARGE IS THE SECURITY MANAGEMENT INSTEAD OF THE PRESIDENT
	IS THERE SOMETHING SPECIAL IN OUR ENVIRONMENT THAT INCREASES THE LIKELIHOOD OF THE RISK OF A MAJOR FIRE OR CHEMICAL EMISSION OCCURRING IN THE NEAR AREAS? WHAT KIND OF INDUSTRY, SERVICES, WAREHOUSES, POWER PLANTS OR TRAFFIC ROUTES ARE LOCATED IN THE AREAS NEAR US?	THE PRESIDENT, THE SECURITY TEAM, AUTHORITIES AND OTHER SECURITY STAKEHOLDERS
THE STUDENT COMMUNITY, PUPILS AND STUDENTS	WHAT ARE THE KEY CHARACTERISTICS OF OUR EDUCATIONAL INSTITUTION COMMUNITY, SUCH AS THE FUNCTIONAL CAPACITY, AGE GROUP OR SPECIAL FEATURES OF THE PUPILS OR STUDENTS? ARE THERE ANY EARLY EDUCATION GROUPS OR PEOPLE WITH DISABILITIES?	THE WHOLE EDUCATIONAL INSTITUTION STAFF TOGETHER
BUILDING	WHAT IS THE CONDITION OF THE PROPERTY? IN WHAT CONDITION ARE THE BUILDING'S STRUCTURAL OR TECHNICAL SOLUTIONS?	THE PRESIDENT, THE SECURITY TEAM, AUTHORITIES
	WHERE IS THE PROPERTY LOCATED? DOES THE PROPERTY HAVE MORE ABOVE-GROUND FLOORS THAN ONE, FROM AMONG WHICH THE FACILITIES TO BE PREPARED FOR SHELTERING PURPOSES COULD BE ASSIGNED? HAVE THE EDUCATIONAL INSTITUTION'S OWN SECURITY OPERATORS OBSERVED THE REQUIREMENT FOR A SITUATION CONTROL ROOM AND EQUIPPED SUCH A ROOM FOR EMERGENCIES AND FOR PRACTICING EMERGENCY SITUATIONS?	THE PRESIDENT WITH THE SECURITY TEAM
STAKEHOLDERS	IN WHICH WAYS HAS THE EDUCATIONAL INSTITUTION COMMUNITY IDENTIFIED ITS STAKEHOLDER GROUPS AND THEIR NEEDS AND EXPECTATIONS WITH A VIEW TO SAFETY IN CASE OF SITUATIONS REQUIRING SHELTERING INDOORS?	THE PRESIDENT WITH THE SECURITY TEAM

TOPIC ENTITY CONCERNING PLANNING	ISSUE TO BE ADDRESSED	PERSON(S) IN CHARGE
EMERGENCY COMMUNICATIONS	HAS THE EDUCATIONAL INSTITUTION COMMUNITY IDENTIFIED THE REQUIREMENTS RELATED TO EMERGENCY COMMUNICATIONS AND LAUNCHED PREPARATIONS FOR SECURING COMMUNICATIONS WITH THE HELP OF BOTH PERSONNEL RESOURCES AND TECHNICAL DEVICES AND PROGRAMMES?	THE PRESIDENT WITH THE SECURITY TEAM
	WHICH COMMUNICATIONS METHODS WILL THE EDUCATIONAL INSTITUTION COMMUNITY USE IN CASE OF EMERGENCY? DOES THE COMMUNITY HAVE ANY WALKIE-TALKIES AT THEIR DISPOSAL, AND IF THEY DO, CAN THE STAFF USE THEM? DOES THE MANAGEMENT HAVE AT THEIR DISPOSAL TWO MOBILE SUBSCRIPTIONS OR DEVICES THAT ARE NOT INTER-DEPENDENT?	THE PRESIDENT WITH THE SECURITY TEAM
RISK MANAGEMENT	IS THE SAFETY AND SECURITY SITUATION MONITORED ON A REGULAR BASIS?	THE WHOLE EDUCATIONAL INSTITUTION STAFF TOGETHER
	ARE PREPARATIONS BEING MADE FOR NEW RISKS?	THE PRESIDENT WITH THE SECURITY TEAM
SECURITY TRAINING	IS THE STAFF SAFETY-ORIENTED?	THE PRESIDENT
	DOES THE STAFF HAVE ANY RISK ASSESSMENT COMPETENCE?	THE PRESIDENT WITH THE SECURITY TEAM
PLANNING AND TRAINING	HAS THE EDUCATIONAL INSTITUTION IDENTIFIED, ASSIGNED AND IMPLEMENTED THE ROLES FOR SHELTERING SITUATIONS? HAS AN 'ACTION CARD' BEEN PRODUCED FOR EACH ROLE, WITH DESCRIPTION OF THE RELEVANT TASK IN CASE OF AN EMERGENCY?	THE PRESIDENT WITH THE SECURITY TEAM
	HAVE THE SITUATIONS REQUIRING SHELTERING INDOORS BEEN IDENTIFIED AND HAVE PLANS BEEN DRAWN UP FOR THEM? IS IMPLEMENTATION OF SUCH PLANS PRACTICED ON A REGULAR BASIS?	THE PRESIDENT WITH THE SECURITY TEAM
	IS PLANNING AND IMPLEMENTATION OF SECURITY TRAINING RISK-BASED, COVERS ALL PERSONNEL GROUPS, AND IMPLEMENTED IN COLLABORATION WITH STAKEHOLDERS?	THE PRESIDENT WITH THE SECURITY TEAM
	DOES THE EDUCATIONAL INSTITUTION HAVE A SECURITY TRAINING SCHEDULE COVERING THE WHOLE SCHOOL YEAR, WITH REGULARLY SCHEDULED SESSIONS FOR CONSIDERING KEY SCENARIOS, AND CONTINUOUS AND REGULAR TRAINING?	THE PRESIDENT WITH THE SECURITY TEAM
	HAS A RESPONSIBLE PARTY BEEN ASSIGNED TO EVALUATE THE EXERCISES? DOES THE EDUCATIONAL INSTITUTION HAVE AT ITS DISPOSAL AN EASY-TO-USE EVALUATION TOOL TO ENABLE UNIFORM EVALUATION THAT WOULD PROVIDE VALUABLE FEEDBACK ON HOW SUCCESSFUL THE EXERCISES HAVE BEEN?	THE PRESIDENT WITH THE SECURITY TEAM

4.2 The significance of leadership in an emergency

Uncertainty and incompetence to act or even total freezing when managing a situation reduce everyone's possibilities for safe sheltering and, in a real situation, even survival. The management of an educational institution needs several actor roles for implementing sheltering, including at least the following:

- situation management
- situation manager
- communications management
- watchmen at doors
- room inspectors
- people guiding others to shelter rooms
- shelter-specific persons in charge
- people responsible for ventilation and internal public announcements
- the staff

The representatives of the staff guide the pupils or students under their responsibility and other members of the educational institution community to shelter in the floor that has been jointly agreed for the purpose and initiate active sheltering measures. The principle is that sufficient and safe facilities in the uppermost floors of the building have been agreed for this scenario. The educational institution community should define a maximum number of people for sheltering indoors room by room and draw up clear instructions on this.

Every employee in the community is obliged to acquire sufficient competence to be able to act in various roles required in a sheltering situation. Therefore, continuous and well-planned practical training cannot be replaced with written instructions. Real competence and tested, actual skills play a central role.

The previously popular titles, such as area manager, must also go. In today's educational institution communities, people move a lot between various units and also due to opportunities to perform work remotely. Today, it is no longer possible to appoint with full certainty the kind of chain of various actors, where one could without delay identify who is missing from the chain, or that could take control of an acutely and surprisingly arisen situation and launch action even without the area manager present. A better outcome is certainly achieved when the responsibilities have been divided between all the employees of the community and everyone has acknowledged his or her personal responsibility in promoting common operations. In such a way, potential emergency operations can be launched immediately, beginning with the room where the member of the school staff is at that moment.

4.3 Tasks of situation management

Situation management is one of the most important tasks in an emergency. The management of the educational institution usually makes the decision to initiate

sheltering measures. Notice must also be taken of the possibility that, in the absence of a representative of the organisational management, the decision concerning sheltering must be made by some other party. In an emergency, any member of the educational institution community present takes the responsibility for managing the situation, at least in the beginning. The situation management is formed by the person who took the role associated with this task under the circumstances and other individuals he or she appoints to the task. The more people have been able to practice the absence of management during the exercises, the more certain it is that people ready to take the responsibility for this task can be found in a real situation. This must be practiced on a regular basis, and the organisation must aim at producing a sufficient number of competent people for every role. It is better that the educational institution has too many competent people than too few.

In an emergency, the most acute decisions need to be made then and there. In such a situation, it is extremely important that competence has been built up widely throughout the organisation. Naturally, this is an issue related to the size of the organisation as well: the bigger the place, the more potential actors there are. However, it must be noted that competence can only be achieved through continuous and versatile training. The situations emerge quickly, so, it is important to generate sufficient competence through exercises. The more there are representatives of the staff and stakeholders with competence to manage different roles in sheltering situations, the more certainly all the members of the educational institution community can be led to shelter safely and in time.

QUICK INSTRUCTIONS TO SITUATION MANAGEMENT

1. **Make the decision to launch the sheltering measures**
2. **Call the emergency centre (112) and inform them about sheltering indoors.**
3. **Inform the staff about sheltering indoors using the communication tool (such as Situation Manager in a real situation) assigned for situation management and ask them to advance to the assigned room for issue of orders.**
4. **Turn the radio and television on and tune to YLE (Finnish Broadcasting Company) channels and open the Internet. Follow the instructions issued by authorities.**
5. **Update the situational awareness picture (such as the rooms used for sheltering/emptied, number of people in classrooms).**

4.4 Tasks of situation manager

The task of situation manager is primarily held by a representative of the educational institution management, and secondarily by a member of staff. If you are present, assume the task without delay. Please note that the tasks described below are

ultimately assigned as the situation at hand requires. However, the situation management always makes the decisions on which action to take and in which order to implement the measures listed below.

QUICK INSTRUCTIONS TO SITUATION MANAGER

1. Initiate immediate action as soon as you have received first information on a situation requiring sheltering indoors and proceed to the situation control room.
2. Give an announcement (or assign another member of the educational institution community to this task) about sheltering indoors to those in the building and assign one person to give continuous announcements. Log on to potential situation management platform (such as Situation Manager) and send the emergency message to the members of your educational institution community, without forgetting the stakeholders.
3. Assign one person to open the doors of all shelter rooms. Demand him or her to acknowledge when the task has been performed.
4. Open the radio and listen to official announcements and act according to the instructions given.
5. Assign one person to shut off ventilation and to post a note that this measure has been taken. Ensure that you receive an acknowledgement that the task has been performed.
6. Order people to bring safety boxes to the shelter rooms. Demand them to acknowledge when the task has been performed.
7. Assign a watchman to every external entrance (preferably a pair of watchmen) and place persons to guide people to the shelter rooms in the corridors.
8. Assign at least one supervisor, who belongs to the school staff, to each shelter room. It is his or her duty to ensure that sheltering measures are carried out, rooms filled in a systematic manner, and the head count of each shelter room reported to the situation management.
9. Assign room inspectors. Write down their names and assign each one of them a specific area and ensure that you receive their acknowledgement when the rooms have been inspected.
10. When assigning tasks, hand out walkie-talkies as well.
11. If the number of people in the situation management does not allow performing all the tasks, delegate some tasks to other members of the staff.
12. Ensure that the ventilation ducts and windows of the situation control room are closed and sealed. Keep the door closed.
13. Assign a person to assist you and receive the reports on rooms inspected and make a record of them.
14. Assign a person to assist you and receive information on the number of people sheltered indoors and make a record of it.
15. Assign a person to assist you with communication with the authorities.
16. Once authorities announce that the situation is over, decide on protective measures.
17. Organise a debriefing of the event, if necessary. Assign a person to assist you with communication with the rescue authorities.

4.5 The tasks of communication management

According to Korpiola (2011), in an organisation, communications is no longer a support function, but an essential part of its strategy and management. The current communications culture challenges organisations to provide information openly and rapidly, and make it readily and transparently available. The same laws of communication apply to every Finnish educational institution as regards the planning and implementation of communications. A well-planned and implemented communications is the prerequisite for maintaining trust in the organisation's activities. (Korpiola, 2011, 13.)

The educational institution's security communication is part of its other active and proactive communications. It is like a pair of glasses through which communications is viewed in terms of planning and implementation of safety and security. At its best, the organisation's proactive security communications form an entity that includes such things as security orientation, plans produced for supporting safety work, security training with its contents, everyday discussions, meetings, bulletins, feedback, notifications of security deviations, signs and bulletin boards (Merivirta & Mäkelä 2011, 4 - 5). Proactive implementation of security communications also in case of shelter-in-place exercises is an excellent way of involving the community, while sending a positive security message on why the educational institution organises exercises with the particular scenario in mind.

Alongside proactive security communications, the educational institution must also have a proven competence and skills to communicate when matters have not gone as they should have gone. We refer to this as crisis communications. The key role in handling such communication is held by the school management as well as potential security and communications actors. The responsibility for situation control, communications included, in case of a crisis concerning the school always lies with the party preassigned to the task.

In a beginning crisis situation or in a situation that has already developed into a crisis, it is important that also the crisis communications process can be launched quickly. When a crisis is detected, the immediate steps, agreed in advance, will be initiated. The first step is to ensure that the community members can be led to safety. At the same time, the implementation of communications begins while observing the fact that, from the viewpoint of crisis communications, you always need to look further into the future than the immediate measures to be taken within the next few hours. (Crisis management guide of Laurea University of Applied Sciences 2016.)

The management and the persons assigned to this task are responsible for the evaluation of the severity of the crisis and its potential consequences and for launching crisis activities. In crisis communications, it is important that the organisation holds the communications initiative in its own hands, which requires not only ready-made plans, but first and foremost, regular training. Crisis communications

cannot be implemented following guidebooks and instructions alone, but you need real and proven ability to act as well as the will to succeed. (Crisis management guide of Laurea University of Applied Sciences 2016.)

Internal crisis communications

In case of a crisis, the well-being and safety of humans must be put first. Therefore, crisis communications must also always begin from the well-being and safety of those closest to the crisis. The parties include the internal stakeholders of the organisation, such as the administration, staff, pupils and students, and student unions. It is also important to take account of potential exchange students and teachers and the language used for communications. It must be ensured as soon as possible that those belonging to the internal stakeholders, especially those working and present in the 'scene of the crisis', receive information of what has happened, operational instructions and a point of contact, which they can use to get updated additional information and instructions, if necessary. (Crisis management guide of Laurea University of Applied Sciences 2016.)

External crisis communications

External stakeholders include all the other parties that the scene of the crisis should be in contact with concerning the crisis. Authorities are also regarded as external stakeholders even though, in practice, cooperation and communications with them often begin in the very early stages of the crisis communications process. External stakeholders include such groups as rescue authorities and the police, hospitals, other authorities, experts in crisis assistance, the media, family members, residents of the area, companies and other similar operators, cooperation partners, the security company, property management, insurance company, subcontractors, rescue organisations and parishes. External communications are carried out through websites and intranet bulletins and by telephone and e-mail. In practice, it is not always possible or even necessary to inform all the parties mentioned, so, the situation management must always make a situation-specific decision on which external stakeholders are to be informed, in what way and in what schedule. (Crisis management guide of Laurea University of Applied Sciences 2016.)

External communications

The main responsibility for providing information to the media lies with the President, Vice President, Head of Safety and Security or some other actor appointed to this task. They agree on communications and, if necessary, they can also delegate these tasks to other actors. Those responsible for providing information define the action to be taken and what is going to be said, when and where the information is to be provided, and how informing will advance in accordance with the situation (severity, impact and news value). They also see to that the content of the information provided is consistent and truthful. (Crisis management guide of Laurea University of Applied Sciences 2016.)



The main principles of crisis communications

1. Keep the initiative in your own hands. Tell everything and tell it immediately. Say also if there is something you do not know and promise to find out.
2. Keep the focus on people and humaneness, not in material losses.
3. Try to create a sense of security, whenever there is a justified reason to do so. Put a stop on any 'panicking' with your own actions, words and behaviour.
4. Publish the first bulletin as soon as possible. Should the situation so require, be prepared to organise/participate in a press conference. Prepare for sharing information on a regular basis. Prepare also for the possibility that within the next few hours you must be able to tell about the causes and consequences of the crisis, and provide other background information too.
5. Keep your own organisation up to date on what is going on.
6. Apologise for what has happened. Admit any errors or negligence, where appropriate.
7. Follow the news and correct any erroneous information immediately.
8. Make sure that provision of information continues after the situation is over.

You must never:

- lie, make excuses, belittle anything, exaggerate or speculate
- blame anyone or anything, reply "no comment" to a question (Crisis management guide of Laurea University of Applied Sciences 2016.)

4.6 Tasks of watchmen at entrances

The watchmen at entrances ensure that the members of the educational institution community shelter indoors.

QUICK INSTRUCTIONS TO WATCHMEN AT ENTRANCES

1. Take a walkie-talkie with you, turn it on and tune to the agreed channel.
2. Advance to the external entrance assigned to you. If possible, carry out the watchman's duties at the entrance in pairs. Stay in the immediate vicinity of the entrance inside the building.
3. Check the near areas outside the building if you can do this safely. Use your personal judgement.
4. Order people to come inside and proceed to the shelter rooms.
5. Try to keep people indoors. Observe the school's responsibility for potential minors. However, any adults cannot be forced to seek refuge indoors.
6. Find your way to a shelter as soon as you have received the order to do so from the situation management, or when it is no longer safe to remain at the entrance. Remain also active towards the situation management.
7. Inform the situation management when necessary. Inform the situation management when necessary.

4.7 Tasks of room inspectors

Room inspectors ensure that no members of the educational institution community are accidentally left or intentionally remain in facilities that are not intended for sheltering indoors.

QUICK INSTRUCTIONS TO ROOM INSPECTORS

1. Make a mental map of the area to be inspected.
2. Stop, survey the area, listen.
3. Proceed systematically in the premises of the educational institution.
4. Empty the rooms of all people and order them to proceed to the shelter rooms. Close the windows.
5. Mark the room as inspected by posting the INSPECTED sign on the door.
6. After the inspection round, return to the situation control room, report your observations and state that you have performed your assignment.
7. When emptying rooms, dare to use your own voice – shout if the situation so requires.

4.8 Tasks of people guiding others to shelter rooms

People guiding or directing others to shelter rooms assist the members of the educational institution community to proceed to the agreed shelter rooms in a controlled manner. The larger, higher or labyrinthine the property is, the more people are needed to guide others to shelters.

QUICK INSTRUCTIONS TO PEOPLE GUIDING OTHERS TO SHELTERS

1. Take the property keys with you and proceed to the corridor leading to the rooms agreed as shelters.
2. Start guiding people to the shelters in a visible manner.
3. Give clear instructions in Finnish (and in other languages as well, if necessary).
4. Start filling the rooms beginning with the ones at farthest end of the corridor.
5. If necessary, ask another member of staff or a stakeholder group to assist you and to keep count when the room-specific maximum number of people has been reached.
6. Emphasise to the staff that it is their responsibility to start guiding pupils, students and other people once they are inside the shelter rooms.
7. Talk to people, inform them about what is happening and about any causes of events you are aware of. Communicate about the situation clearly and purposefully.

4.9 Tasks of shelter-specific persons in charge

Make sure that all doors, windows and vents in the shelter room are sealed using duct tape. Everyone seeking shelter must always be allowed to enter the room. Turn the radio on and tune to YLE channels and follow the instructions given. Try to keep people calm in the room and urge everybody to sit down. Make sure that everybody understands what the situation is about. Keep everybody informed about any new developments.

Urge everybody to avoid unnecessary telephone use so that the connections to the authorities would not get congested. However, allow people to call their close family members. Make sure that first aid is available to those who need it. Write down the names of the people in the shelter and report the head count to the situation manager. Stay in the shelter until the authorities give the permission to cancel the shelter-in-place order and leave the premises.

4.10 Tasks of the people responsible for ventilation and internal public announcements

When the management has ordered you to initiate the measures or the information has reached you through another reliable channel:

1. Make an announcement on sheltering indoors in accordance with the instructions given (see the model below). IN EVERY EXERCISE, it must be clearly stated that the situation is not a real emergency. Should the exercise suddenly turn into a real situation, this should be announced as well.
2. Shut off the ventilation using the “IV-hätä seis” (emergency ventilation shut-off) switch.
3. In the lobby, guide people to shelter room x/floor x and try to prevent people from leaving the building by informing them about the situation.
4. Leave a note on the inner doors at the entrance: “Sheltering indoors in progress in the building, proceed to shelter room x/floor x of the building”.
5. Seek refuge yourself when told to do so.

Example of announcement instructions for a shelter-in-place exercise

Attention!

This is an exercise. I repeat, this is an exercise.

The scenario of the exercise is a major chemical accident in a nearby area.

Please move to the fourth floor for indoor sheltering.

Facility personnel will guide you to shelter.

This is an exercise.

Example of announcement instructions for when the shelter-in-place exercise is over

Announcement when the shelter-in-place exercise is over:

Attention!

The exercise has ended. I repeat, the exercise has ended.

Example of announcement instructions for a shelter-in-place situation

Attention!

An important announcement follows.

There has been a major accident in nearby area.

Please move to the fourth floor for indoor sheltering.

Facility personnel will guide you to shelter and lead the action.

Please wait for the “All Clear” announcement.

4.11 Tasks of the staff

Once the management has given the order to shelter indoors, the staff will take action and follow the instructions given. The representatives of the staff guide the pupils or students under their responsibility and other members of the educational institution community to the shelter rooms and initiate active sheltering measures.

QUICK INSTRUCTIONS TO THE STAFF

1. Inspect the room where you are at, be the last to leave it and leave an INSPECTED sign on the door.
2. If you have a group of pupils or students under your responsibility, guide them and other people to the shelter rooms. Inspect the rooms along the way and mark them as inspected as well if this is possible without endangering the safety of anyone under your responsibility. Take care of the group of pupils or students under your responsibility also in the shelter. Calm down others and help them seek refuge.
3. If you do not have any groups of pupils or students under your responsibility, inspect the room where you are at and leave an INSPECTED sign on the door. Go immediately to the situation control room to assist the situation management.
4. Close the windows of the shelter if they are open.
5. When you are sheltering with a group, ensure that everyone seeking cover also reaches the safe room. Close the door, when the shelter is full, observing the maximum number of people for each room, or when no more people are coming to the room.
6. Make sure that all doors, windows and vents of the shelter room are sealed using duct tape, clothing or any other materials available. The safety box contains tape and garbage bags.
7. Turn on the radio to a YLE channel and listen to additional instructions issued by the authorities.
8. Try to keep people calm in the room and urge everybody to sit down. Make sure that everybody understands what the situation is about. Keep everybody informed about any new developments.
9. Make sure that first aid is available to those who need it. First-aid equipment is provided in connection with the shelter rooms.
10. Write down the names of the persons in the shelter and report the head count to the situation management or to a record keeper assigned with the task to go round the premises and collect this information.
11. Urge everybody inside the shelter to avoid unnecessary telephone use so that connections to the authorities would not get congested. However, allow people to call their close family members.
12. You may only leave the shelter when permitted to do so by the situation management or authorities.

Chapter 5 examines the information to be marked on floor plans relating to the needs of a shelter-in-place situation. Information to be marked on floor plans include the location of the situation control room, shelter rooms and alternative shelter rooms with the room-specific maximum number of people, as well as the location of the emergency shut-off switch for ventilation. In addition, information is provided on the equipment available in the situation control room and the contents of the safety box.

5. FLOOR PLANS, THE SITUATION CONTROL ROOM EQUIPMENT AND THE SAFETY BOX

This chapter outlines all the documentation and instructions that the educational institution community plans and prepares in accordance with information pertaining to the specific site in reference to situations requiring sheltering indoors and exercises involving such situations. The chapter presents alternative examples of how to produce sheltering material with a view to the specific site.

5.1 The situation control room equipment and need for equipment

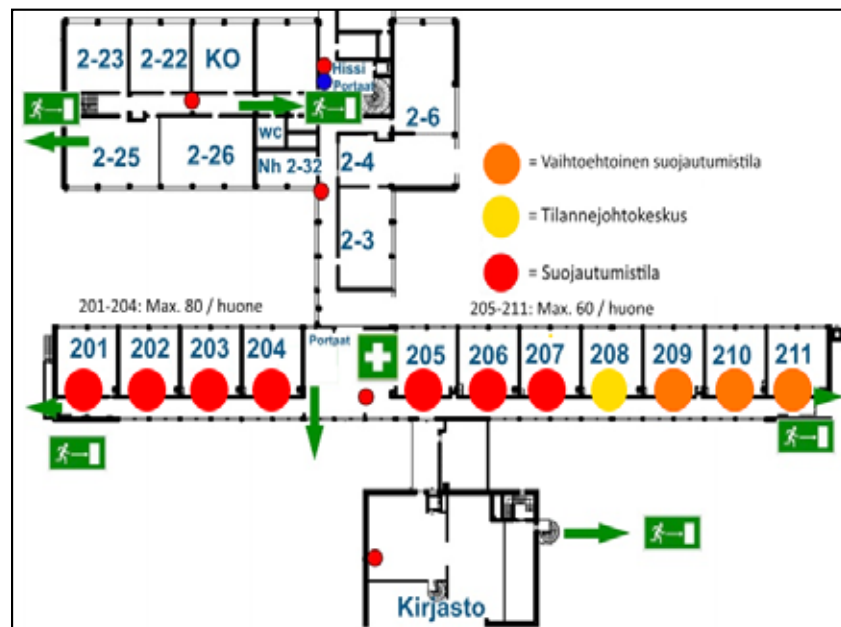
- room for at least 10 people
- a map of the nearby area and the floor plans of the building
- note-taking accessories: paper, large memo pads, easel pads, and pens and pencils
- ready-made lists for recording the names and number of people in the building
- safety vests for the staff
- safety boxes
- materials suited for sealing the room, such as tape and garbage bags
- all operating instructions relating to shelter-in-place situations
- an Internet or WLAN connection and computer, and a potential communication tool for situation management
- data projector
- radio
- mobile phones and walkie-talkies
- it would be good if there was also water supply or a cooking corner in the situation control room

5.2 Information to be marked on floor plans

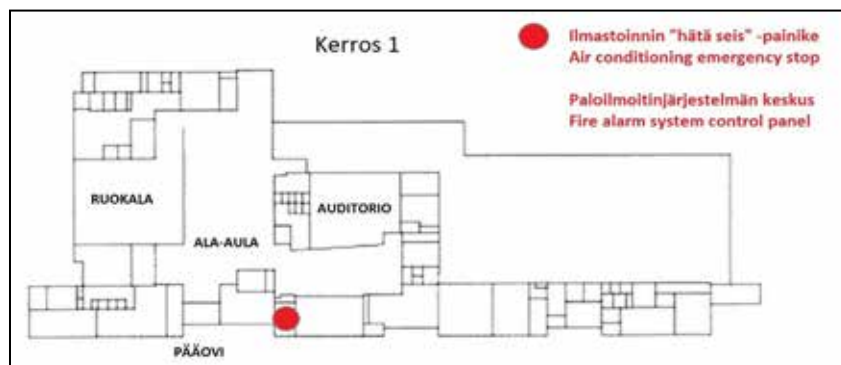
The following information is to be marked on floor plans made for the purpose of sheltering indoors:

- shelter rooms and the maximum number of people for each room
- alternative shelter rooms and the maximum number of people for each room
- the location of the situation control room
- the location of the emergency shut-off switch for ventilation

Picture 2 shows an example of a floor plan with information on the location of the situation control room, shelter rooms with the maximum number of people, and alternative shelter rooms. Picture 3 shows the location of the emergency shut-off switch for ventilation.



Picture 2. Example of a floor plan



Picture 3. Location of the emergency shut-off switch for ventilation

5.3 Safety box

The safety box is an equipment box designed and put together with the school's own operations as the starting point. It is a collection of everything essential for enabling successful sheltering. It contains clear, role-specific instructions, floor maps of the property divided into different inspection areas, and a list of shelter rooms with ready-made columns for recording the number of people in each shelter. The safety box contains a sufficient amount of duct tape, a battery-powered radio and batteries, marker pens, Post-it notes, a sufficient number of torches, and safety vests. As many safety boxes are put together as necessary for the particular property. The boxes are placed in such a manner that they are certain to be available in case of emergency. A functional solution is to place the boxes in the shelter rooms.



An example of dividing the premises into inspection areas

To assist the situation manager, draw up a joint list of the room inspections: who has been sent where and with what equipment (Table 6). In the floor plans, draw a red frame around the rooms to be inspected (see adjacent picture). In addition, draw up cards giving concise inspection instructions for every inspection area in the premises. Print out the joint list on room inspections, floor plans and inspection instructions and laminate them. Keep the above-mentioned materials in the safety box. Add also an erasable marker pen to the safety box to be used for filling in the joint list on room inspections.

Table 6. Room inspections by area of responsibility

AREA OF RESPONSIBILITY	PERSON	WALKIE-TALKIE (YES/NO)	ADDITIONAL INFORMATION/OBSERVATIONS	INSPECTED
CELLAR A				
CELLAR B				
1ST FLOOR A				
1ST FLOOR B				
2ND FLOOR A				
2ND FLOOR B				
3RD FLOOR A				
3RD FLOOR B				
4TH FLOOR A				
4TH FLOOR B				



Chapter 6 focuses on the acquisition, maintenance and practicing the use of communications tools, and the internal announcements in the school. The starting point is that the school acquires walkie-talkies for general use. They can also be used for other purposes as part of normal everyday operations. It is also advisable to plan and draw up the public announcement instructions in at least two different languages. It is also important to laminate them and place them in such a way that they are always readily available near the place where announcements are made.

6. PUBLIC ANNOUNCEMENTS AND THE USE OF WALKIE-TALKIES

In this chapter, the focus is on the acquisition and maintenance of communications tools for the school and on practicing the making of public announcements at the educational institution. The starting point is that the school acquires walkie-talkies, which can also be used for other purposes as part of normal everyday operations. This way everyone would become familiar with using walkie-talkies. Most of the school staff has never used a walkie-talkie before, so, it is also important to go through the basic matters related to using them on a regular basis.

Agree also where the walkie-talkies will be stored in the school. Every member of the staff must know this location and they must also have unobstructed access to them. It must also be agreed who will be responsible for charging the walkie-talkies and keeping them in continuous readiness for use. Check the operating instructions for the specific walkie-talkie for recommendations on how their batteries should be charged. A good way of keeping the walkie-talkies in working order is to acquire timers, which helps to ensure that they are charged regularly. Continuous charging may weaken the batteries over time and finally destroy them. With a timer, the batteries are charged only when the battery power is running low. It should be noted that everything mentioned in this text refers to basic-level walkie-talkies. Of course, the use of devices designed for professional use can always be recommended, but due to their high price they are out of reach for many educational institutions.

6.1 Public announcement instructions for shelter-in-place situations

In shelter-in-place situations, the pupils, students and staff need instructions. The announcements can be made using the public-address system, a megaphone or own voice. Confident and concise announcements enhance the community's operating capacity, and studies have shown that in a real situation they are among the key measures with a view to getting the operation started and finding cover.

An announcement can be made, for example, as follows:

Attention, attention!

An important announcement follows.

There has been a major accident in a nearby area.

Please move immediately to the fourth floor for indoor sheltering.

Facility personnel will guide you to the sheltering and lead the action.

Please wait for the "All Clear" announcement.



6.2 Operating instructions for walkie-talkies

In educational institution communities, walkie-talkies are seldom used and, therefore, quick instructions on their use are needed. Below, we give an example of operating instructions for walkie-talkies. It must be noted that the instructions differ between different walkie-talkie models. These instructions have been drawn up to serve as 'layman's instructions' for people with no previous user experience.

1. Press the push-to-talk button and keep it pushed down for as long as you are talking.
2. About two seconds from having pushed the push-to-talk button down, state your message as follows:
 - When you are in an exercise situation, always begin by saying "this is an exercise".
 - Say who you are addressing and then who is talking. For example: "Exercise leadership – classroom 240 calling".
 - Wait until the party you are trying to reach responds with the proper call sign. In this example, the answer would be: "Exercise leadership responding". Then you know for sure that the party you are trying to reach is listening.
 - Once it has been confirmed that the party you are trying to reach is listening, state your matter as briefly and concisely as possible.
 - Wait until the party you are trying to reach acknowledges your message with the proper call sign. If you do not receive an acknowledgement, call again following the instructions under point 2) and ensure that the message was received.
 - End the conversation by saying OVER AND OUT.

Please note:

- A walkie-talkie is not a regular telephone. When you speak, keep the telephone transmitter approximately 5-10 cm away from your face and talk towards the microphone.
- Always wait for two seconds holding the push-to-talk button down before starting to talk. Keep holding the button down until you have said your whole message, then release it so that you can hear the answer.
- When you are listening, do not push the push-to-talk button.
- Always let others finish their message before you start your own.
- Do not interrupt if you hear other people talking, even if you had something important to say. The message cannot be understood if several people talk on the same channel at the same time.
- Always think in advance what you are going to say to ensure that communications run smoothly.
- Speak calmly.
- Always remember to acknowledge messages using your own call sign.
- Remember to begin your message by saying "this is an exercise", when involved in one.

You should agree on the call practices for walkie-talkies in advance. Examples of call signs to be used are shown in Table 7.

Table 7. Examples of walkie-talkie call signs to be used when sheltering indoors

UNIT/TASK AND CALL SIGN	WHAT DOES IT MEAN?
TIKE	SITUATION CONTROL ROOM AND SITUATION MANAGEMENT
MAIN ENTRANCE	MAIN ENTRANCE TO THE BUILDING
DOOR X	FOR EXAMPLE, ENTRANCE C, WHICH IS THE ENTRANCE TO STAIRWAY C
SHELTER X	FOR EXAMPLE, SHELTER 202, WHICH IS CLASSROOM 202 USED AS A SHELTER
ROUND X	FOR EXAMPLE, ROUND A, WHICH IS THE PERSON INSPECTING WING A OF THE BUILDING
ASSEMBLY POINT	PERSON IN CHARGE OF THE ASSEMBLY POINT

Examples for walkie-talkie communications:

The watchman at the main entrance calls the situation control room (tike): “TIKE, can you hear me, this is the MAIN ENTRANCE”

Person responding: “TIKE can hear you”

The caller The Main Entrance: “There’s no one coming to the main door any more. I can smell smoke. May I leave my position?”

Person responding at TIKE: “TIKE acknowledges. Situation clear. You may leave your position.” Over and out.”

If someone has died, inform the situation control room, for example, as follows:

“I need somebody to assist me and check a patient, right now”.

The situation is explained to the person who comes to assist and he or she goes to the situation control room to report on the situation.

Quick instructions are needed for the walkie-talkies available for use on such issues as how to put the battery in place, how to switch the device on, where the push-to-talk button is located and which channel is to be used for communications.

IN CONCLUSION

We got the idea for this guide, when the educational institution field expressed their need for instructions for implementing risk-based security training and exercises. While on the field, we also heard concerned comments from parents about how, in an exercise, pupils had been made to run only wearing stockings to cover their feet to escape from the reach of a man with a knife threatening the school. From the viewpoint of the development of risk-based security operations, there was a clear demand for this kind of a guide.

One of the key tasks of educational institutions is to identify, analyse and treat the risks that can threaten its operations. When the institution has prepared for the identified risks in an appropriate manner, it has required that the educational institution community has examining every risk separately and defined how likely it finds the realisation of the risk. It has also required that the community has assessed together how severe the consequences of the risk would be should it be realised. Based on these two factors, the educational institution must decide which risks it considers so likely that it is important to practice for such situations. These were the starting points for this guide, which provides every educational institution with the basic information on how to plan and implement a good shelter-in-place exercise. For this guide, we selected such starting points as to give the reader an opportunity to approach the safety and security of the specific educational institution through a tailored training based on high-quality learning. It is important that with the help of exercises the members of the educational institution community learn to act as individuals and a group in a safer manner.

This guide is based on the model of safety and security management according to which all security operations at an educational institution should be risk-based,

particularly as regards security training and exercises. This guide presents different scenarios around one of which our entire key message is built: the purpose of practicing sheltering indoors is that, by acting collaboratively, we would be able to secure the whole educational institution community in a situation, where there is a major fire raging in the nearby area or toxic gases that are dangerous to breathe are spreading into the air. After all, the likelihood of such events occurring is real. It could happen in your educational institution today, tomorrow or next week. Are you capable of taking action should this happen?

The guide is based on the views and experiences of two safety and security experts and research information. We, the writers, have understood that you can never write out everything relating to the matter. Therefore, we have focused on what we think will be useful for improving the safety and security of your educational institution. We cannot give any ready-made operating models for the actual incident, but we can share information and competence on what we have learned from the exercises we have arranged over these years and from research as well. Hopefully every Finnish educational institution arranges exercises also from risk-based starting points. It is certain that an exercise is never a waste of time, but one day it may save the lives of several members of our community.

Safety work is the entire educational institution community' business. It cannot be a separate function created separately by each operator, but it should rather be work managed and implemented in collaboration between all actors. Safety is not truly under control until the entire educational institution community practices it together by planning, training and taking action in a true emergency - not forgetting the stakeholder either.

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Tiina Ranta & Soili Martikainen

SHELTERING INDOORS IN EDUCATIONAL INSTITUTIONS



The guide *Sheltering indoors in Educational Institutions* focuses on shelter-in-place exercises, the effectiveness of which is improved by means of good planning. One of the key tasks of educational institutions is to identify, analyse and treat the risks that can threaten its operations and to decide what kind of risks the educational institution considers so likely that it is important to practice for them. When estimating a serious situation in the nearby area that would require sheltering indoors, a fire or a chemical accident appear as the most probable incidents.

The exercises need to be attended by the whole educational institute community: the staff, pupils or students and other stakeholders. In a true emergency, every member of the educational institute community must know how to collaborate with others. Safety is not truly under control until the entire educational institution community practices it together by planning, training and taking action in a true emergency.

This guide was created on the basis of the need expressed by those who participated in the 'Safe and Secure School' training, financed by the National Agency for Education and implemented by the Laurea University of Applied Sciences. The guide is intended for anyone interested in improving the safety in any educational institution. We hope that the guide will give its readers new ideas about how to carry out training in sheltering indoors.

