

Development of Emergency Preparedness Work in Schools- Challenges and Possibilities

Trygve J. Steiro

Institute for Teacher Education, Norwegian University of Science and Technology, Norway. E-mail:
Trygve.J.Steiro@ntnu.no

Bjørn Ivar Kruke

Institute for Safety, Economy and Planning, University of Stavanger, Norway. E-mail: Bjorn.I.Kruke@uis.no

Glenn- Egil Torgersen

Department of Educational Science, University of South-Eastern Norway, Norway. E-mail:
Glenn-Egil.Torgersen@usn.no

“Ongoing life-threatening violence” (Norwegian abbreviation: PLIVO), in schools, refers to low-probability yet potentially high- consequence events. In 2016, the Norwegian Police Directorate and Directorate of Education issued national guidelines on emergency preparedness. However, these guidelines provide limited direction regarding the active involvement of teachers and students. This study responds to the need to explore how broader participation in preparedness work can be achieved and sustained within schools. As previous research has largely relied on cross-sectional surveys, there is also a need to examine developments over time. Accordingly, this study adopts an action research design in collaboration with two schools with experience in preparedness planning and training. In addition, evaluation reports and interviews with key informants are analysed to investigate how students can assume greater ownership of preparedness initiatives. The findings suggest that a shared understanding of and ownership of preparedness plans enhance schools’ capacity to respond effectively to critical incidents. Strong leadership commitment and the institutional anchoring of preparedness work are essential. Furthermore, such efforts contribute to the development of students’ life skills, a core objective of the Norwegian national curriculum. Finally, a positive and inclusive school environment emerges as a key factor in supporting effective preparedness practices.

Keywords: Preparedness, Schools, Safety Management, Involvement of Employees and Pupils

1. Introduction

In our contribution to ESREL 2025, we stated the need to examine schools' preparedness and to conduct follow-up studies over time (Steiro et al., 2025a). It was also suggested that action research (Bryman, 2016; Postholm, 2019) be conducted to test the assumption that more people in schools should be involved in preparedness for ongoing life-threatening violence (Lyng et al., 2022; Lyng et al., 2024a; Lyng et al., 2024b). What are the potential benefits of involving more of the staff and the pupils in preparedness work? The tragic school shooting in Örebro on February 4th, 2025, revealed that lives were saved due to the school's recent training of staff and teachers on evacuation in such settings (Björkman & Molin, 2025). The

Örebro attack also raised awareness of such attacks, particularly in Scandinavia. The first author in this paper was interviewed on Norwegian National Radio Broadcasting on the topic of preparedness, involvement, and training, where it was claimed that the message was that you can prepare and train for violence in schools, including school shootings, and that you therefore should involve more staff and pupils in preparedness, also related to violence. The interview led to contact with one high school in mid-Norway and with another school owner representing seven high schools and seven secondary schools, who asked us to assist with their preparedness efforts. This paper aims to examine experiences of involving teachers and

pupils in preparedness work, including exercises related to school violence. Data stems from document studies, a questionnaire distributed in a high school, and evaluation reports following exercises in several high schools.

2. Theoretical approach

Ongoing life-threatening violence has a very low probability, but potentially severe consequences, demanding that actions be taken and planned accordingly. Since schools are not considered high-risk organizations and the risk of ongoing life-threatening violence is low, this might represent a challenge in how to approach preparedness planning and exercises.

Previous studies indicate that preparedness involvement is often limited among school staff (Lyng et al., 2022; Lyng et al., 2024a; Lyng et al., 2024b). However, a PLIVO incident is typically addressed by individuals closest to the violent person, and the incident will presumably be over before a school's crisis staff is assembled. This calls for greater focus on the people at the sharp end, i.e., classroom staff and pupils. The Government provides no guidance on the involvement of school staff and pupils in preparedness work. This raises the question of whether pupils should be involved at all. Findings from previous studies indicate that both teachers and pupils express a desire for greater involvement (Lyng et al. 2022; Lyng et al., 224; Lyng et al., 2024b). The key issue, therefore, is not whether involvement is wanted, but how it should be implemented. This also requires a careful examination of potential benefits and drawbacks, including whether discussing the topic could cause discomfort or unease among both teachers and pupils. This means that experience in approaching this topic is important, which calls for experiential learning (Kolb, 1984).

Safety management relies heavily on top management commitment and a reporting system (Kjellén, 2000), as well as on vertical interaction within organisations. Top management sets safety priorities, allocates resources, and ensures lessons learned lead to lasting organisational improvements (Pursiainen, 2018). Strong leadership engagement builds trust between management and employees, supports continuous monitoring and system review, and enables ongoing improvement of corrective and preventive measures (Pursiainen, 2018). Reason (2016)

argues that safety culture comprises a learning subculture, a reporting subculture, a just-in-time subculture, and a flexible subculture. In a dynamic society characterized by Volatile, Uncertain, Complex, and Ambiguous (VUCA) conditions, a learning approach is essential (Antonacopoulou et al., 2019) for a resolute and reliable response, including to violence. Steiro et al. (2024) discuss the importance of strengthening autonomy and taking responsibility. Learning is about exploiting knowledge and exploring knowledge (March, 1991). One approach to learning in a professional community is about reflection (Irgens, 2021). A robust response to school violence, including school shootings, necessitates preparations, engagement, experiential learning, etc. Thus, the pre-crisis phase (Kruke, 2012) involves agreeing on expectations and on who is doing what in a violent incident and using this as a basis for training the relevant actors on how to cope with the situation at hand. In this respect experiential learning is a key issue in preparedness work.

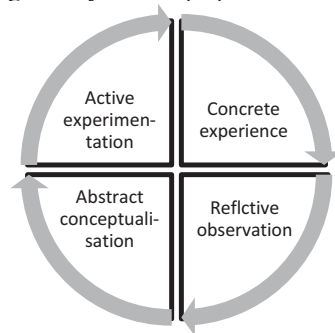


Fig. 1. The experiential learning cycle (Kolb 1984)

The experiential learning cycle starts with *concrete experience*, i.e. our everyday experiences. We then reflect on our new experiences, before we transform these reflections into models, theories or general principles. Finally, active experimentation deals with testing existing ideas by creating new experiences. This model has served as the basis for developing a battery of questions for the present study.

3. Methods and materials

This study is based on an action research approach involving the research team and the schools in question. Action research involves solving and investigating issues. Action research

entails iterative cycles of planning, action, and reflection in collaboration with practitioners (Bryman, 2016; Postholm, 2019). This approach enabled both empirical insight and the practical development of preparedness work, while schools retained ownership of implementation. This means that we are part of the study and that reflexivity should be addressed (Aide & Beddoe, 2024). We have communicated the following message in recent years. Mass casualty events, such as the Örebro event, can be trained for. There is a very low probability of a serious violent incident in schools, but the consequences are high. More staff and pupils should be involved in both preparedness planning and training. Pupils should not be used as markers in exercises involving the police (Lyng et al. 2022c; Steiro et al., 2025b; Steiro, 2025).

Regarding the individual high school, which we will term dataset A, pupils are involved in the preparedness activities. School A questionnaire was sent to the management group for information and comments. No significant changes to the questionnaire were proposed, except to shorten it and reduce question overlap. The questionnaire was distributed via a QR code at a personnel meeting in December, and 66 people responded. The total number of employees is 197, which makes a response rate of 33%. The school has around 1000 pupils.

For dataset B, which comprises several schools under the same owner, we have played a more active role. They had already begun preparing for school violence. The school owner set a 2025 deadline for all schools to develop a preparedness plan and to hold at least one exercise on a PLIVO scenario. We have met on several occasions with the school owner's preparedness team and once with the school owner, the head of schools, and school preparedness representatives, to present our proposals. Furthermore, the head of the school that had progressed the furthest presented their report and lessons learned from the first exercise. The schools were given considerable freedom to develop the format of their own exercises. We received all the exercise reports in early December and provided general feedback to the schools; these are presented in dataset B.

4. Results

The results are divided into two parts. First, we present the results from the questionnaire, which we have termed dataset A. Then present dataset B, which is the results of our analysis of the schools' exercise reports.

4.1. Dataset A, questionnaire

Table 1 shows the questionnaire respondents, broken down by function, number, and percentage, and Table 2 shows the respondents by experience level.

Table 1. Respondents

Function	Number	Percentage
Teacher	48	72%
Management	8	12%
Administration	5	7%
Other personnel	6	9%

Table 2. Respondents experience level

Experience	Number	Percentage
0-5 years	15	22%
6-14 years	25	37%
15-24	15	22%
25 +	12	18%

As presented in Tables 1 and 2, the respondents are highly experienced. That could have affected the results, as one might expect that an inexperienced teacher would find it more difficult to address PLIVO in the classroom.

In the question, "Management has a high engagement when it comes to preparedness," 30 % agree, and 63 % fully agree. No one reports neutral or disagreement, but 7% fully disagree. It would be interesting to raise these points. Regarding the question: "The schools have gone through preparedness plans (PLIVO) very well": 67 % fully agree, 30 % agree, no one is neutral or disagrees, and only 1 person fully disagrees.

Regarding involvement of staff: "The staff is appropriately involved in preparedness regarding PLIVO". One respondent reports a full disagreement, and another is neutral. 46 % agree, and 51 % fully agree. So, it can be claimed that the personnel are involved. It demonstrates that long-term, systematic preparedness work is important and not a "quick fix". On the other hand, regarding the school owner: "School owner is clear on expectations to the school's work regarding preparedness work related to PLIVO:

“15 % fully agree, and 52 % agree. 24 % report neutral. 9 % disagree, and no one fully disagrees.

Regarding the Directorate of Education (UDIR) preparedness guidance on school violence, responses are more divided. “I know UDIR’s guidance for serious incidents”: 7% fully agree, 49% agree. 25% respond neutral. 16% disagree, and 1 respondent fully disagrees.

It is also interesting to examine how respondents assess pupils’ contributions to preparedness. We have assumed this is the appropriate way to proceed. But how is it perceived? “Pupils might be frightened and have minimal information regarding PLIVO”. 18 % percent fully disagree, and 61 % disagree, which brings the combined number up to 79%. 13 % respond neutral, 4 % agree, and 3% fully agree. In retrospect, the questions may be intimidating and insufficiently informative. It should have been two separate questions. Still, it is a clear finding that respondents do not think pupils would be frightened. At the same time, we should recognize that staff are highly engaged in preparedness activities and have extensive experience. Thus, the results might have been different for a school with less experience with violence.

The other question regarding pupils was: “Pupils should be involved in planning of preparedness in relation to PLIVO.” Here, we find that 1 respondent fully disagrees, whereas 13% disagree. 10% respond neutral. 55% agree, and 19% fully agree. That indicates a potential for greater pupil involvement in preparedness work, also related to school violence.

Regarding parents, the following questions were addressed. “Parents might be frightened”. 6% fully agree, and 19% agree. That accounts for 25%. 28% respond neutrally, 36% disagree and think parents would not be frightened, and 10 % fully disagree. A total of 46% do not think parents will be frightened. The question indicates that this should be discussed more within the school and given greater consideration. The other question regarding parents was: “Parents are informed on what they are supposed to do in a preparedness situation.” 28% disagreed or strongly disagreed. This item had a very high proportion of respondents who reported neutrality (43%). Only 25% agree or fully agree. We think the reason for this might be that parents are not considering the planning and training, which is natural. However, when involving pupils, one should also consider

informing and involving parents. In an emergency that could quickly spread via social media, parents may attempt to go to the school to find their loved ones, thereby obstructing roadways, impeding police and rescue efforts, and diverting resources.

4.2. Schools' evaluation reports, dataset B

Dataset B shows that students at these schools are well informed about PLIVO. Some schools have shown videos and discussed them with pupils. Thus, we assume that teachers would have noticed the students' concerns. Alternatively, no one has reported that involving pupils has been problematic. However, that is not the same as concluding that this is not without concern. More studies need to be done. However, we can argue that more schools in the sample have tried to involve students, and the results to date are promising.

Furthermore, the reports show that the schools have chosen different approaches to planning and exercises.

Table 3. School B1

What was done	Lessons learned
One-hour plenary session with staff and pupils. A walk through the different areas of the school building. Check emergency exits. Focus on how to barricade	Signal horn to be used Focus on hiding as much as possible after evacuating the school building

Table 4. School B2

What was done	Lessons learned
Two-fold: Video demonstration regarding actions PLIVO. Common discussion on warning and action, hiding, emergency exits, and warning possibilities. For the pupils. The information video is the same as for staff. Discussions in the classroom	Teachers and pupils do not know enough about alternative evacuation routes.

Table 5. School B3

What was done	Lessons learned
Tabletop exercise with the preparedness group. Updated the emergency plan. A brief for the staff regarding the PLIVO exercise before the summer. The pupils are provided with information before the exercise. The preparedness group and other staff will contribute to classroom activities, led by the class teachers. One common scenario I developed for discussion and reflection. The pupils demonstrated high engagement in the topic.	The preparedness group needs to work on alternative assembly areas. A planned first-aid course for staff is scheduled. The signal horn will cover the entire school.

Table 6.- School B4

What was done	Lessons learned
Pupils are not part of the exercise. The police assisted in the exercise.	The PA system was tested. Still difficult to obtain information because there was a higher level of activation/stress during the exercise. Feedback indicated a lack of equipment for capturing classroom insights. The debrief was highly useful, even though the police were absent. This was wished for.

Table 7.- School B5

What was done	Lessons learned
Information and preparation of the staff. In the classrooms, a quiet voice and a film	Increased awareness. Pupils understood the

are combined with dialogue. Preparedness group available Parents were given information about the exercise beforehand. Teachers reported that the exercise was educational and safe.	rationale for the exercise. Employees gained greater confidence in handling PLIVO scenarios. The school will consider more training in barricading. Additionally, investigate alternative technical solutions to secure certain doors.
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Table 8.- School B6

What was done	Lessons learned
Focus on information and preparation. Information to parents a week before. Focus on learning, not frightening. Three of the staff appointed observers. In every class, there was an introduction focused on Run- Hide- Warn. A practical scenario to discuss. Debrief/ reflection. Point presented by the teacher: <i>"No surefire answer, but simple choices can save lives."</i>	The Teams channel did not function well. However, the Team channel needs further testing. Train with or without a teacher who has the lead in the situation. The video is functioning very well.

Table 9. School B7

What was done	Lessons learned
Tabletop exercise with the preparedness group. Information regarding all employees. Information to parents. Preparedness exercise for all employees, pupils, and management. PowerPoint	The exercise was perceived as beneficial, promoting discussion, reflection, and awareness. Feedback indicated a need

presentation with a film. Group work using the PLIVO checklist.	for more visible and active management presence during implementation. Overall, 89% reported increased feelings of safety; 11% did not.
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Table 10. School B8

What was done	Lessons learned
Training internally without the Fire Department or the police. The signal horn was used to notify personnel to check the Teams channel. Focus on run, hide, act. Enough time set aside for debriefing and 1:1 conversations for those who wanted them. Focus as if it were a fire drill to make us feel safer, not unsafe.	The agenda should be sent in advance to facilitate preparation. Improving escape routes in some classrooms. Develop a good warning system for PLIVO.

Table 11. School B9

What was done	Lessons learned
Individual preparation of what to do during a PLIVO. Plenary discussion on what functioned well Common discussion on warning and acting. Common discussion in a walk-through in the school building. Looked for hiding places and possible escape routes. Involving pupils. Pupils watched an information video together with teachers. Information to parents regarding the theme,	Knowing the building is essential. A prompt response is essential to mitigate consequences. Then one needs to know where to go. Essential to maintain good warning routines.

including access to a video.

Table 12. School B10

What was done	Lessons learned
PLIVO information will be provided at parents' meetings. The head of school briefed all classrooms, with police present. Warning systems (alarm and SMS) were tested. Pupils watched a film, discussed response actions, reviewed alternative escape routes, and considered barricading and visibility measures.	The school owner was not warned. This has been put into the preparedness plan. Limited possibility for alternative evacuation through windows. Want to check out the possibility of fire ladders. Check out the warning on the intercom.

5. Discussion and conclusions

The present study indicates that the school owner plays a crucial role in determining the extent to which teachers and pupils/students are involved in preparedness activities for school violence. These findings can be interpreted through the EPCE model - Emergency Preparedness Competence in the Educational context and schools (EPCE) model, to leverage school experience in planning and training for PLIVO.

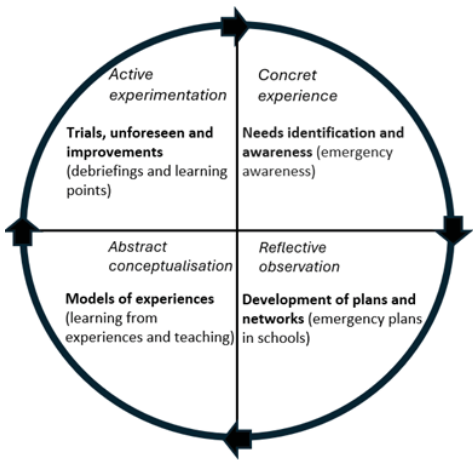


Fig. 2. The EPCE model based on Kolb's (1984) four phases of experiential learning

The *concrete experience* is about identifying and raising awareness of needs (emergency awareness): events in society, guidance from authorities and the local community, including assumptions and needs for pupils/students and parents. *Reflective observation* involves examining experiences and linking them to everyday school practice, collaboration among stakeholders, physical and contextual conditions, and the integration of preparedness into strategic plans. *Abstract conceptualization* concerns developing local preparedness models, scenarios, procedures, and exercises; integrating preparedness into the curriculum; ensuring progression in learning; and training staff. Finally, *Active experimentation* concerns systematic learning and evaluation across school communities, testing and adjusting exercises and teaching programs, and fostering openness, improvisation, and adaptive learning.

External triggers, such as societal events, policy guidance, and expectations from school owners, help raise awareness and initiate preparedness efforts within schools. Within dataset B, however, only one school had made substantial progress in its preparedness work concerning PLIVO. In this case, the school had mandated that planning and exercises be completed by 2025. Importantly, this requirement was not limited to a formal directive; resources were allocated, the topic was placed on meeting agendas, and the school that had advanced furthest in its efforts was encouraged to share its experiences with others. Although we do not believe that we directly influenced the outcomes, our involvement may have served as a source of inspiration. The schools were responsible for involving pupils in the process, with explicit support and endorsement of the school owner, yet such initiatives may not have taken place without our encouragement.

We observe that the schools in dataset B adopted different approaches to planning and training, a variation intentionally encouraged, as preparedness must be owned locally. Autonomy in schools is very important (Irgens, 2021). Several of the reported activities, such as classroom discussions, video-based learning, and debriefing after exercises, illustrate the reflective observation phase of the EPCE model. Through these activities, pupils and staff connect

preparedness knowledge to everyday school practice

In the current study, we find that most employees in dataset A do not consider involving pupils in planning and exercises problematic, nor do they see any reason to exclude them. This, we will argue, is also evident in dataset B, where 9 out of 10 schools have involved pupils. Primarily to watch a video, discuss, reflect on next steps, get to know the building, and view it from a PLIVO perspective. Thus, the findings of this study indicate that encouraging pupils to include may be beneficial. That said, further studies are needed on this issue.

Regarding parents, we believe this warrants particular attention. Providing parents with information in advance is important, as it allows them to share information about the pupil that can be taken into consideration (e.g., trauma from war). Information obtained after exercises is also very useful.

We observe that all participating schools adopt a learning-oriented approach to the topic. This is highly advantageous, as preparedness is not an end state but a continuous process that requires ongoing improvement. The schools have both leveraged existing knowledge and explored new insights, while also identifying directions for future development. By involving a broader range of stakeholders, planning and training must remain dynamic, particularly as personnel and pupils change from year to year.

Finally, dataset B indicates that school buildings warrant further investigation. As new schools are constructed and existing schools are modified, questions arise about preparedness-related concerns related to school buildings. We believe this issue requires further attention.

The findings of the present study should inform the knowledge base guiding interagency collaboration between schools and external services. Previous research highlights the need to incorporate insights from both the local community and the school environment into strategic documents and practical preparedness activities (Torgersen, 2025), as violent or threatening incidents are often committed by individuals with current or former ties to the school or groups rooted in the local environment. Strengthened collaboration among schools, child welfare services, and the police can therefore enable earlier identification and more targeted

preventive interventions for at-risk individuals and groups within the community. Accordingly, such a locally grounded approach should be integrated across all four phases of the EPCE model. The EPCE model, and the four phases' frames preparedness as a continuous learning process, moving from awareness to reflection, conceptual development, and active experimentation. The findings show that broader staff and pupil involvement strengthens this cycle and supports shared ownership. Clear managerial anchoring is crucial to ensure that experiences are translated into structures and practices. Local adaptation combined with autonomy enables active experimentation and continuous improvement. Preparedness should therefore be understood as an ongoing organizational learning process rather than a one-time exercise.

Acknowledgement

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