Universal Journal of Educational Research 12(5): 114-123, 2024
DOI: 10.13189/ujer.2024.120503 http://www.hrpub.org

Piloting Safety Notice Reporting on Comprehensive Education Students

Miika Leino*, Eila Lindfors, Emilia Luukka

Department of Teacher Education, University of Turku, Rauma Unit, Finland

Received June 18, 2024; Revised October 3, 2024; Accepted October 25, 2024

Cite This Paper in the Following Citation Styles

(a): *[1] Miika Leino, Eila Lindfors, Emilia Luukka , "Piloting Safety Notice Reporting on Comprehensive Education Students," Universal Journal of Educational Research, Vol. 12, No. 5, pp. 114 - 123, 2024. DOI: 10.13189/ujer.2024.120503.*

(b): *Miika Leino, Eila Lindfors, Emilia Luukka (2024). Piloting Safety Notice Reporting on Comprehensive Education Students. Universal Journal of Educational Research, 12(5), 114 - 123. DOI: 10.13189/ujer.2024.120503.*

Abstract Safety education is a combination of values and attitudes wherein safety is considered important and unnecessary risks are not accepted. The aim of safety education is to develop knowledge of proactive and reactive safety measures and procedures, combined with skills, and a will to act safely in an authentic situation. Students' role as part of safety culture is vital because they make up the majority of people in school. Therefore, it is likely that students also make a majority of safety observations in schools. Examining students' safety notice reports as expressions of school safety culture benefits safety education by offering a timely picture of students' real-world safety issues and giving practical examples of what issues are important to address in teaching safety. To recognise timely topics on safety education in comprehensive education, our study asks: What kind of safety observations do comprehensive education students consider worth filing when using an online safety reporting form? The data consist of safety notice reports (N=60) filed by comprehensive school students between November 2022 and June 2023. The safety notices were collected using an online form accessed through a web-application and via one of the pilot schools' own safety notice reporting system. Safety notices could concern events and observations made by the reporting individual or be made on behalf of another to keep the reporting threshold low. The safety notice reports were analysed and classified according to dimensions of safety in learning environments.

Keywords Safety Education, Safety Notice Reporting, Comprehensive Education, Safety Competence

1. Introduction

Safety is a universal concern globally in every community. In Finland, schools are unique places to influence the safety attitudes of students through safety education since the public comprehensive education reaches almost all children and young adults within the age group. Schools are believed to be safe places because the safety and security of schools are regulated through different statutes and laws. Schools can therefore – in principle – be expected to be safe places since the environment itself is well managed. Regardless, both major and minor hazards and risks materialize, and all manner of incidents take place [1]. In this context by hazard, we refer to a wider phenomenon, which can harm an individual or most likely lead to injury. Hazards can be due to human activity or due to the surrounding conditions. All hazards include risks and usually major ones. However, all risks are not to be considered intolerable. We all encounter and take prudent risks in our everyday lives and thus have learned to control them by understanding the nature behind them.

The means and resources necessary to avoid hazards and intolerable risks are limited. Hazards can hypothetically be unlimited and thus it is vital to know which hazards and risks must primarily be prevented [2]. Every safety deviation could be considered a warning sign for a more serious accident and therefore it is necessary to gather information on all kinds of safety observations [3], [4].

In the past, the role of the principal and school staff (who, together, form approximately 10% of the school's actors) in maintaining safety has been highlighted [5]. Since students account for approximately 90% of the school community,

their role in maintaining safety cannot be overlooked. However, according to Somerkoski [6], comprehensive education students (N=283) do not see themselves as safety promoters, but think of safety as a social system, where the responsibility for safety has been outsourced to the authorities. The involvement of students in making safety observations is therefore important. In developing curriculum-based safety education in a school community, making safety observations and reporting them can be a method for making safety an authentic daily learning activity. We propound that observing and reporting indicate safety competence. However, there are no prior studies on using a safety notice reporting system as a safety education method, and neither are there studies on safety observations made and reported by comprehensive education students.

Though different kinds of safety notice report (SNR) forms aren't completely unheard of in the field of education (see e.g. [3]), they are usually focused on reporting injuries and are filed by a member of the staff. Hence, regrettably little is known about safety notice reporting in schools due to the lack of research-based information on comprehensive students' safety observations. A verifiable, foundational fact, however, is that active and systematic reporting is the key to maintaining safety [7], [8]. This study seeks to understand the state of Finnish comprehensive school students' safety competence based on SNRs (N=60). We pose the research question: What kind of safety observations do comprehensive education students consider worth filing when using an online safety notice reporting form?

2. Theoretical Background

2.1. Safety Education

Safety education is an important part of managing safety culture in schools [9]. Safety education is a part of safety culture and a combination of values and attitudes wherein safety is considered important and intolerable risks are not accepted [10]. It can be described as the ability of systems, communities, and children to anticipate, prevent, withstand, adapt to and recover from causes of stress and shock, while advancing the rights of every child – particularly the most disadvantaged. Safety education is education that focuses on the prerequisites for feeling safe and secure: freedom from fear, anxiety, hazards, doubt, and a state of existence or a sense of security or certainty [11]. As a part of safety education, teachers are expected to create a safe learning climate that makes students feel psychologically safe and able to interact with their peers and share their thoughts openly in class [12]. A safe learning climate contributes to positive changes in students' learning processes [13]. This argument is supported by the review study conducted by Thapa et al. [14]. The aim of safety education is to promote students' safety competence by encouraging students to develop their knowledge and skills in proactive and reactive safety measures and procedures and the will to act safely in an authentic situation [5].

The value and significance of safety education is also recognized in other fields of research. Safety education has been successfully adapted to game-based learning also, where the aim is to prevent severe or fatal injuries by simulating hazardous situations in safety training [15]. Safety education in the context of this study employs the same means as road safety education and game-based learning. Safety competence is action competence in a situation where there is a need for either proactive action to prevent accidents, injuries and hazards or reactive action in a situation where an accident has already happened. It refers to a functional capacity – a set of attitudes, knowledge, skills and the will to prevent risks, face safety hazards and debrief safety incidents that have occurred [16]. Safety competence combines attitudes and values with acknowledgement of the importance of safety and not accepting unnecessary risks.

For students to develop their safety competence, a teacher must be able to address safety both objectively and subjectively to maintain and develop internal and external safety both proactively and reactively, ensuring safe and secure learning environments, furthermore, to demonstrate knowledge of proactive and reactive safety measures and procedures, combined with skills, and a will to act safely in an authentic situation [5]. On average, Finnish comprehensive school students' state of safety competence and attitudes towards safety are at a good level, but there are notable differences between genders. This phenomenon appears to repeat elsewhere in the world, i.e. in Bangladesh [17] and China [18].

The aim of safety education is to build resilience by developing safety competence [5]. Knowledge of the kinds of security observations made is crucial to identifying and preventing safety incidents. Holistically identifying safety-related needs enables school safety. Gathering safety observation data is not a new phenomenon. Various forms for reporting near misses and accidents have been used in different organizations for a long time, for example in the health and welfare and aviation sectors, where the importance of continuous learning from these reports has been recognized [19]. In education, reporting practices of this kind are not entirely unknown (see e.g. [3]), but they have typically focused on reporting accidents and near misses, with a staff member responsible for reporting. It has to be noted that the role of incident management and anticipation is essential to good safety culture [9].

2.2. Dimensions of Safety in Educational Establishments

According to Mubita [20], *'safety'* refers to a condition of being shielded from harm and other non-desirable outcomes and the ability to control recognized hazards by

lowering them to an acceptable level. Security is feeling safe from unpleasant sensations, and resilience against potential harm, with an absence of threats to human life or other unwanted coerced change. Based on these definitions we can establish that the term '*security'* has a somewhat broader meaning and refers to a wider spectrum of concepts related to protection, whereas '*safety'* focuses more on human-related protection issues. Previous studies have shown that safe and secure learning environments are prerequisites for students' focus on learning and schools need to be highly sensitive to creating and maintaining safe context for education [9], [21], [11].

School safety has multiple distinct dimensions, from human-related mental, physical, and social dimensions to the structural safety of the school building and the pedagogical safety climate of the school [20], [21]. We employ a six-dimensional model of school safety [1]. This model has appeared to be the most extensive definition of school safety thus far (Figure 1).

The physical and psychological dimensions of safety examine safety from the perspective of the individual. Contrary to prior research, we define physical safety in learning environments through an individual's personal physical immunity rather than the structural premises (see e.g., [11], [22], [23]). A person's physical safety may be threatened by intentional acts such as violence, non-suicidal self-injury, the use of intoxicants [24], [25] and unintentional acts like injuries and incidents. Violations of a student's physical safety also include the use of corporal punishments in schools [26]. A prerequisite for psychological safety in learning environments is a supportive atmosphere, the fulfillment of emotional needs, and freedom to express oneself without fear of negative consequences [27]. Psychological safety is connected to trust experienced by an individual in relation to one's surroundings and other individuals when expressing oneself [28]. Social safety in a learning environment includes a respectful and confidential atmosphere where interaction is positive [26]. It also encompasses interpersonal relationships and interaction, community values, attitudes, practices, mutually agreed-upon rules, communication and cohesion that are connected to the security of the whole community [29], [30].

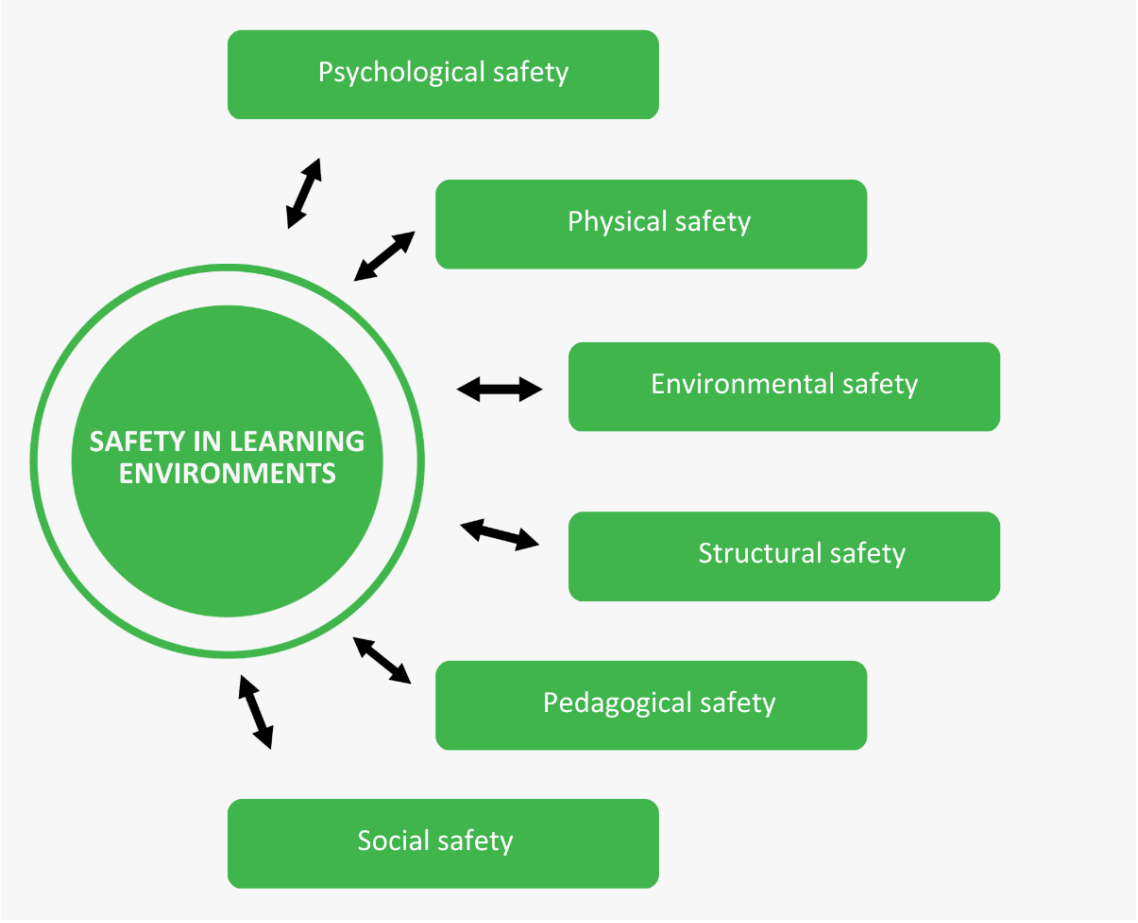

Figure 1. Dimensions of safety in learning environments [1]

The pedagogical safety of learning environments includes the teaching arrangements of different subjects, lesson contents and the instructional interaction between teachers and pupils 19], [31]. The safety of teaching arrangements also applies to teaching and learning in environments outside of school, such as learning in the context of camping, forest excursions, bike rides and other visits outside the school. Structural safety of learning environments refers to the concrete, built environment, in line with previous studies on school safety [32]. In Finland, this dimension aligns particularly with the Rescue Act (379/2011). For schools and educational establishments, this includes the building, furniture and equipment (tools, machinery, materials) and yard areas. The environmental dimension of safety contains threats, hazards and natural disasters related to the natural environment [21]. These may include extreme temperatures, strong winds, thunderstorms, floods and debris carried by floods, landslides or forest fires. Animals may also pose a risk specific to the geographical location.

2.3. Safety Notice Reporting as an Authentic Learning Method in Safety Education

Filing an SNR is an authentic safety observation task for students. By collecting SNRs, the school community gains valuable information about its safety, and students gain safety competence. Students report safety issues that they consider important enough to be reported. To achieve safe and secure schools, students and teachers must be taught to maintain a safety-mindset which does not always come from learning a certain skill, knowledge or use of equipment [33]. Achieving this mindset is a more comprehensive and abstract matter.

Safety observations can be either positive, describing good and effective practices, or negative, describing harmful, dysfunctional, or hazardous practices, situations, or places. *A near miss situation* is a hazardous event, where a serious accident, injury, potential disability, or structural damage could have happened, but was avoided [34], [35]. *An accident* can be defined as a loss, injury or damage caused by an unusual or adverse event to someone or something [36], [9]. *Injury* is closely related to the term *accident,* in that it is an unpleasant, unintentional, sudden, and unexpected event, accidental injury or a chain of events causing bodily harm [37], [38]. Typically, people tend to make safety observations and file SNRs only when something has gone wrong [40]. However, positive safety notices are just as important in learning and enhancing good safety practices [40]. An example of a positive safety notice in schools might be that *"leaves from the maple trees were nicely raked from the driveway"* or *"the yard was properly gritted, and it wasn't slippery at all"*. Negative notices can be classified as *safety deviations,* [38], such as near miss situations, accidents, injuries, structural damage, or hazards caused by items.

It is better, in principle, to proactively identify typical features of hazards and the situations leading to accidents and to prevent them from happening, than to react once something has already happened [41]. Finding the root causes of hazardous situations is the key to improving safety. To get to the root cause, it is vital to report and document different safety notices rather than treat each SNR as an individual case [29], [22]. Examining students' SNRs as expressions of school safety culture benefits safety education by offering a timely picture of students' real-world safety issues and giving practical examples of issues that are important to address when teaching safety matters [42]. Also, engaging students as members of a safety culture is more effective when combined with an authentic task than when using theory-oriented instruction [43]. Increasing responsibility also increases students' understanding of safety and the whole organization draws closer to the resilient level of safety culture. Students' role in reporting is vital because school safety culture is to a large degree about what schools know about their safety and how they monitor safety observations [44]. Attitudes toward safety can be developed through systematic safety education [11]. According to Stuart [45], students also learn more effectively when actively involved in the learning process rather than simply being passive bystanders.

3. Context and Data

The data for this study was collected as part of the *ONNI – Success in School Safety -project 2022–2024*, which involved 15 Finnish pilot schools varying in size, grades, and location. Schools were divided into three categories based on the number of students: small schools had 100 students or fewer (n=1), mid-sized schools from 100 to 400 students (n=6) and big schools had 400 to 800 students or more (n=8). Schools were also divided into three categories by grades: primary schools had grades 1 to 6 (n=8), upper-secondary schools had grades 7 to 9 (n=4) and comprehensive schools included grades 1 to 9 (n=4). Schools were also divided into three categories by location: rural (n=3), urban (n=8) and central schools (n=4).

Data collection took place between November 2022 and June 2023. The data consists of (N=60) SNRs filed by comprehensive education students in grades 1–9. Nine of 15 schools provided SNRs altogether. One pilot school provided SNRs solely from their own reporting system. For the other five schools, the reasons varied from why they did not provide any SNRs. Some schools did not deploy the app at all, and some schools did not deploy the student version. In one school, staff turnover delayed participation to the extent that the application could not be used effectively. It must also be noted that the practice is new to most, if not all, students. There are also no statistics on how many students installed the web-application on their mobile devices at all or how strongly they were encouraged to do so by staff.

4. Methods and Analysis

The study implements thematic content analysis and data-based categorization in the creation of subcategories [46]. Data was gathered using an online SNR form launched as part of the research project. The SNR form was part of a web-accessed safety application. Instructions for app use were available in three languages, Finnish, English and Swedish to provide as many students as possible an equal possibility for filing safety observations. Since the application was web-accessed, there was no need to download it to users' mobile devices and it could also be used on computers and tablets. Users were instructed to save the web-link to the application as a shortcut icon on mobile devices or to bookmark it on desk-top computers. The application included basic school-specific information, safety management and preparedness documents and the place to file an SNR. The safety notice form consisted of both open question fields and multiple-choice questions with the option to include a photo or video of the observation. Only three questions were obligatory as we believed this would encourage going through the whole form instead of feeling stressed if some questions did not suit the observation made. The form was designed so that a basic description of the observation could be recorded in approximately 2−3 minutes. Safety notices were able to be made by the reporting individual or on behalf of another to keep the reporting threshold low. Providing a reporter's contact information was voluntary but desirable for follow-up purposes from the school's point of view. In this study, all SNRs were handled anonymously.

The analysis started by reviewing each SNR (N=60) individually. Each SNR is considered a case of its own [47] as the reports are descriptions of authentic safety observations. The data consists of multiple individual safety notice reports (N=60) and therefore the study can be considered a multiple case study [48]. Segments of the written descriptions were then highlighted to thematize the observation and place it into a main category identifying the dimension of safety that it featured: physical, social, psychological, pedagogical, environmental or structural safety. Cases were numbered in a way that allowed connecting them to a school number. The data used in this study is part of a larger, broader data set collected from schools. This set of data focuses on safety observations made by students. SNRS which were completely empty, antisemitic or openly racist and did not concern genuine safety matters were discarded from the analysis.

Two researchers discussed and created the categorizations. If the description involved intentionally inflicted, physical harm between the persons involved, the SNR was classified as describing the physical dimension of safety. The second phase accounted for the intentionality of the reported observation. Typical physical contact between students involved falling, hitting, shoving and near-misses. If inappropriate behavior, intimidation, harassment or threats with objects were identified in the description, the SNR was categorized under the dimension of psychological safety. When the SNR contained observations related to public safety, such as broken parts of property, it was classified under structural safety of the learning environment.

5. Results

The analysis of the SNRs filed by comprehensive education school students shows that the cases of safety observations (N=60) concern physical, psychological and structural dimensions of the safety of learning environments (Figure 1). The results are presented by the dimensions of learning environments below. Inappropriate or inadmissible SNRs (n=21) formed 37% of the data. These SNRs were declared inadmissible either by a member of school staff or interpreted as such by the researchers. This categorization was made based on the discussion of the written description in the SNRs between two researchers. The whole data was thoroughly read several times in order to form the categorization. Researchers concluded that none of the written descriptions suited the pedagogical, environmental or social dimensions of safety in learning environments or had more similarities to the presented dimensions.

5.1. Physical Safety Observations

Observations related to the physical safety of the learning environment (n=11) accounted for 18% of the data (Table 1). These cases included deliberate, violent acts against another student, accidental injuries and substance use by a student. The reported violent acts were shoving, hitting and kicking a fellow student. Accidental injuries were usually falls.

An example of deliberate violent act:

S2-C21: *"My little brother [Name] was beaten at the bus stop. [Name] told me today that some of his classmates [student 1] and [student 2] from first grade hit him at the bus stop."*

An example of accidental injury:

S2-C23: *"I fell over on my bike. [street name] was frozen and there was water on top."*

Table 1. Observations related to physical safety of the learning environment in comprehensive education

Perpetrator / originator	Top category	Sub-category	Type or form
Student	$Deliberate\ act\ against\ another\ student, n = 5$	**Violence, n=5**	$Shoving, n = 1$
			$Hitting, n = 3$
			$Kicking, n = 1$
		Use or possession of intoxicants, n=1	
Accidental injury	$Accident\ or\ near-miss\ to\ a\ student, n = 5$	**Incident, n=4**	$Falling\ down, n = 1$
		Near-miss situation, n=1	

Physical safety of learning environments, n=11

Table 2. Observations related to psychological safety of the learning environment in comprehensive education

Perpetrator / originator	Top category	Sub-category
Student	$Deliberate\ act\ against\ another\ student, n = 4$	**Threatening on social media, n=1**
		Threatening with an object, n=1
		General nuisance, n=1
		Non-verbal harassment, n=1
Staff member	$Inappropriate\ behavior\ towards\ a\ student, n = 5$	**Disrespectful act, n=1**
		Condescending behavior, n=4
Person outside the school	$Inappropriate\ behavior\ towards\ a\ student, n = 1$	**Harassment, n=1**

Psychological safety of learning environments, n=10

5.2. Psychological Safety Observations

The cases categorized as observations related to psychological safety (n=10) accounted for 17% of the data (Table 2). These cases concerned deliberate acts against another student, inappropriate behavior of a staff member directed at a student and inappropriate behavior of a person outside the school directed at a student. Deliberate acts against a student are described as harassment, threats or general nuisance. Inappropriate behavior by a staff member directed at a student involved condescending behavior and disrespectful action.

An example of a deliberate act against another student:

S18-C1: "*Pupils have sharp heads that are hazardous. A pair of compasses were thrown and threatened."*

An example of inappropriate behavior of a staff member directed to a student:

S12-C31: *"I was in a maths class and the teacher [name] behaved and spoke to me in a very condescending and disrespectful way. The [teacher's name] told me that you will never amount to anything when I told him/her about my further studies in mathematics, he/she also told me that I have no chance to improve my mathematics. This is really disrespectful and demeaning and the teacher should not act like this."*

5.3. Structural Safety Observations

Cases categorized under the structural dimension safety (n=17) accounted for 28% of the data. These observations are related to general structural safety, such as potential electrical hazards or broken parts of buildings.

Table 3. Observations related to structural safety of the learning environment in a comprehensive education

Type of observation	Top category
General safety observation	$General\ structural\ safety\ concern, n = 17$

Structural safety of learning environments, n=17

An example of a general structural safety concern:

S4-C28: *"[School name] school tree's Christmas light electric cord cut off. [Place name] in the apple orchard there are those tall trees with the Christmas lights that are wrapped around the tree and then the rest of the cord was just snapped off and left without any protection."*

6. Discussion

The study at hand is the first of its kind as the multiple case study [47] in examining safety observations reported by comprehensive school students. A *safety notice report* is a general term for recording safety observations. The study provides a snapshot of the kinds of safety observations that comprehensive students consider worth making. In previous studies (see e.g., [40], [10]), researchers have used the term *'turvallisuuspoikkeama' (safety deviation, safety anomaly).* In this study, however,

we presumed this might focus attention on negative observations and influence respondents to file negative observations only. Therefore, the more neutral term *'safety observation'* (*turvallisuushavainto)* was chosen as an umbrella term to also include positive observations along with the safety deviations as Syrjälänen and others [39] highlight.

The results have limited generalizability due to the low threshold and small number of participating schools. It is likely that a fair proportion of safety observations remain unreported. Our conversations with school staff have revealed that there were unreported cases, for example, a pupil being assaulted because of debt related to tobacco. This may be partly because the victim of the assault has also acted in violation of the school rules by bringing tobacco products to school. This raises the question; how many similar cases take place? Further, bystanders might not file a report fearing repercussions and stigma. The will to act upon an authentic situation is clearly something to be addressed through means of safety education [5]. School policies which promote safety and staff commitment to them seem to have a direct impact on how safe students feel at school [49].

With this pilot study it can be established that pupils do observe safety issues, but the number of reports was low in relation to the number of pupils in schools. Six of the 15 schools involved in the larger project did not report any safety observations at all. All 15 schools were provided equal opportunity to use the app and schools received support from the research project and the app developer also. However, from the point of view of multiple case studies, the overall data amount is quite substantial. Since every safety notice report is a unique observation, every report is considered as an individual case. Through these individual cases, researchers were able to categorize the same type of incidents and observations under the main categories.

As an answer to our research question *'what kind of safety observations do comprehensive education students consider worth filing when using an online safety notice reporting form?*', our analysis shows that students' safety observations and correspondingly the SNRs filed by students concentrate on three specific dimensions of safety in learning environments: physical, psychological and structural safety. Cases spread fairly evenly among these three dimensions. Interestingly, students filed as many SNRs concerning themselves as they did on behalf of others. Students filed a few more SNRs related to general safety issues within the structural dimension of safety than related to the other two dimensions.

The observations were reactive in nature and only partially preventive by stating visible risks. This suggests that students can identify obvious incidents and hazards but not necessarily potentially hazardous places or risk behavior in advance [5]. Students need guidance to identify what constitutes a safety observation. Safety education plays an important role in making SNR practices a part of normal, everyday actions in schools. Teachers need not only pedagogical skills but safety skills also, and the ability to teach safety content according to the curriculum, thus implementing a high level of safety culture in an educational institution. Safety education should not be seen as a separate entity, but as an essential part of every school subject across the curriculum. Safety is a common concern that involves everyone.

Using an online or otherwise mobile application could be the most equitable and best-managed way to report safety observations. At its simplest, this can be provided through an online questionnaire that any student can access using their own device. However, there is an ongoing discussion on reducing the use of smartphones in schools. A more traditional way could be using a simple paper form. However, this can pose a problem on how well the students' handwriting is recognizable and therefore could prevent some students from filing a safety notice report altogether in fear of losing anonymity. Regardless of the means, the most important thing is that appropriate observations are made, reported and the reports acted upon [50]. The important thing to remember and acknowledge is that inappropriate SNRs are safety deviations of their own right. During the data collection for this study alone, there were a fair number of inadmissible reports and signs that someone attempted to use the form to bully a fellow student. This calls for chance in school safety education policies for students to better obtain the importance on reporting safety observations.

7. Conclusions

Making safety observations as an authentic learning task for students requires addressing safety education more thoroughly with students. Making authentic safety observations engages students with the safety culture of the organization. Attaining a strong level of safety culture demands that every member of the organization contributes to the safety culture from their own position. Identifying and preventing risks and potential hazards are keys to enhancing school safety. As established, a majority of school community members are students and their potential is recognized, although students do not see themselves as promoters of safety. We conclude that with systematic safety education measures students' safety competence can be developed and their great potential to contribute to the safety culture of their school can be harnessed. Also, active reporting on safety observations could increase students' feeling of being safe. Based on our study, reporting safety observations seems to be a new policy for Finnish students while in the US there is more experience in using them. Safety is not to be outsourced exclusively to rescue authorities, but to a large degree is something that everyone can impact. One way to engage students with the school safety culture could be naming student safety supervisors or safety agents which would change weekly or monthly.

Their role would be to enhance reporting and participate in analyzing the root causes of SNRs alongside the school staff.

We conclude that making safety observations and reporting them are essential parts of safety culture and safety education. The importance of safety observations and ways of recording observations must be highlighted in future safety education policies in order for students to adopt a positive attitude towards observing safety. Making safety observations and reporting them are ways to take responsibility for the safety culture and strengthen it. This is authentic learning in everyday school situations where safety competence is practiced as part of normal activities and not as a separate task. In addition, we recommend organizing special safety weeks or events a few times a year which focus on specific areas of safety that the students highlight being important for them.

As a future research topic, we recommend conducting observation studies in schools to gather data from a different point of view. This would provide broader data and would allow comparing what comprehensive students consider worth reporting and what a person outside the school community observes. Our concern remains that a fair number of safety observations are left unreported.

REFERENCES

[1] Leino, M. & Lindfors, E. ”Oppimisympäristön turvallisuuden osa-alueet ja tilannekuva – Perusopetuksen turvallisuuden hallintaa turvallisuusilmoitusten perusteella [Dimensions and snapshot of safety in the learning environment - Managing safety in basic education based on safety notice reports].” Hallinnon tutkimus [Administrative Studies Journal], vol. 43, no. 3, pp. 226–245, 2024.

[2] Uchida, R. “Risks and Benefits of Evidence in Educational Practice.” *The Japanese Journal of Educational Research*, vol. 82, no. 2, pp. 277-286, 2015. https://doi.org/10.11555/kyoiku.82.2_277

[3] Jones, S., Kirchsteiger, C., & Bjerke, W. “The importance of near miss reporting to further improve safety performance.” *Journal of Loss Prevention in the process industries*, vol. 12, no. 1, pp. 59-67, 1999. https://doi.org/10.1016/S0950-4230(98)00038-2

[4] Lindfors, E. “Safety, Risk and Learning. How to master a risk and safety in Technology education learning and working environments.” D. Gill, D. Irwing-Bell, & D. Wooff (Eds.) Handbook of Technology Education. Bloomsbury Publishing. 2023. https://doi.org/10.5040/9781350238442.0032

[5] Waitinen, M. ”Turvallinen koulu?: Helsinkiläisten peruskoulujen turvallisuuskulttuurista ja siihen vaikuttavista tekijöistä.” [The safety culture in Helsinki's comprehensive schools and the factors influencing it]. Helsingin yliopiston Opettajankoulutuslaitoksen tutkimuksia 334. [Studies of the Teacher Training Institute of the University of Helsinki 334.] Helsinki: Helsingin yliopisto. [University of Helsinki]. 2011. http://urn.fi/URN:ISBN:978-952-10-6864-5

[6] Somerkoski, B. Turvallisuus yläkoululaisen kokemana. [Safety as experienced by a secondary school student] Teoksessa J. Mäkinen (toim.), Asevelvollisuuden tulevaisuus. [In J. Mäkinen (Eds.) The future of compulsory military service.] Julkaisusarja. 2, Artikkelikokoelmat. Johtamisen Ja Sotilaspedagogiikan Laitoksen Julkaisut, 133−143. Helsinki: Maanpuolustuskorkeakoulun johtamisen ja sotilaspedagogiikan laitos. [Publication series. 2, Collections of articles. Publications of the Institute of Management and Military Pedagogy, 133-143. Helsinki.] 2013. http://urn.fi/URN:NBN:fi-fe201303202576

[7] Reason, J. “Safety paradox and safety culture.” Injury Control & Safety Promotion, vol. 7, no. 1, pp. 3-14, 2000. https://doi.org/10.1076/1566-0974(200003)7:1;1-V;FT003

[8] Lindfors, E. & Teperi, A. “Incidents in Schools - Incident Analysis in Developing Safety Management.” In: Nazir, S., Teperi, AM., Polak-Sopińska, A. (eds) Advances in Human Factors in Training, Education, and Learning Sciences. AHFE 2018. Advances in Intelligent Systems and Computing, vol. 785. Springer, Cham. 2019. https://doi.org/10.1007/978-3-319-93882-0_44

[9] Lindfors, E. & Somerkoski, B. ”Turvallisuuden edistäminen oppimisympäristössä [Promoting safety in learning environments].” In M. Hiltunen & P. In M. Hiltunen & P. Granö (Eds.) Suhteessa maailmaan [In relation to the world]. 2018.

[10] Somerkoski, B., Kärki, T. & Lindfors, E. “Learning Outcomes: Safety Education for Comprehensive School Pupils.” *European Journal of Social and Behavioral Sciences*, vol. 26, pp. 3009–3020, 2019. https://doi.org/10.15405/ejsbs.262

[11] Lawal, M. B. “Social Studies Teachers’ Readiness to Teach the Security Education Theme in the Reviewed Edition of Nigeria’s Basic Education Curriculum.” *American International Journal of Humanities, Arts and Social Sciences*, vol. 2, no. 1, pp. 18-28, 2020. https://doi.org/10.46545/aijhass.v2i1.89

[12] Haidari, S. M., Karakuş, F., & Koçoğlu, A. “Teacher and student perspectives on safe learning climate in gifted education.” *Kuramsal Eğitimbilim Dergisi [Journal of Theoretical Educational Science]*, vol. 13, no. 2, pp. 311-333, 2020. https://doi.org/10.30831/akukeg.581632

[13] Holley, L. C., & Steiner, S. “Safe space: Student perspectives on classroom environment.” *Journal of Social Work Education*, vol. 41, no. 1, pp. 49-64, 2005. https://doi.org/10.5175/JSWE.2005.200300343

[14] Thapa, A., Cohen, J., Guffey, S., & Higgins-D’Alessandro, A. “A review of school climate research.” *Review of Educational Research*, vol. 83, no. 3, pp. 357-385, 2013. https://doi.org/10.3102/0034654313483907

[15] Jin, G. & Nakayama, S. & Tu, M. “Game based learning for safety and security education.” Journal of Education and Learning (EduLearn), vol. 14, no. 1, pp. 114-122, 2020. https://doi.org/10.11591/edulearn.v14i1.14139

[16] Puolitaival, M & Lindfors, E. ”Turvallisuuskasvatuksen tavoitteiden tilannekuva perusopetuksessa – dokumenttiaineistoon perustuvaa pohdintaa.” [Situational picture of safety education objectives in basic education

reflection based on documentary material] In Rautiainen, M & Tarnanen, M (Eds.) Suomen ainedidaktisen tutkimusseuran julkaisuja. Ainedidaktisia tutkimuksia 15. Tutkimuksesta luokkahuoneisiin, 119–141. [Publications of the Finnish Substance Didactic Research Society. Subject-Didactical Studies 15. From Research to Classrooms, 119–141]. 2019. https://urn.fi/URN:NBN:fi-fe2021042820990

[17] Hasan, M. K. & Younos, T. B. "Safety culture among Bangladeshi university students: a cross-sectional survey." *Safety Science*, vol. 131, p. 104922, 2020. https://doi.org/10.1016/j.ssci.2020.104922

[18] Gong, Y. "Safety culture among Chinese undergraduates: a survey at a university." *Safety Science*, vol. 111, pp. 17–21, 2019. https://doi.org/10.1016/j.ssci.2018.09.010

[19] Merry AF, Henderson B. "Incident Reporting, Aviation and Anaesthesia." *Anaesthesia and Intensive Care*, vol. 45, no. 3, pp. 291-294, 2017. https://doi.org/10.1177/0310057X1704500304

[20] Mubita, K. "Understanding School Safety and Security: Conceptualization and Definitions." *Journal of Lexicography and Terminology*, vol. 5, no. 1, pp. 76–86, 2021. https://journals.unza.zm/index.php/jlt

[21] Vallinkoski, K & Koirikivi, P-M. "Enhancing Finnish basic education schools' safety culture through comprehensive safety and security management." *Nordic Journal of Studies in Educational Policy*, vol. 6, no. 2, pp. 103-115, 2020. https://doi.org/10.1080/20020317.2020.1720069

[22] Somerkoski, B., Granö, P., & Koskela, T. "Practical Training in Teacher Education: Reflecting Physical and Psychological Learning Environment." In *Well-Being in the Information Society. Fruits of Respect: 8th International Conference, WIS 2020, Turku, Finland, August 26–27, 2020, Proceedings 8* (pp. 251-264). Springer International Publishing. 2020. https://doi.org/10.1007/978-3-030-57847-3_18

[23] Piispanen, M. "Hyvä oppimisympäristö: Oppilaiden, vanhempien ja opettajien hyvyyskäsitysten kohtaaminen peruskoulussa [A good learning environment: pupils', parents' and teachers' perceptions of well-being in primary schools]". 2008. http://urn.fi/URN:ISBN:978-951-39-4871-9

[24] Zinberg, N.; Shaffer, H.; Kauffman, J. & Trainor, K. "The study of intoxicant use and misuse in psychological and medical education: A basic curriculum." *Psychology of Addictive Behaviors*, vol. 6, no. 1, pp. 14-21, 1992. https://doi.org/10.1037/h0080607

[25] Jaquier, V., Hellmuth, J. C., & Sullivan, T. P. "Posttraumatic stress and depression symptoms as correlates of deliberate self-harm among community women experiencing intimate partnerviolence." *Psychiatry research*, vol. 206, vol. 1, pp. 37-42, 2013. https://doi.org/10.1016/j.psychres.2012.09.020

[26] Mayeza, E. & Bhana, D. "Boys and bullying in primary school: Young masculinities and the negotiation of power." South African Journal of Education, vol. 41, no. 1, 2021. https://doi.org/10.15700/saje.v41n1a1858

[27] Díaz-Vicario, A. & Gairín Sallán, J. "A comprehensive approach to managing school safety: case studies in Catalonia, Spain." *Educational Research*, vol. 59, no. 1, pp. 89-106, 2017. https://doi.org/10.1080/00131881.2016.1272430

[28] Newman, A.; Donohue, R. & Eva, N. "Psychological safety: A systematic review of the literature." *Human resource management review*, vol. 27, no. 3, pp. 521-535, 2017. https://doi.org/10.1016/j.hrmr.2017.01.001

[29] Kutsyuruba, B; Klinger, D. A., & Hussain, A. "Relationships among school climate, school safety, and student achievement and well-being: a review of the literature." *Review of Education (Oxford)*, vol. 3, no. 2, pp. 103–135, 2015. https://doi.org/10.1002/rev3.3043

[30] Geller, E. "Psychological science and safety: Large-scale success at preventing occupational injuries and fatalities." Current Directions in Psychological Science, vol. 20, no. 2, pp. 109−114, 2011. https://doi.org/10.1177/0963721411402667

[31] Zuzeviciute, V. "Dimensions of Safety in Educational Settings; Lithuanian Case." Int'l J. Educ. L. & Pol'y, 2012. https://cris.mruni.eu/cris/handle/007/33680

[32] Xaba, M. "An investigation into the basic safety and security status of schools' physical environments." *South African Journal of Education*, vol. 26, no. 4, pp. 565-580, 2006. https://hdl.handle.net/10520/EJC32099

[33] Jonathan, G K & Mbogo, R W. "Maintaining Health and Safety at Workplace: Employee and Employer's Role in Ensuring a Safe Working Environment". *Journal of Education and Practice*, vol. 7, no. 29, pp. 1-7, 2016. https://files.eric.ed.gov/fulltext/EJ1118861.pdf

[34] Nashef, S. AM. "What is a near miss?" *The lancet*, vol. 361, no. 9352, pp. 180-181, 2003. https://doi.org/10.1016/S0140-6736(03)12218-0

[35] Van der Schaaf, T. W., Lucas, D. A., & Hale, A. R. (Eds.). "*Near miss reporting as a safety tool*." Butterworth-Heinemann. 2013. https://doi.org/10.1016/C2013-0-04588-4

[36] Andersson R & Menckel. "On the prevention of accidents and injuries. A comparative analysis of conceptual frameworks." *Accid Anal Prev*. vol. 27, no. 6, pp. 757-768, 1995. https://doi.org/10.1016/0001-4575(95)00031-3

[37] Somerkoski, B., & Lillsunde, P. "Safe community designation as quality assurance in local security planning." In *Safe and Secure Cities: 5th International Conference on Well-Being in the Information Society, WIS 2014, Turku, Finland, August 18-20, 2014. Proceedings 5* (pp. 194-202). Springer International Publishing. 2014. https://doi.org/10.1007/978-3-319-10211-5_20

[38] Langley, J. & Brenner, R. "What is an injury?" *Injury Prevention*, vol. 10, no. 2, pp. 69-71, 2004. http://dx.doi.org/10.1136/ip.2003.003715

[39] Syrjälänen, E.; Jukarainen, P.; Värri, V-M. & Kaupinmäki, S. "Safe School Day According to the Young." *YOUNG*, vol. 23, no. 1, pp. 59–75, 2015. https://doi.org/10.1177/1103308814557399

[40] Jones, S.; Fisher, C.; Greene B.; Hertz M. & Pritzl J "Healthy and safe school environment, part I: results from the School Health Policies and Programs Study 2006." *J Sch Health*. vol. 77, pp. 522-543, 2007. https://doi.org/10.1111/j.17461561.2007.00233.x

[41] Hollnagel, Erik. “Risk+ barriers= safety?” *Safety science*, vol. 46, no. 2, pp. 221-229, 2008. https://doi.org/10.1016/j.ssci.2007.06.028

[42] Gahungu, A. “Indiscipline and safety in public schools: Teachers and principals at odds.” *International Journal of Research in Education and Science (IJRES)*, vol. 4, no. 2, pp. 375-390, 2018. https://doi.org/10.21890/ijres.409267

[43] Seo, H.J.; Park, G.M.; Son, M.; Hong, A.-J. “Establishment of Virtual-Reality-Based Safety Education and Training System for Safety Engagement.” *Educ. Sci*., vol. 11, no. 12, p. 786, 2021. https://doi.org/10.3390/educsci11120786

[44] Kahraman, H., Koybasi, F. & Ugurlu, C.T. “Perception of Safe School in Turkey: Opinions of Parents, Students and Teachers.” Educational Policy Analysis and Strategic Research, vol. 17, no. 2, pp. 266-290, 2022. https://doi.org/10.29329/epasr.2022.442.12

[45] Stuart, A. “A blended learning approach to safety training: Student experiences of safe work practices and safety culture.” *Safety Science,* vol. 62, pp. 409-417, 2014. https://doi.org/10.1016/j.ssci.2013.10.005

[46] Krippendorff, Klaus. “Content analysis: an introduction to its methodology” (Fourth Edition). SAGE Publications. 2019. https://doi.org/10.4135/9781071878781

[47] Schwandt, T., & Gates, E. “Case Study Methodology.” In N. K. Denzin, & Y. S. Lincoln (Eds.), The SAGE Handbook of Qualitative Research (5 ed.). SAGE Publishing. S.341-358. 2017.

[48] Eriksson, P. & Koistinen, K. “Monenlainen tapaustutkimus.” [A case study of many kinds.] Kuluttajatutkimuskeskus. [Consumer Research Centre.] 2014. https://doi.org/10.13140/RG.2.1.3944.6489

[49] Varjas, K., Henrich, C. C., & Meyers, J. “Urban middle school students' perceptions of bullying, cyberbullying, and school safety.” *Journal of School Violence*, vol. 8, no. 2, pp. 159-176, 2009. https://doi.org/10.1080/15388220802074165

[50] Planty, M; Banks, D; Lindquist, C; Cartwright, J; & Witwer, A. “Tip Lines for School Safety: A National Portrait of Tip Line Use.” Research Triangle Park, NC: RTI International. 2020.http://hdl.handle.net/20.500.11990/1772