Requirements for emergency management training from a 'passion for failures' perspective

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ABSTRACT

Swedish municipalities are stimulated to conduct emergency management exercises in addition to developing crisis plans. These exercises tend to be grounded in an instrumental philosophy. There is too much focus on doing the exercise and too little attention for the implementation of lessons learned afterwards. A common experience is that the same 'mistakes' are discovered again and again in yearly exercises. Furthermore there is a paradoxical balance between empowering the organization in its learning process (positive feedback) and revealing the failures (negative feedback). In this paper we reflect on the learning process in a Swedish municipality in 2006 where two emergency management exercises were held and where a minor and a major crisis occurred during the year. We argue that the longitudinal learning process should be the focus in stead of ad hoc exercises. In addition we develop some requirements for emergency management training from a 'passion for failures' perspective.

Keywords

Training exercises, coaching, failures, organizational learning.

INTRODUCTION

Training and simulation is a 'hot' and important topic in emergency management. Its importance is illustrated by a quote from the general director of the Swedish Emergency Management Agency (SEMA):

> *In Sweden, we have too little actual practice of emergency management. We must practice much more on all levels of society. And we must practice together with each other, so that we can focus on coordination and communication. We are aware of the fact that this is probably the weakest link in the event of an emergency. (Eksborg, 2004)*

Her point is that a nice emergency management plan is not enough. People need to have experience of how to apply that emergency management plan and how to deal with unforeseen issues. Moreover, most crises involve multiple organizations that all have their emergency management plans which need to be applied in concert.

Our research started with the question: how should Swedish municipalities conduct emergency management exercises? During the research we widened our perspective to: how should Swedish municipalities train emergency management? Our observations in a single municipality shifted our focus from the single exercise to the larger, longitudinal learning process. Besides two planned exercises we analyzed how the municipality acted in two crisis situations in 2006. That gave us the opportunity to compare 'exercise behavior' with 'real behavior'. The interesting issue became whether the lessons learned in the exercises actually were adopted, rather than how lessons learned were generated in the exercises.

After introducing some background on the Swedish emergency management system, on exercises and on learning processes in organizations we discuss our research design and results. In the discussion we reflect on the importance of guiding the ongoing learning process rather than designing an ad hoc exercise. Moreover, we illustrate how a 'passion for failure' philosophy can be incorporated in this learning process.

THE EMERGENCY MANAGEMENT SYSTEM IN SWEDEN

In 2002 Sweden introduced a new structure for emergency preparedness. The major elements of the 2002 reform in Sweden were (Larsson, 2005): a more integrated management structure (to stimulate strong collaboration between the numerous specialized institutions that are involved in a crisis) and bottom up emergency preparedness (to be able to handle the crisis with parties close to its origination, who perform as much as possible their usual duties). The new emergency preparedness structure strongly rests on the idea that a crisis should be fought locally (principle of proximity), that each actor is responsible for the duties he or she performs in non-crisis situations (principle of responsibility) and that tasks and duties should be organized and located as in peacetime (principle of parity). Although many local authorities, like for instance rescue services, police, health care organizations, electricity companies et cetera will immediately act within their own responsibilities (sector responsibility) the local municipality will almost always be involved as a supporting base-pillar (Larsson, 2005, p. 36). The so called geographic area responsibility of local government does not overrule or take away the existing sector responsibilities of other authorities. It is aimed at supporting those authorities, stimulating collaboration between them and checking whether they are addressing all aspects of the crisis and not working at cross purposes.

Developing your role as a municipality in such a system may be quite complicated. It does not only concern making a good inventory of risks that could turn into crisis in your area. It also includes identifying effective coordinated actions of the crisis actors involved and defining all the communication needs with potential partners. To make it worse the partners needed may differ from crisis to crisis.

EMERGENCY MANAGEMENT EXERCISES

As such issues cannot only be captured in plans, expert institutions like SEMA stimulate actors to organize and conduct regular exercises. SEMA (2006) lists three types of exercises, namely: start-up exercises (focusing on alarming), exercises in discussion mode (where a scenario and each actor's response action are collaboratively discussed) and exercises in play mode. The latter are so called tabletop role-playing exercises or simulation-games (Hendela et al., 2006; Smits and Van de Walle, 2006). The organizational employees to be trained receive a scenario on paper or via phone calls and interact with a facilitator panel and each other to simulate their coordinated actions. Although such playing experiences generate a lot more learning points than usual discussions, the following possible drawbacks of role-playing exercises are identified in literature:

1. Crisis management training exercises tend to focus information handling and decision making in scenarios where a major crisis is going on, while the most difficult and critical moment seems to be to discern between a irrelevant/harmless incident and a major crisis when the first signals arrive (Boin and Lagadec, 2000; Robert and Lajhta, 2002);
2. Exercises for emergency management often aim at central management and the central information department, however in most crisis both the early signals as well as the expertise to identify an effective cure strategy are available at lower levels in the organizations involved (Weick and Suttcliffe, 2001);
3. It is very important that all relevant actors are present in the exercise, missing parties strongly affects the realism of the exercise. In case the participants in the exercise identify a need to contact an actor that is not represented the exercise facilitators need to be that well-informed and experienced that they can instantly simulate a realistic response. A common experience is that it is difficult to simulate the role of the public and media and really create pressure (Ericson and Larsson, 2005);
4. Players in tabletop exercises usually contribute to the narrative of events themselves. In that process they often tend to minimize problems and maximize the effects of their actions. Players often commit more resources than they actually have available and estimate unrealistic timelines for the deployment of these resources (McGrath et al., 2005).
5. Due to counter-productive educational methods, lack of clarity about the importance of exercising crisis management, limited resources for exercise analysis and redesign/improvement there is little chance that the impressive list of improvements is being acted upon. Participants may be traumatized and tired and may want to return to their usual jobs as soon as possible (Robert and Lajhta, 2002).

To prevent such problems it is important to follow a design approach when developing training exercises. Sol (1990) describes an analytical framework that enables to characterize design methodologies by their mode of thought (Weltanschauung), their modeling constructs, their working method and their management approach. He refers to

these characteristics as the way of thinking, the way of modeling, the way of working and the way of controlling. Often the discussion on design of training exercises is limited to the way modeling (discussion mode or role play) or the way of working (what activities to conduct when designing an exercise). These issues relate to types of problems like the third or fourth in the list of examples above that deal with realism in the way of modelling. In contrast, the first and second problem in that list relate to the way of thinking. The parts of the organization and types of behaviour we want to train depend on how we conceptualize crisis management. The last problem example in the list above relates to the way of controlling: how to embed the exercise in an organizational learning and change process. We elaborate on the perspectives way of thinking and way of controlling in this paper.

HIGH RELIABILITY ORGANIZATIONS, LEARNING ORGANIZATIONS AND 'PASSION FOR FAILURES'

What do we want to accomplish when we train a municipality in crisis management? Our observations indicate that current methods (or their appliance) are in contrast with recent insights in emergency management literature. For example, current mainstream exercise methods promote ad hoc, centralized control of a limited number of risks by a limited number of people. Instead, several major authors in the field argue for ongoing, decentralized, attention and capability to act, towards any possible crisis that may occur at any time (Boin and Lagadec, 2000; Robert and Lajtha, 2002; Weick and Suttcliffe, 2001). We argue that a large amount of current research and practice on risk and emergency management is lacking this perspective. Risk analysis methods emphasize ultimate anticipation (to prevent risks to become a crisis) and emergency preparedness plans and exercises emphasize resilience (to cure major crisis). What is missing is a method that stimulates balancing anticipation and resilience in less extreme forms. Weick and Suttcliffe (2001, p. 42) have in their study of high reliability organizations identified a concept they call mindfulness:

> "*By mindfulness we mean the combination of ongoing scrutiny of existing expectations, continuous refinement and differentiation of expectations based on newer experiences, willingness and capability to invent new expectations that make sense of unprecedented events, a more nuanced appreciation of context and ways to deal with it, and identification of new dimensions of context that improve foresight and current functioning*".

We refer to Turoff, Chumer and Hiltz (2006) for a more elaborate discussion of high reliability organizations and an accompanying summary list of 50 (!!) characteristics of mindful organizations on the individual, group, organization and system level.

A lot of the characteristics and underlying thoughts of high reliability organizations mirror the thoughts and practices described in theories on learning organizations (Argyris, 2004). In both high reliability organizations and learning organizations there is a strong interest for overcoming personal and organizational barriers for openly discussing and reflecting on failures. Weick and Suttcliffe (2001) emphasize that employees simultaneously need to value routines to enable fast, predictable and coordinated response and need to value improvisation to choose another course of action when underlying beliefs are inappropriate for current situations. Argyris (2004) points at the need to surface the gap between people's espoused theory (what they say they do) and their theory in use (what they actually do). Both Weick and Argyris point at the challenge of making explicit what the underlying beliefs are that govern our emergency responses. Change is needed on the individual level, where employees need to learn skills to reflect mindfully on theories in use and theories espoused. Change is also needed at the organizational level, where current cultural beliefs can limit creative emergency responses.

In conclusion, the aim of emergency management training should not be to train for a routine response. The aim should be to develop individual skills and a supporting organizational culture that enable continuous critical reflection on current behaviour, on resulting decisions and on their consequences for the future.

RESEARCH DESIGN

Under 2006 we have conducted an action research study at a Swedish municipality. We have closely followed as well as actively participated in the design, execution and analysis of a training intervention of a consultant. That means that we have constantly shared our reflections with the consultant and the members of the municipality involved in the training, and thereby consciously influenced the intervention we studied.

EMERGENCY MANAGEMENT AT THE MUNICIPALITY OF TRAINTOWN IN 2006

Traintown (a pseudonym) is a municipality in Sweden with 50.000 inhabitants spread over one major city and some small villages on the countryside. The municipality is organized in 10 different departments like school, technical services, social services and so on. The managers for these departments are governed by committees of politicians who operate separately. The earlier mentioned particular law enables that in crisis situations a so called crisis committee of politicians can be formed that rules the municipality only during this crisis period. This political committee can only decide in issues related to the crisis and has to report to the usual political committees afterwards. Because of the law change and the accompanying new responsibilities Traintown municipality turns to a consultant to help them to adapt their crisis management plans and to train their politicians, top management and a central information group. It is important to note that the new law leaves quite some room for interpretation. A major question is how certain procedures and routines should look like in Traintown. The consultant develops a five step approach which is interrupted by a minor and a major crisis (see Table 1).

January 2006	1) Interviews and group discussions with politicians, department managers, information group
January	Crisis A: minor incident, accident with a buss from Traintown
March	2) Exercise 1: Scenario snow chaos, theme Starting-up, pre-announced exercise in calm pace
May	3) Exercise 2: Scenario water pollutions, theme Catch the future, pre-announced exercise
August – October	Crisis B: A pyromaniac sets fire to 6 day nursery schools
October	*4) (Exercise 3: unannounced exercise, cancelled because of crisis B)*
December	5) New crisis management plans approved by the municipal council

Table 1. Interventions and events in Traintown in late 2005 and 2006

During the initial discussion with key persons and key groups it turns out that crisis plans are not 'living' documents and that the central information group is not well prepared for their role in crisis situations. They are spread over several departments, are not used to work as a group under normal circumstances and lack therefore clear and uniform information procedures and routines. In a discussion of a snowstorm scenario where managers need to raise their hand when they want to take initial measures, the school chef is the first to alarm (2 days before the storm arrives).

The buss accident that occurs 200 kilometers from Traintown turns out not to be a municipality crisis in the end, but in the beginning there is much insecurity. The internet site of a national tabloid states that the buss is coming from Traintown and that there are some fatalities. A small crisis group initiates and handles the crisis from the room of the municipality director. Some hours later it becomes clear that the buss is owned by a company in Traintown, but has few passengers from the municipality. Reflections on this accident are that it would have been much worse in case of a school buss with 50 children from Traintown. Despite the fact that they managed this minor crisis well, the lack of routines and procedures is evident. Collaboration and task assignments for individuals have been created on an ad-hoc basis which is experienced as chaotic and time consuming by some involved employees.

Both 2-day training exercises are conducted in a positive atmosphere where the 50 people that are trained participate as if it really is crisis and put much energy in reflecting on what they have learned. This results in an (unplanned) extra full day workshop with the information group between the two exercises. In the first exercise there is much pausing to enable reflection and to coach individuals and groups. The second exercise is more realistic in its continuity with a major reflection moment at the end of day 1 and at the end of day 2. In the first exercise the first day is fully dedicated to the information group. The consultant determines that it is crucial that they develop their role before the others join in. Conclusions of the first snowstorm exercise are that the politicians are too much involved in details and many major and minor issues about the crisis rooms and support equipment that do not function as expected. Furthermore there is much insecurity about the roles of the municipality director, the information group and the connection between information group and management group. For example, the

municipality director is not the superior of the other department chefs under normal circumstances (each report to their own political committee). This leads to a passive leadership style from the municipality director. The consultant discusses this matter after the first exercise with the municipality director privately and with the management team, which results in a more pronounced role of the director in the second exercise. However, they still encounter problems with the communication routines between management and information group. In the second exercise it takes much time for the information group to start up and deliver their first situation picture. Therefore there is a tendency for the management group to act on their understanding of the situation without using the input from the information group. The other way around info feels that it takes a long time before the management group reaches a decision that can be shared with the public. The insecurity about aligning the management and information process leads to a conflict at the beginning of day 2 where info enforces that the message to cook the (probably) polluted water is changed in not using it for food preparation and drinking at all, without an actual approval of the management group. The management group fulfills the theme of the second exercise to capture future issues in good time, but needs to be reminded several times during the exercise by the consultant. A remarkable observation is also that the municipality is alarmed to the highest level after only two hours playing (real-time), unless the fact that the situational picture at that moment is very indistinct: there are a lot of people ill, but the plausible source (water pollution) is only discovered after 6 hours playing.

Three months after the second exercise Traintown municipality experiences a real major crisis. Nursery schools (wooden houses) are set to fire under nighttime following the pattern (see Table 2):

Day 1, early morning	One school completely destroyed
Day 14, early morning	Second school completely destroyed
Day 15, late evening	Two attempts, no major damage
Day 17, early morning	Third school completely destroyed
Day 45, early morning	One attempt, no major damage

Table 2. Time between fires

In reflection on this crisis it is concluded that the most heavily involved departments, the school department and the technical services department (the latter is responsible for buildings and security), have performed very well. They area ahead of the crisis the whole time and do actually plan for the next fire to occur with regard to for example alternative day-care for the children. The central organization has some individuals involved on day 1, 2, 14, 15 and 16 but does not fully alarm before day 17, so after the third fire. That implies that the central information group has no chance to serve the management adequately with a situation report, as they have to make up for their late start. Because of the limited upstart of the central crisis management organization, the municipality director is heavily involved in operational issues and has it difficult to prioritize analysis of potential escalations and future scenarios.

In the aftermath of this crisis the third planned exercise is cancelled. Reflection on the nursery school fire crisis is prioritized and a lot of work is invested in updating the crisis plans. Lessons learned are translated into practical checklists and graphical pictures of how to collaborate. There is however more focus on finishing the plans than on taking time for group discussions about the lessons learned in the fire crisis.

DISCUSSION

Some of the many interesting issues that can be learned from this case are presented here. We have prioritized those who relate to the theme of the paper, the connection between a training exercise and organizational learning.

Failures in the crisis management organization point at failures in the everyday organization

SEMA's principle of responsibility, that in crisis situations each actor should be responsible for the duties he or she performs in non-crisis situations, implies much more than one maybe realises. To guarantee a smooth functioning of the crisis management organization it should look like everyday organization. So that people automatically know what their responsibility is, how their work relates to that of others, and what information is relevant to share with whom. In theory, the crisis organization is just a very fast and mindful operating everyday organization. Our case shows that there where the differences between everyday organization and crisis organization are largest

(municipality director, information group), problems arise. The consultant therefore proposed that the information group should work more as a central group in everyday life (as in the crisis organization). From that perspective a crisis management training exercise becomes more than a preparation for a potential future event. It becomes a tool to improve everyday life organization. Who does not want to be part of a fast and focused but mindful operating learning organization? This is however not the way how emergency management training exercises are presented nowadays. We argue for a more explicit coupling between crisis management training and everyday organizational improvement. That can however be threatening for organizational members who have an interest in keeping the present (less effective) organizational routines. There is a huge difference between discussing the contents of a crisis plan and discussing your everyday functioning.

Balancing positive and negative feedback

Although we strongly advocate a mindful organization that stimulates open discussion about failures and vulnerabilities, there is another side of the medal. We have had several discussions with the consultant why not more forcefully pointing at the obvious shortcomings that appeared during the several interventions and events. He strongly opposed and argued for a balance. There is no 'one recipe for all' as one may interpret from the 'three easy ways to exercise' that SEMA recommends (SEMA, 2006). An exercise needs to be dedicated to how long a municipality has come in its learning process. Therefore we had a calm first exercise and a little bit more complex second exercise. This strengthens the literature recommendations that training interventions should be anchored in a deep understanding of the organization's inner workings and should be introduced progressively over time, gradually and incessantly, with effective methodological support (Boin and Lagadec, 2000). It also confirms that too much focus on failures in the reflection of exercises can be counterproductive and that it should be balanced with positive reinforcement (Robert and Lajtha, 2002).

Persons matter

The assignment of the consultant was to oversee and revise the crisis management plans and to train the crisis management organization in applying them. That formulation strongly focuses on the revised crisis plan as result. However, the consultant reinterpreted this assignment by constantly highlighting the need for a 'common memory'. He wanted to stress that in the next crisis situation people might more relate to memories of fruitful collaboration experienced in the exercise than to a plan on paper. There is however another dimension which has been applied more unconsciously. Besides crisis plans and trained routines stored in common memories key persons have a very crucial role in the crisis organization. People like the municipality director and the information chef have linking pin functions which give them the power to 'make or break' trained routines. The consultant has on several occasions had personal discussions with them to initiate personal change in their attitude and behaviour. Maybe uneasy discussion topics like 'who am I in a crisis situation?' and 'am I suited to do this job' are needed. We see such interventions aimed at changing individual attitudes and organizational culture as an equally important contribution as the revision of the crisis plans and organizational routines.

Beyond exercises: evaluating critical incidents, coaching of key persons

The importance of follow-up activities after an exercise has been stressed by several authors (Boin and Lagadec, 2000, Robert and Lajhta, 2002). People, strongly motivated or not, will experience personal and organizational barriers to implement the lessons learned. The previously mentioned personal coaching discussions can be used to guide and support people. One does not necessarily need a consultant for this, people in similar functions in different organizations could also coach one and another. In addition to personal coaching it can be very valuable to compare training exercise performance and lessons learned there with performance in a real life incident like the nursery school fires in Traintown. In this case a major discussion point has been why they alarmed so quickly in the water pollution exercise and why it took so long in the fire crisis. This has resulted in a more clear definition of slowly increasing alarm phases, instead of the earlier existing everything or nothing paradigm.

Drawing on our first discussion point that the crisis organization resembles the everyday organization one does not have to wait for a major crisis or a yearly exercise. Equally relevant would be to analyze the functioning of the everyday organization under a period of pressure or stress (like an important deadline). We argue that the form of the learning intervention is less important than the philosophy behind it. So an in depth scenario discussion, a role playing exercise, a real crisis, an important daily activity can all equally well serve as inputs for a moment of critical reflection. Crucial is what questions are taken up in that reflection and that the learning process is continuous and consistent. It still requires more learning moments in Traintown to embed the alarming procedure.

CONCLUSION

Throughout this paper we have argued that there is too much focus in the way of working (what activities to conduct) and the way of modeling (how should the game or scenario look like) in designing exercises for emergency management. Both researchers and practitioners need to address more time and effort in the way of thinking and the way of controlling. Questions related to the way of thinking are for example: What is our conception of risks, crises and crisis management? What kind of emergency response organization do we aim at, what capabilities need to be learned? Questions related to the way of controlling are: How do we measure what lessons are learned by whom? How do we expect to embed the lessons learned in an organizational change process?

In elaborating on these questions from a 'passion of failure' perspective that is advocated by those who aim at developing high reliability organizations we propose the following requirements for emergency management training. First we argue for more attention for personal development of key employees and related issues like attitudes, atmosphere and culture, besides usual issues like crisis plans and collaboration routines. Secondly, we suggest that positive and negative feedback needs to be balanced to motivate people to commit to the learning process as well as to urge them to critically address their failures and weaknesses. Finally we conclude that this implies that other kind of training interventions are needed besides a yearly training exercise. By backing up the outcomes of the exercises with thorough follow-up activities in personal coaching and consequent evaluation of minor incidents one can control whether the lessons learned are actually adopted or not.

We hope that these ideas will inspire others. Traintown municipality has committed to at least another year of training and research in which we will try to implement these ideas together with them.

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