

# Didactics and Innovation in Collaboration for the Unforeseen in Training Practice Preparation

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**Abstract:** The objective of this chapter is to improve collaborative practices and exercises, taking the unforeseen into account. The major focus is on the process of making collaboration exercises and the planning phase of these potential learning situations. Two educational perspectives will be explored in order to improve the planning work itself and, possibly, also training for the unforeseen. The use of social technology, together with didactic thinking, may enhance the extent and quality of collaboration training. Planners also need to deliberate upon the importance of “standard” or traditional exercises in combination with collaboration, seeing the whole picture and the exercise as a program. On the other hand, it is of vital importance to train in the realms of the unforeseen, entering the uncharted waters of learning outside known territory.

**Keywords:** *Samhandling*, interaction, collaboration exercises, didactic, planning phase, unforeseen.

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## Introduction

The fear of being “the fool”, or showing that you do not know something, shuts down investigative, exploratory practices. This is not ideal but it is highly understandable. The thinking in this chapter needs to be tested empirically, measuring it on the premises of increased collaboration and the perceived degrees of the unforeseen in exercises. Innovative collaboration training is not carried out, probably because the people involved do not have time to do it. The objective of this chapter is to improve collaborative practices and exercises, taking the unforeseen into account. Collaborative practices in this text are referred to using the Norwegian term *samvirke*, which I perceive as leaning slightly closer to inter-organizational interaction than either of the Norwegian words *samhandling* or *samarbeid*. Chapter 1 (Torgersen, 2018) in this book provides a thorough discussion of these nuances.

This chapter reflects on the process of making collaboration exercises and the planning phase of these potential learning situations. The chapter dwells not on the exercise itself, but on the planning and preparatory phases of such tasks. Two pedagogical or didactic<sup>1</sup> perspectives will be explored in order to improve planning work itself and possibly training for the unforeseen. In this work, I argue that the use of social technology together with didactic thinking, may enhance the extent and quality of collaboration training. This chapter reflects a semantic theoretical construction (Kvernbekk, 2002), merging two practical and theoretical perspectives: Innovation pedagogy (Darsø, 2011) and the didactic planning tool or diamond (Bjørndal & Lieberg, 1978). These theories are not merely used to describe practices (Kvernbekk, 2005) but also to create new and different, innovative emergency-planning practices.

Exercises are related to the “unforeseen” and the Bow-tie Model (see Chapter 1) in two ways. Firstly, they relate to the third phase – stabilization. The topics practiced in exercises will often relate to the practices following the handling of something unforeseen. Secondly, this text explains how exercise planners can train themselves, addressing new training topics which relate to risks we do not know. It is about systematic,

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<sup>1</sup> E.g. Theories of learning and teaching practice(-s), or in an anglo-saxon tradition; education or curriculum studies.

experience-based probing into the unforeseen in training planning. I will point to procedures and roles that can enrich planning processes to create ideas for practicing the unforeseen.

The educational concept of the unforeseen in a didactic framework can influence the choice of content, methods and evaluation. Furthermore, it is related to phenomena such as knowledge, learning, outcomes, judgement, and collaboration (Torgersen & Saeverot, 2015:20). The unforeseen can be contrasted with the predictable or the foreseen. The epistemological source of the unforeseen lies in the realms of our incompleteness of thinking (human error) and in the ontology of an unpredictable world in which we feel we have no control (Kvernbekk, Torgersen, & Moe, 2015). From this viewpoint, the need to address the unknown in educational practices within the field of emergency preparedness is urgent. If the unforeseen is rarely addressed in training/learning situations, the exercise can become ritualized and follow predetermined scripts, known to all and an objective in itself.

During fieldwork on naval exercises (Kristiansen, Löve-Sörensen, Carlström & Magnussen, 2017), I have noticed that what is going to happen and the topic are decided first. People jump to conclusions about exercise goals and content. This represents a possible early closure of the possible topics trained. From that point onwards, planning is reduced to task distribution, and basic project management for producing tasks and Gantt diagrams. This is also important, but may cause one to lock-on-target too early, reducing the possibility to prepare for the unforeseen. Depending on the scale of the exercise, the planning partners may develop their own training objectives to ensure learning in their home organization. Another point is that while the objectives may be loosely linked to the exercise, the training “lives a life of its own”, and the evaluation ends up as something different. Overall, I analyze these challenges from an organizational didactic perspective. Organizational didactics are defined as “... a discipline focusing on the interaction between training and organizational structure, business and management/leadership.” (Torgersen & Steiro, 2009:65) Didactic tools offer planners (teachers) help in their reflective thinking on different aspects of organized learning activities. They highlight the interconnect-edness between different educational or planning variables.

## Personalities and collaboration theory

Personality tests such as Myers and Briggs type indicator (MBTI) (Myers, 1998) or the Jungian Type index (Ringstad & Ødegård, 2012) refer to judging personality types according to one of four dimensions. People possessing traits such as “J” (Judging types) can become stressed by too much flexibility, emphasis on re-evaluating tasks, and dealing with surprises. They prefer order and structure, producing significantly fewer possibilities in creative tasks. These personality types can often be found in the environment of emergency preparedness and in planning groups, and among managers in general. Thinking and judging (TJ) are typical traits found within groups of military and police leaders (Storr, 2009:174), where organizations are hierarchical, predictable and structured.

Collaboration (*samvirke*) within and between different public bodies developed as a popular work methodology among different public entities in the late 1980s, as a counterweight to an era with a competitive climate. Recent research underlines that collaboration is both more useful and effective than individual initiatives (Berlin & Carlström, 2013; Jamal & Getz, 1995). The concept of collaboration in organizational thinking is often related to improvement and integration.

However, even if collaboration is perceived as useful, it needs to be stressed that from an emergency-management perspective, most incidents are solved within the boundaries of “blue light” organizations. This is the way it should be. It is in situations where the mission is not solved by one participant alone, or where resources of time and personnel are sparse and limited, that the need for collaboration emerges at both a ground and strategic level (Andersson, Carlstrom, Ahgren, & Berlin, 2014). Hurricane “Dagmar” is a relevant example.

Theoretically, a horizontal collaboration is a process in which different participants work together, devoid of all pretense, to solve a common problem (Berlin & Carlström, 2008; Jamal & Getz, 1995; Martin, Nolte, & Vitolo, 2016). Collaboration is divided into four subdivisions: vertical, horizontal, formal and informal (Berlin & Carlström, 2009).

A *vertical perspective* addresses different relationships in a top-down or bottom-up perspective. In short, it is about various hierarchical levels and the collaboration between superiors and subordinates. Such levels

differ in extent and numbers. Long, vertical command chains can be a challenge in emergencies that demand clear and rapid decisions.

*Horizontal collaboration* describes an idealistic relationship between equal partners. To become equal, the collaborating partners must agree upon a joint, equal sharing of responsibilities and resources. A horizontal collaboration model is unlikely to be affected by the need for speed and certain decisions in an emergency.

*Formal collaboration* refers to rules, legislation, treaties and agreements that divide tasks between the participating parties. Such rules or guidelines frame individual tasks and responsibilities. Leaders or government authorities often develop such guidelines. On the one hand, such guidelines contribute to clarity and predictability. On the other hand, too many details in such guidelines can create organizational barriers in emergencies. Problems emerge when situations follow new pathways or develop in terms of urgency and complexity. Something outside of the well-known routines is needed from both organizations and leaders. These situations demand experience and “gut feelings” (Kahneman & Klein 2010), enabling those involved to rise to the manifest challenge. This represents a shift in command and control thinking, from *befehlstaktik* towards *auftragstaktik* (Stewart, 2009)<sup>2</sup>.

*Informal collaboration* can be found in written and unwritten routines and agreements. In emergencies, some groups collaborate with more ease, due to mutual situational awareness, trust, or a common background.

Collaboration does not occur because of the event per se. Collaboration demands voluntarism. The participant needs to see the usefulness of collaboration and be willing to work across organizational and professional boundaries to achieve a common objective (Andersson et al., 2014). Even though there is a contemporary emphasis on emergency training and exercises, research has found that collaboration is more than a rhetorical expression. It is something of practical value in relation to managerial challenges, asymmetry, uncertainty, and lack of trust (Berlin & Carlström, 2011). To achieve a higher degree of collaboration in actual

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2 This relates to whether military orders should be performed blindly, or adapted to the situations, encouraging the soldiers to be flexible when they are solving their orders.

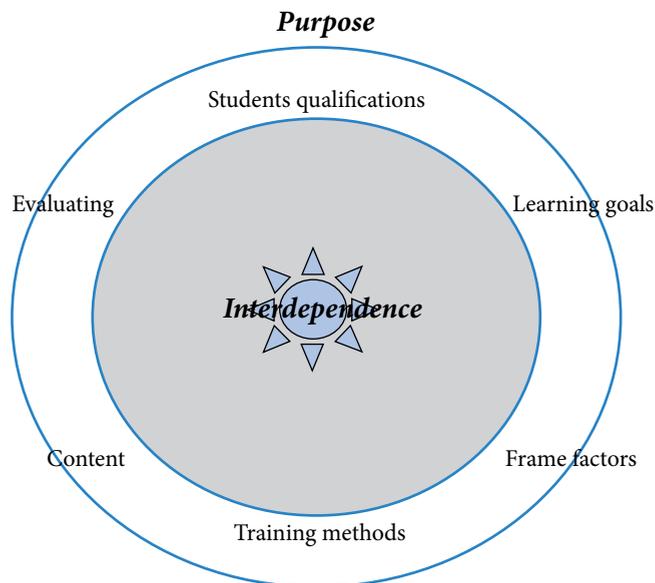
emergencies, exercises need to have an increased focus on learning and evaluation.

Training for the unforeseen places creativity and new practices up front in training priorities. Common ground needs to be established, where different organizations and practitioners can meet to learn from and alongside each other. Better relations, communications and the ability to collaborate can be developed through getting to know each other's organizations, strengths and challenges (Gnyawali & Madhavan, 2001). Furthermore, if the unforeseen is taken into consideration, collaboration practices will be challenged by bridging the gap.

## Tools for didactic planning

### The Diamond Model

Bjørndal and Lieberg (1978) present a model or didactic tool to help teachers improve their planning processes. The model (Fig. 18.1) accentuates the relationships between the purpose of training (education), objectives, learning prerequisites, framework conditions, content, methods and evaluation.



**Figure 18.1** The Didactic Diamond Model.

If training for the unforeseen is the purpose, then this affects the didactic model by reducing the emphasis on goals or objectives. This line of thinking also has an effect on evaluation, challenging the ways of doing things and changing what is both appreciated and valued. If synchronous collaboration training represents an overriding exercise objective, planners need to reflect on the circumstances under which this will occur, and then plan taking into account the interconnectedness of didactic factors, i.e. content, methods, framework conditions, evaluation and learning prerequisites. If the case or scenario is too quickly decided upon when creating emergency exercises, it reduces the likelihood of investigating other possibilities and new ways to do collaboration training, with something new or even unforeseen as a factor. To develop this, I will turn to innovative pedagogical practices.

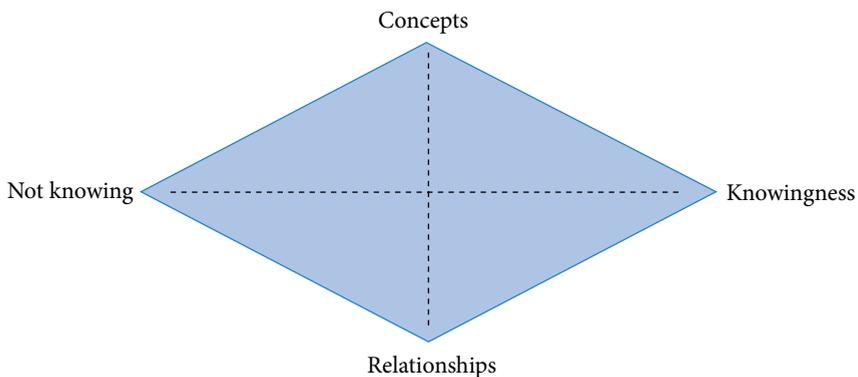
## Innovation pedagogy

Innovative competence is one of the future core competencies (Darsø, 2011:10–11), and innovation pedagogy is about creating social and educational frameworks and structures that enhance innovative collaboration. Innovation competence is about the ability to create innovation by navigating effectively in collaboration with others in complex environments.

According to Darsø (2011:62), a creative innovation process contains five steps. The first step is (i) wondering about something – a phenomenon, problem, or disturbance. This triggers (ii) information seeking and gathering. Something that has gone unnoticed suddenly becomes intriguing and interesting. This is tiring and is followed by a (iii) mental incubation period, in which ideas and thoughts can hibernate and develop. The next phase contains (iv) illumination and *eureka* experiences, when the problem suddenly finds its solution. The last phase is about (v) verification of ideas and testing of solutions, with consideration to what started the project in the first place. “Prejects”, in which multiple possibilities are investigated before a project is planned, are rare and seldom realized.

## “Prejects”

“Prejects” involve human influences on the innovation processes. Human interaction is a decisive element with regard to a project’s success or failure. The Innovation Diamond model (Figure 18.2) is a conceptual framework for the perception and articulation of barriers to, and opportunities for, innovations. The Diamond consists of four parameters that give direction to the mind and show how to facilitate innovation. The Diamond model highlights two dynamic fields of innovation: knowledge and communication.



**Figure 18.2** The Innovation Diamond.

The *knowledge* that is necessary to create innovation is complex and contains sources needed to develop ideas. Such knowledge is interlinked with what is known and what is unknown. Knowledge in innovation is a mix of evidence-based research, hearsay, intuition, traditions and personal convictions. *Non-knowledge* represents the opposite parameter of knowledge. In an innovation “preject”, we need to explore what we know and somehow transform it into new practices with added value. Such processes make us touch upon what we do not know, or what we do not know that we do not know. People can avoid the field of not-knowing and seek a safe haven in old knowledge and wisdom. “Not-knowing” is a social role related to the fool, the clown, and the child, asking fundamental questions and doubting causality. In emergency preparation, this relates to the unforeseen. A “preject” needs to accentuate both what the group knows and what it does not know.

*Communication* in innovation pedagogy is about relations and concepts. Relations, according to Ritchie (Darsø, 2011:70), concern the interaction between us and how we relate to each other. We can be open or closed, and we can have either short or long-term relationships. Concepts can be described as models of guidelines or regulations. They can also be fully formed ideas. Communication is of vital importance to keep the flow of what the group knows and does not know moving towards the development of concepts. A challenge is the “muddling in the middle”; a group meets and dwells upon a problem for hours at a time, without clarity, concepts, or decisions. A creative process drifts around and in between knowing and not-knowing, between concepts and relations. This framework demands four different leadership roles, according to Darsø (2011:72).

## Leadership in innovative didactics

The four leader or team roles are the Science Detective (knowing), the Gardener (relationships), the Clown (not-knowing) and the Concept Developer (concept). The didactic framework of Bjørndal and Lieberg (1978), without objectives, which in emergency training planning are unknown, provides the five focal points to the “preject”. These are: content, methods, framework conditions, student learning prerequisites and evaluation. These represent five tasks which the innovative pedagogue needs to explore, finally choosing a path of action in the form of a project that aims to train for meeting the unforeseen. The leader roles proposed by Darsø (2011), (i.e. Science Detective, Clown, Gardener and Concept Developer), are not equivalent to situational leadership, where the role shifts within the individual leader, providing shifting impressions. It is the task of the innovative team not to jump to conclusions but to stay in the open “landscape” and the “preject” phase.

Team leadership designated by the process owners will, in this case, stall decisions and provide the planning team members with different leadership tasks. The “preject” needs to address possible practice topics, such as analogue, parallel, and synchronous collaboration. Exploration of what they know or do not know regarding these topics relates to learning prerequisites, evaluation, methods and content. It is even

more important to discuss the interrelationship between these concepts. According to Lave (1991), learning in practice can be seen as a trajectory and she advocates the idea that practical learning provides an in-built progression. Applied to the field of emergency, people have trained and learned in structures formed by work practices and economic logic. This highlights the importance of taking learning prerequisites into the planning of what to train. The innovative planning team needs to ask themselves, “At what level of expertise do the individuals and the organization need to be trained?”

The Gardener provides the group with ice-breakers, nurturing and caring for the group’s well-being during the process. The Gardener needs to ensure that everyone is heard and signifies that everyone’s contribution is important. This may include providing a structure of opening and closing meetings, where all participants single out three points related to the task at hand and say something about their expectations for this work. This phase can open up the topic of concepts, what the expectations are, and what knowledge exists within the planning group. The role of the Gardener is particularly important for ensuring that everyone has his or her say.

What do we know? This is the question the Science Detective needs to ask, followed by the Clowns, who highlight what do we not know. The Concept Developer can harvest ideas, from the topic selection of the Didactic Diamond of Bjørndal and Lieberg (1978). To schedule a second meeting in the “preject” period can be beneficial in providing a cognitive incubation period, furthering ideas and alternating team leadership roles.

## The sixth task of innovation didactics – making wise decisions

The “preject” is a process where the actions taken are about unlocking project scripts and creating more learning opportunities. In the transition from a pedagogical “preject” phase to the project phase, some deliberations need to be taken into account. Synthesising is about incorporating all the leads and variations from the “preject” into project work. In a transition from “prejects” to projects, Posner and Kouzes (1988:485),

give five points of advice to leaders who wish to accomplish extraordinary projects. The first two points were covered in the “preject” phase:

- 1) Challenging the Process
  - a. Search for opportunities
  - b. Experiment and take risks
- 2) Inspiring a Shared Vision
  - a. Envision the future
  - b. Enlist the support of others
- 3) Enabling Others to Act
  - a. Foster collaboration
  - b. Strengthen others
- 4) Modeling the Way
  - a. Set the example
  - b. Plan small wins
- 5) Encouraging the Heart
  - a. Recognize contributions
  - b. Celebrate accomplishments

Keeping the advice of Posner and Kouzes (1988) in mind, listening to different forms of dialogue is important. Scharmer (2009:296) sketches out a U model, where the presencing stage represents the change of will by a “collective presence” at spiritual level; this happens occasionally if the group follows “the rules of dialogue”. This deep-phase of the U theory is under debate (Zidulka, 2015) and has been left out of the proposed practice. “Prejects” are not necessarily about this deep change of will but are about the opening of the mind and the rules of dialogue. The theory proposes four depths and four ways to interact: listening, debate, dialogue, and presence. Dialogue about inquiry and thinking together is best suited to level 3, and is of relevance to the innovative emergency planning team.

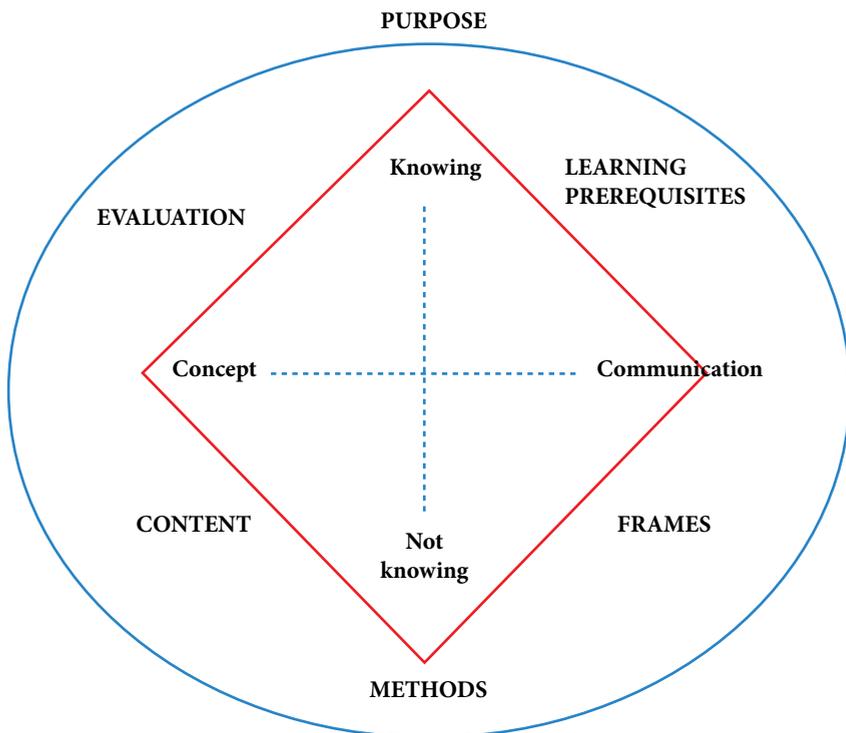
## Closure of “preject” and the reopening of project

You are now in a position to create more-informed training for the unforeseen, using this didactic model for the unforeseen, which can help you to choose the factors that can enhance pedagogical deliberations

and provide more innovation. Keeping it open and without objectives, considered to be a pitfall of project planning and strategic competence management, “prejects” can resolve some problems by offering social tools stemming from innovation pedagogy. Patience is a key virtue in didactics for the unforeseen.

## Conclusion - a new model

I have used theories to illustrate the content of this chapter, not as a description of practice per se (Kvernbekk, 2005), but to promote a different, new and innovative practice. The problems of early closure of topics and goal-driven project models are addressed by introducing a “preject” phase in didactic thinking, i.e. merging two didactic models. The Didactics for the Unforeseen Model (Figure 18.3) combines the two Diamonds in Figure 18.1 and Figure 18.2.



**Figure 18.3** The Unforeseen Didactic Model, integrating didactic planning tools with innovation pedagogy.

The purpose of implementing a “preject” phase into planning is to address fundamental questions of “what, how and why” when holding collaboration exercises. Participants take into account that they are training for the unforeseen and they are not framed by learning goals. The purpose is to train for unforeseen events (see Chapter 1). If committed to innovative didactic thinking, the group needs to distribute the roles of the Concept Developer, Gardener, Clown and Science Detective. This distribution will ensure that the group has a thorough discussion on how the learning prerequisites, content, methods, framework conditions and evaluation are connected and interdependent. By manipulating the “what, how and why”, the group can plan and construct exercises along the continuums of the unforeseen.

The model consists of a blurred surrounding field, where training for the unforeseen represents purpose and the “unknown”. Through the “preject” phase, where the roles of the innovation diamond are put into play, different leadership roles emerge: The Clown, the Science Detective, the Concept Developer, and the Gardener. The team will then analogously, in parallel, or synchronously discuss the different elements of didactic thinking (without goals). To provide a cognitive-incubation period, this “preject” phase is held twice (I propose a one week interval between the two). Using this method, new thinking about emergency collaboration training can emerge, developing better practices. After the second meeting, planners can execute what they have figured out, using ordinary project planning tools and exercise training habits. However, taking the unforeseen into account, the exercise will not play out as it was planned or scripted. This is also learning from the unforeseen.

As mentioned earlier, the limitation of this research is the lack of empirical data, so that it merely ends as a set of suggestions for busy exercise planners, who are impatient and have demanding workloads. Planners also need to deliberate upon the importance of “standard” or traditional exercises in combination with collaboration, seeing the whole picture and the exercise as a program. On the other hand, it is of vital importance to train in the realms of the unforeseen, entering the uncharted learning landscapes outside of known territory.

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