

Key Success factors of Professional Moderation in Creative Problem solving – With A Focus on Process Control

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Key Success factors of Professional Moderation in Creative Problem solving – With A Focus on Process Control

Motto: Ignite and tame the creative dragon or tiger in you and others to breakthrough to bold new solutions!

Abstract

What is this article about?

This paper is about important success factors in the moderation of creative problem-solving processes in complex problem settings.

Complex problems refer to topics in dynamic environments such as the exploration, development and selection of new technological possibilities, product developments and applications as well as their organizational implementation through interdisciplinary project work and demand-oriented reorganization.

Which conception of a process support is assumed?

Basically, the concept presented is about elements of a professional process consulting, support and implementation concept for complex creative issues.

Conceptual differences between the role concepts of moderator, facilitator and mediator are not discussed in favor of the moderator concept, since the context-related success factors presented here would be essential in all role concepts (IAF-world.org 2022, BMWA-Germany.de 2022).

For whom is this behavioral concept suitable?

The moderator concept is suitable for managers, external and internal consultants as well as for employees who want to fill the process role professionally. However, each main role requires a social adaptation to the requirements of the moderation and the acceptance of the participants must be checked when using it (Schlicksupp 1993).

Which companies use this concept?

The concept has been empirically proven by successful applications and trainings in large German companies such as BASF, Robert Bosch, BMW and Infineon and SMEs such as Biotype, Qualitytype, Rotop and Nanogate. Public trainings have been offered for more than 20 years at ZFU - Zentrum für Unternehmensführung in Zurich, Switzerland.

What is the scientific classification of the approach?

From a psychological perspective, the approach is an open systemic approach to creative problem solving as "moderated social interaction". The approach is based on the hypothesis and experience that complex creative problem solving in working groups requires professional coordination in order to effectively use synergetic potentials (Irle 1975, Franke 1975)!

Within the concept "Science to ideas" (Connect2Create, Delft 2022) the part "Science to idea finding" is highlighted. Here, the benefits of applying taxonomies of information processing mechanisms and the leadership mechanisms of promotion, preservation, and self-assertion are described as important capabilities for process control success.

The focus of the considerations is on content process preparation, process planning, and process control behavior in real time.

Keywords:

moderation, facilitation, process control, creativity in groups, complex problem solving.

The difference. What does professional mean here?

In our practice, we distinguish between different levels of requirements to support creative processes through moderation. Depending on the complexity of the problem posed, we differentiate between basic, medium and high levels of moderation efforts.

At the basic support level, the infrastructure for spontaneous creative processes is provided as follows:

A creative working group has a room with supporting equipment, flexible tables, pin boards, flip charts, moderation cases with pens and visualization materials. A moderator is available to support the creative collaboration, an assistant/note-taker to help with the organization. An agenda with creative topics is prepared for the implementation. The moderator provides the communicative framework: the introduction to the topics, the accompanying linguistic support in the organization through the methods, the maintenance of the red thread as well as the maintenance of equal communication through the rules of the game.

His management activities and interventions refer to the procedure through work steps, countermeasures in case of deviations from the rules of the game, support in visualizing and storing ideas on cards or on the flipchart, resolving blockages during the creative process, and feedback on intermediate and final states by summarizing and briefly presenting the creative results.

The organizational format would be the workshop with a small group of 5-9 participants.

Moderation could be done internally by the supervisor, a manager such as a team leader or project manager, by a trained employee, or by an internal organizational consultant.

Moderation skills training uses a simple "metaplan format" (metaplan.com 2022), and creative problem-solving skills training focuses on brainstorming, brainwriting with pin-cards and modifications, and intuitive evaluation methods.

The Corona pandemic has led to a greater shift of meetings and workshops to the Internet/intranet. Program formats such as Adobe Connect, Microsoft Teams, and Zoom provide the alternative means of conducting creative and problem-solving workshops online. To ensure functionality for all participants, IT support by the moderator is required here. It can also be provided by the assistant if he or she has the appropriate skills. Functions for breakout sessions, document import for inspiration and whiteboards for structuring visualization support individual and small group work. In particular, programs for collaborative work in whiteboard format (e.g., Miro, Padlet, Whimsical, Concept board) enable simulation of creative work with the pin-board technique from the face-to-face format.

Based on this basic provision of conditions for the creative problem-solving process, a medium to high level of requirement for moderation may become necessary due to the higher demands of the factual, social, and organizational problem. Medium to high demands characterizes the area of application of professional moderation!

A medium level of requirements in the factual problem (e.g., the moderation of a creative strategy workshop) requires, e.g. the professional acceptance of the assignment, a methodical process design, its discussion with the client, the clarification of leadership roles when the client is present in the workshop, the involvement of the workshop participants in the run-up to the event, agreement on the working style, the preparation of necessary strategy topics and information, the choice of a supportive work location, e.g. outside the company and the organization of the follow-up by means of progress and result protocols.

To emphasize the neutral leadership of the workshop by the moderator, it may be necessary

to give preference to the external moderator.

The highest demands on the moderation of creative problem-solving processes arise when working on complex problems in interdisciplinary, intercultural work teams (e.g. breakthrough workshops to find new chemical compounds/catalysts, the development of new organizational concepts for the supply chain or the search for new strategic business areas).

For topics of this content and social complexity, the moderator is challenged in depth on several levels in terms of professionalism.

In addition to social empathy, the moderator needs an understanding of the characteristics of complex problems (Dörner 1976, 1997, e.g., in a VUCA world) and which methods can be used to creatively address these problems (e.g., through concepts/methods and elements of systems engineering, morphology, networked thinking, scenario techniques, design thinking, TRIZ methodology, and dialectical and analytical evaluation methodology).

Particularly unpleasant (wicked) problems (Rittel 1992) can be the case that a solution is currently not possible, the problem persists or repeats itself, and forms of survival or living with it must be creatively sought (e.g., disposal/destruction of plastic waste in the sea or final disposal of radioactive waste). The delineation and definition of a complex problem can be an initial challenge that can be overcome by preliminary work in interdisciplinary teams, and also by moderation.

Once the goal and creative feasible objectives have been clarified in comparison to the initial situation, it can be considered which methods, creative impulses and steps can be used to search for solutions. A script for the creative workshop process can be drafted and its implementation planned.

Based on the topics, technically stimulating areas of knowledge can be established, which represent a heuristic field of invention in the creative discussion, and can be explored through explorative questions. The moderator takes on the serving role of processing and driving the linguistic-creative process. At the boundary of generating new ideas, he encourages the participants to pursue and develop an emerging concept.

Since this places high demands on the moderator's attention and information processing capacity in real time, creative stimuli for heuristic fields of invention must be developed and tested in advance of the creative process, which can then be used for stimulation during the workshop. The moderator maintains the process through micro-interventions and leads the processing of a topic through moderation sequences to the planned goal.

The social challenge is to determine the workshop language, the necessary ground rules, the intercultural working style, the composition of the work team (e.g., through assessment) and the social process management. On the social level, the moderator must master the developmental phases of team building in the workshop. Only if the participants of a workshop are socially engaged and integrated (in an atmosphere of freedom and security), their cognitive information processing can produce efficient creative outputs. Within the problem-solving work, process and result controlling, conflict resolution work to resolve blockages, and negotiation work to build consensus are required.

Through the content, social and methodological preparation leading to a script, the moderator should be able to be several steps ahead of the working group to be able to lead and support them professionally!

In summary, there are differences between normal and professional moderation competence for creative problem-solving processes in an in-depth process control competence.

This is expressed through:

- the breadth and depth of methodological competence,
- the experience of applying problem-solving methods and their elements to complex problems,
- the construction of a dramaturgy of stimulating, divergent, structuring, convergent and consensus-building work sequences
- the substantive, creatively stimulating process management according to the dramaturgy
- the experience of interdisciplinary and intercultural social leading of workshops, team and project work and their implementation
- situationally appropriate micro-interventions in real time!

This short list of differences and requirements shows that professional moderation as a modern leadership role needs special training and a lot of experience in practice to perform successfully.

From the perspective of process control the areas of creative problem solving of complex problems, conflict resolution and negotiation are real challenges. Especially when these areas appear interwoven. The author's empirical experience as a moderator shows that it is easier to solve technical problems collaboratively than to develop social innovations, where in change the participants themselves are social-emotionally involved and the acceptance of the social solution has to overcome higher personal resistance compared to the acceptance of the technical solution.

Social innovations are more willingly accepted if the benefits can be generated through personal participation and the social innovation contains mechanisms for stabilizing benefits and growth through needs (demand pull), (Lewin 1947, Johnson/Bany 1975). This insight can also be applied to the success of technical innovation, e.g., Apple IPOD and IPHONE use these principles, but also a sports device that offers the characteristics of sport, play with others and excitement.

In order to be able to offer professional process control when dealing with demanding topics, it is expected today that the moderator has the ability to develop:

- "social acceptance" as a basis on which an accepted intervention can take place,
- the design of an orienting process plan for creative processing, taking into account time limits,
- the use of functioning, creatively productive, understandable and goal-oriented methodology off and online

For this reason, we highlight below three important tools whose effective use are success factors in creative problem-solving processes as moderated social interaction.

Use of moderation tools as social and methodical guidelines

1. Ground-rules as a social spring board and intervention platform

The first tool is aimed at the relationship level. There are ground-rules for the "here and now", for the moment, to enable spontaneous contact. Without a relationship level, there is no creative exchange.

The task of the moderator is therefore, in the first step, to quickly influence the relationship level between the participants and the subject. This can be encouraged through brief

contacts, humor, small talk or other social activities (ice-breakers). This warm-up step should open the I for the subject and the we, to accept the common challenge.

The second step builds on the short relationships and forms two to five rules from the relationship situation, which should enable us to work together creatively. Characteristics of fluid creative processes provide orientation for suggestions or for stimulating the group. Successful examples here are the rules of the brainstorming game such as:

- No critic,
- as many ideas as possible,
- speak in core sentences,
- develop ideas of others,
- everyone has equal rights (Franke 1975),
- if in doubt, follow the moderator,
- new Ground-rules can be added at any time (Bourner et al 1993, Schwarz 1994) etc.

From our point of view, Osborn, the inventor of brainstorming, recognized the need for flow early on. The rules of the game are agreed upon by the moderator in such a way that he gets an accepted social intervention platform to control the process of working together (Weinreich, 2010). From this springboard and its positive experience as a leadership tool, we think, it is easier to adopt the concept of theme-centered interaction TCI (van de Braak 2017). TCI-axioms and postulates, based on values as autonomy, appreciation and expanding one's limits fit very good into a creative working culture!

But back to ground rules, they are the norms, which the moderator needs to recognize behavioral deviations as a signal in order to intervene promptly and appropriately.

Be careful and polite, don't use a cannon for a sparrow. Joy, motivation and trust are quickly gone and difficult to rebuild. This is why it is so important that interventions against deviant behavior are experienced as measures for the group, for the creative process and as support for the participant or participants.

2. The script method for developing a central thread and process framework

The second tool is the script method, which can be used to develop a process guide for more extensive creative processes (Van Gundy 1984, Weinreich 1994, Seifert 2002). The core of the screenplay consists of the agenda, which is thought through as a process of problem-solving events and is supplemented by additional dimensions.

The dimensions of the script are:

- Working times for topics and events
- Duration of themes and events
- Topics and events
 - Current situation of the topic
 - Objective situation of the topic
- Result targets for work step, type of representation
- requirement-oriented elementary information processing situations
- Methods/methods elements as the leading approach
- Guidance Instructions
- Tools to support the implementation of a method
- Actors on stage
- Rooms for the whole group and small groups

Each line of the script represents a chronological section of the process.

The sequence of problem-solving topics/events results in the process guide. The process plan, which has been thought through in all elements of the process guide, results in the script. The use of the screenplay pursues the goal of being able to control processes operationally, in the sense of directing. The difference to drama, however, lies in the fact that the play, the "creative process", arises in the "here and now" through free (rules-based) interaction and thus has the creative room of freedom.

Our claim at the beginning was to create the best possible conditions for the interdisciplinary problem-solving process, to promote and preserve the process.

The handling of the script by a moderator must submit to this requirement. Successful creative dynamics have priority over a process plan that is too tight!

Process plans are more of an orientation plan for creative phases, so that interventions in a situation are possible, but do not have to take place. As long as there is room for maneuver for process alternatives and the buffer time of the longest route has not been used up, the interventions that assert the moderation task should be used cautiously. The professional moderator has flexibility due to his knowledge of methods and prepares a goal-oriented process framework that allows alternative paths according to methodological preferences. If, for example, cross-topic intellectual processes take place with a high degree of originality, it is better to support them as creative walks. Intervention that reverses the direction of ideas can playfully use this pool of ideas a moment later on the actual core topic, e.g., to provoke wild ideas.

With the process plan, the moderator has an overview and can track and tolerate deviations from the plan/topic for the team, or intervene and lead back to the topic. Breaks are a good opportunity to update and reorganize the plan. In this way, based on the result achieved so far, the route guidance is restored.

Milestones can be set in the plan when the limit for a topic has been exhausted and the next creative or other topic should be switched to.

Should process plans be communicated to the team and if so, in what detail?

Moderation is a service function, so team members have a right to insight into the planned procedures. However, team members are usually not at the actual management work, but rather want to know how we approach the matter, what we want to work on and in what time and they want to be able to look forward to the result of having achieved something together, and that of value! So, it's worth working towards.

If this is presented in a way that is plausible to common sense the moderator has usually won the team over to his process. What's more, the participants develop trust in the moderation and allow themselves to be involved in the responsibility for a successful process.

3. The moderation compass - a model to develop goal-oriented moderation sequences

The third tool is a moderation compass, which supports the moderator in developing the dramaturgy of the process in a goal-oriented manner and leading it proactively (Fig. 1, p. 7). Alternatives to the model proposed here can be found in Schein (1969,1999), Schlicksupp (1977), also mentioned in Staehle (1980).

In the following, we describe the basic model of a compass (Weinreich 1994, 2005) that has proven itself to be a successful introduction to moderating complex, innovative topics.

The compass claims to support the moderator in his proactive action in the problem-solving process with work and project groups.

Proactive action by a moderator is a leadership behavior that is intimately familiar with the requirements of the leadership and organizational situation of a topic and that can dynamically steer a problem-solving group to a successful solution.

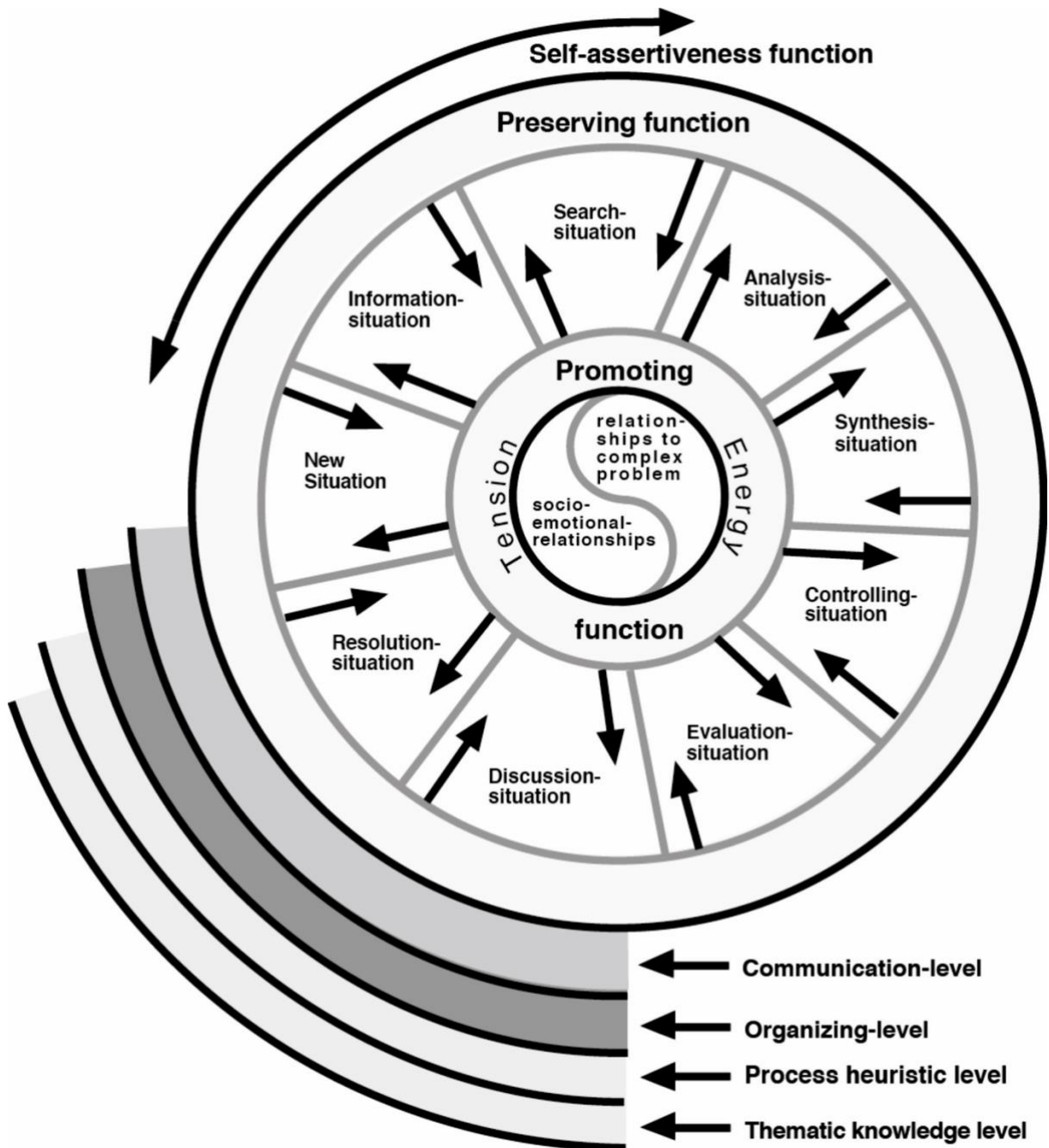


Fig. 1: Basic model of a compass to support the integrated moderation process. It is a concept designed of collaborative learning cycles, based on elementary information processes. Based on two important factors for the delivery of creative energy it shows the three basic management functions of moderation, as well as four important levels of requirements to serve the moderation role professionally.

This means that the moderator can identify, both in preparation and in real time during the process, which thematic (e.g., prior knowledge, methods/techniques and process steps) and socio-emotional prerequisites (e.g., participants, ground rules, relationships, expectations)

as well as events and actions (interventions) are necessary in order to be successful together.

In the preparation, the moderator must analyze the thematic challenge of the topic and, based on his methodological knowledge, his process experience and his social group and leadership experience, design a process plan that maps the social interaction to a successful result.

Use of elementary information processing situations

Based on the requirements of a topic, creative problem solving in groups can be described as social interaction through cooperative information processing.

The heart of the model design is the requirement-oriented recognition of basic information processing situations, from which a heuristic sequence of these situations can be compiled as events (work steps / interactions) to achieve the objective of the topic.

We call basic information processing situations, which are more or less needed in every problem-solving process, elementary standard situations. The information/presentation of a topic, the creative search for ideas, the clarifying analysis etc. are examples of such situations.

Standard situations are characterized by the fact that they generate a directed, functionally progressing information processing.

The direction arises from the stimulation of summatively divergent, convergent, or balanced mental production.

The function and aims of standard situations are defined in a work step-oriented manner (Fig. 2, p. 11). With the help of the methods assigned to a standard situation, aim and function can be carried out in the problem-solving process, e.g., to clarify core functions of a product (analysis situation) through the method "progressive abstraction". With a method kit/bank filled up with method alternatives behind each standard function, we get situational freedom for modeling the standard situation within given resource scope.

For example, as an alternative to progressive abstraction, an analysis situation could be carried out using top-down or free structuring by "mind mapping".

The requirement-oriented use of these standard situations of problem-solving information processing enables us to unfold any topic with regard to its processing in a goal-oriented sequence of work steps (Fig. 2, p. 11). Because of the heuristic character of creative design phases and their arrangement, we speak of a goal-oriented process heuristic instead of a goal-oriented process logic.

Let's take a quick look at the elementary standard situations and how they are arranged in the compass. The arrangement of the standard situations in the compass suggests a sequence of problem-solving situations from information about the topic to a decision on the proposed solutions or measures to be taken. This would be an ideal-typical process solution. However, the compass is designed and should be understood as an open design model. It is an offer and the situations can be freely selected and combined according to the requirements of the topic as a goal-oriented consequence. For example, if the processed solutions are on the table for a topic, the next step after information and presentation would most likely be the evaluation.

The difficulties of the beginner in designing a problem-solving work step sequence are mostly in the factual understanding of the topic and mostly have to do with the technical language used. Once this hurdle has been overcome, the requirements (sub-goals) of the topic can be identified and formulated, and then elementary standard situations can be sought that lead to progress in solving the sub-goals.

That is, a process guide is designed according to requirements. Each standard situation can be selected according to the processing status of the subject to start the problem-solving process. Standard situations can be repeated and run through with more sophisticated methods.

At this point, it is useful to discuss the relationship between the model of the main patterns of innovation and the model of the moderation of creative problem-solving processes. Both pursue the goals of increasing effectiveness in the innovation process. The main pattern of ideas takes a broad view to identify all relevant patterns of social innovation for innovation management (Enthofen 2022), while the moderation compass focuses on the management of creative work groups as part of it. The moderation compass also starts from a taxonomy. It is here a taxonomy of standard situations of information processing.

These standard situations are based on the summary of information processing mechanisms of client-centered thinking with similar information content.

For the moderator, it is important to recognize in the first conversation and later on which goal-oriented mechanisms and motives are driving the client's problem. Here we start from conceptual synonyms of language. All verbs or nouns that stand for the search and discovery context in thinking then fall into the domain of the standard situation "search" and are thus a signpost for the moderator to use creative search and discovery procedures in problem posing.

The same applies to the other standard situations. Take synthesis, for example. Simple word germs for synthesis are developing, assembling, and composing. The dominant functional information content of the synthesis domain then consists of the summary of all synonyms that refer to a summary of any kind, i.e., words that stand for functional mechanisms such as: combine, assemble, summarize, collect, compile, aggregate, accumulate, survey, structure, plan, arrange, form, make compatible, algorithmize, construct, engineer, compose, constitute, and so on.

These first heuristic signs about the standard situation and the method library behind it give the first ideas to the moderator for the methodical support or process control. Of course, these signs have to be checked for appropriateness in the context of the entire problem framework.

The feedback we receive from our users, especially the beginners, in and after the moderation compass trainings is, that they feel more confident in matching the mechanisms required by a problem and those offered by a methodology. They understood the key message here: A search requesting mechanism in the problem needs a search serving mechanism in the method and then applied in the moderation sequence!

An evaluation requesting mechanism in the problem needs an evaluation serving mechanism in the method and then applied in the moderation sequence!

In this way, it is also easier for them to choose from a complex methodology (such as design thinking or TRIZ) only the methodological component that corresponds to the dominant issue of the problem and problem based creative solution patterns come up.

A small example shows the transfer process of information processing from identified goals of the customer to the standard situations.

Example of sub-goals/requirements/steps of a topic and their mapping into requirement-oriented standard situations and their arrangement as a draft for a goal-oriented moderation sequence:

Sub-goals of a creative topic/problem:	→	standard situations in the compass:
1. Information on the topic, kick-off	→	information / presentation situation

		discussion situation
2. Creative exploration of the topic	→	search situation
3. Structuring of the topic	→	analysis situation
4. Requirements Analysis		
- Requirements capture	→	search situation
- Requirements structure	→	analysis situation
- Requirements evaluate	→	evaluation situation
5. Redefinition of the topic	→	discussion situation
6. exploration for solution ideas	→	search situation
7. Specification and in-depth search	→	search situation
8. Playful design, holistically solutions	→	synthesis situation
		- concept building
		- construction

etc.

As already indicated, the standard situations have a different character in terms of the type of thought processes to be coordinated. The search situation is characterized more by divergent, creative thinking (symbolism in Fig. 2 p. 11), a check or evaluation situation by convergent, judgmental thinking. In a discussion of understanding, on the other hand, divergent, exploratory and convergent, clarifying thinking can balance each other out. In the compass, behind the standard situations, there are methods, techniques, and methodical elements as an offer that correspond to the character of the standard situation. For example, creative methods such as brainstorming, brainwriting or synectics belong to the methods of capturing or creative search and are therefore methods of the search situation. Overall artistic, composing processes such as the morphological construction kit support concept formation and construction and are therefore part of the synthesis situation.

Other standard situations can also take on auxiliary functions in dealing with a standard situation. In the case of information about a topic, a short-term clarifying discussion can support the transfer of information to the participants. Or in the case of analysis a short-term evaluation can help to find a better structure (Fig. 5, p. 15). In this sense, the problem-solving process or parts could be nested in the standard situations when necessary. However, for orientation and preservation of the process, the standard situation leading in the process, i.e., the transfer of information here, must be clear.

Different methods require different resources, e.g., time, media and tools. By choosing from the situational method kit, the moderator can play through different methods for one work step and thus come up with process scenarios and calculate the total time of the problem-solving process.

Fig. 3, p.12 illustrates the discussed relationship starting from the characteristics of the problem through the ordering of synonymous driving mechanisms in the compass to the method library and the ordering of standard situations to the moderation sequence. Due to the overall complexity, the plan shall support the moderator to reduce complexity in the real time situation of process control. For example, making goal-oriented process decisions dynamically according to the requirements of the interaction. For example, when experts meet creatively, there can be creative flights of fancy at an early stage, which make later planned work steps in the process obsolete. As briefly mentioned above, a constructive break is used to reorganize the further work steps and then to present and agree on the renewed process plan to the participants so that the problem-solving cooperation remains

fluid. In this way it is achieved that no content, methodological, procedural or socio-emotional friction losses consume the creative energy.

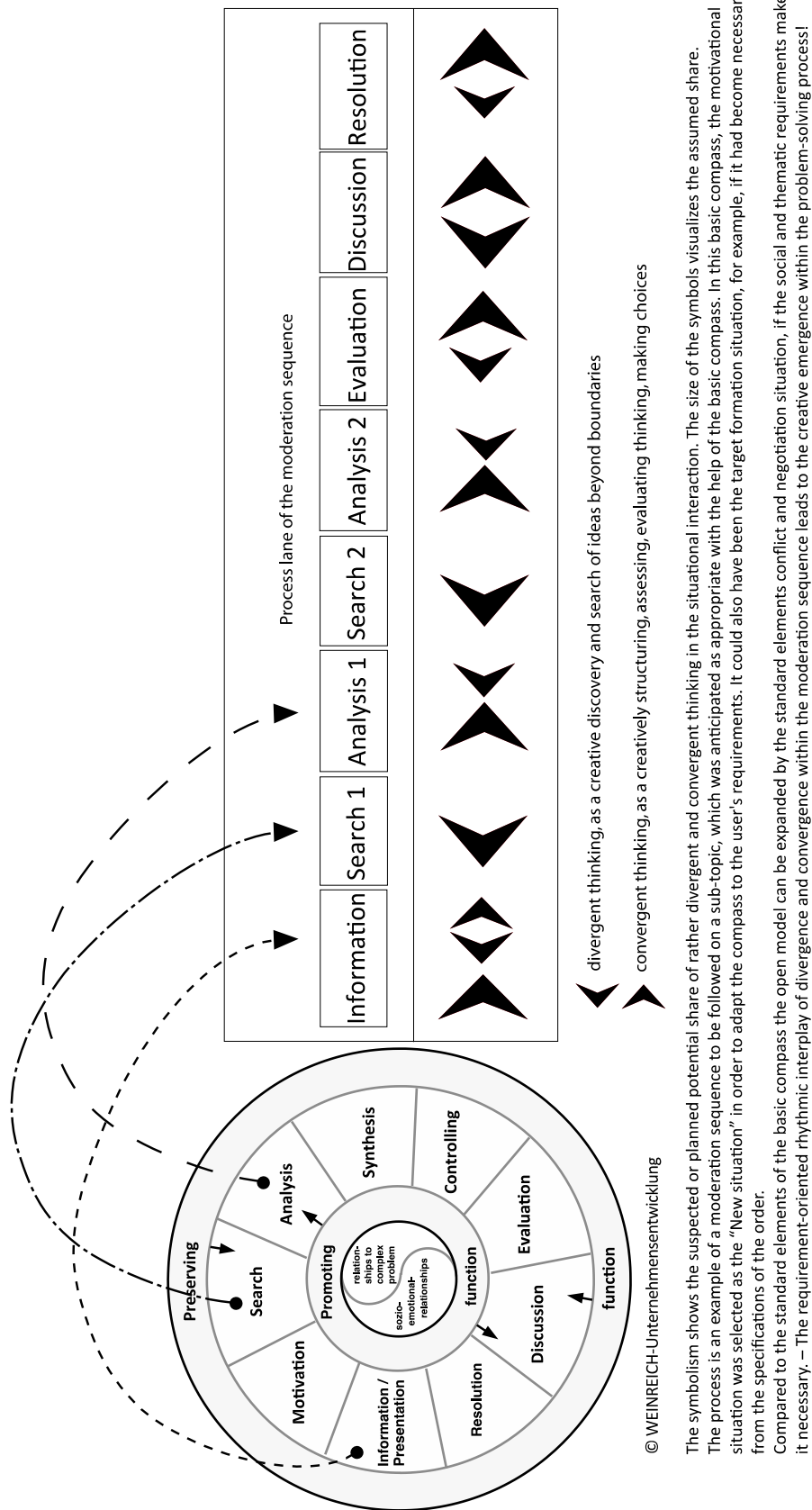


Fig. 2: Unfolding of a sub topic into goal-oriented process heuristic, called moderation sequence

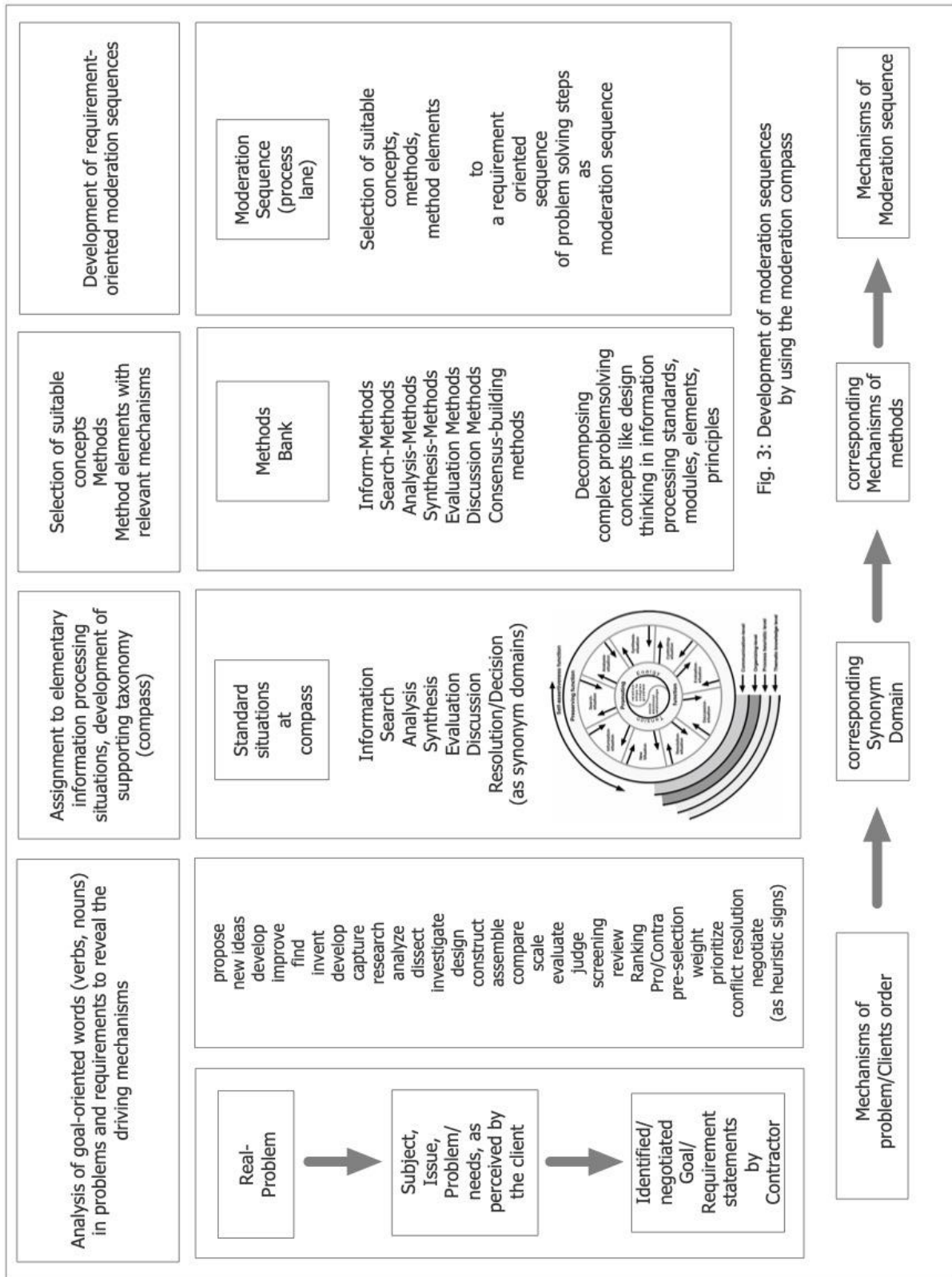


Fig. 3: Development of moderation sequence by using the moderation compass

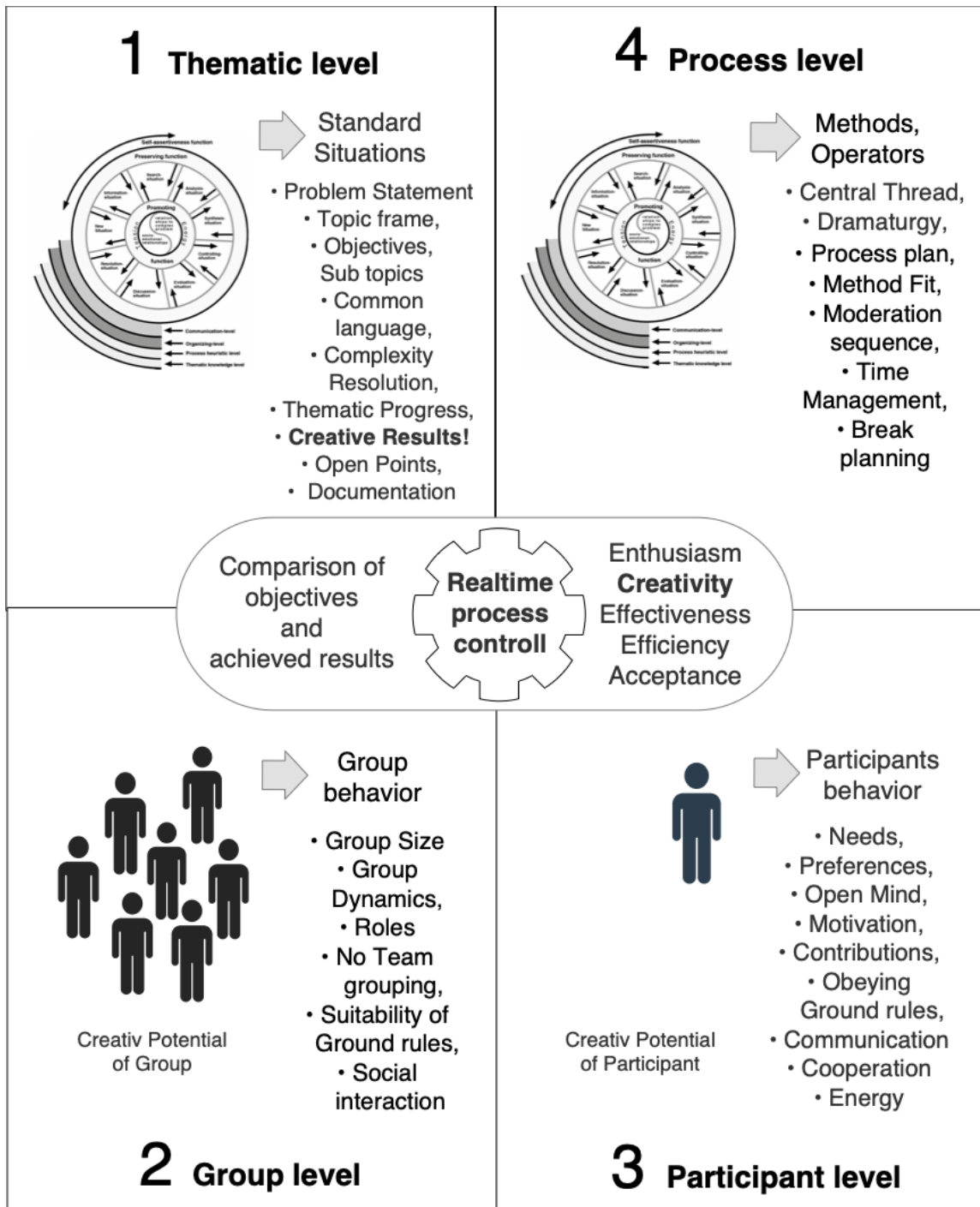


Fig. 4: Four level view as a navigation cockpit for realtime process control

Four Design levels for constructive promotion and process control

How can the moderator's control be understood holistically using the compass (Fig. 1, p. 7)? From our point of view, the moderator has four design levels to create constructive tension and to influence tension in order to make creative energy available. The four design levels are: the thematic level, the process level, the group level and the participant level (Weinreich 2005, 2022).

Each of these design areas of the moderator is subject to its own control and requires appropriate influence and interventions (Fig. 4, p.13). As the most important point in the thematic field, we consider the clarified problem definition. The red thread can then be designed in the process field from the break-up of sub-topics and their objectives. In the case of complex topics, however, further service areas in the thematic field must be considered. This is the linguistic control: to establish and maintain a common language and understanding area (common definitions). The complexity control: the level of resolution (depth and breadth of interconnection, dynamic characteristics). And the thematic progress control: the verification of the achievement of the objectives, or what is still to be worked on thematically.

The four-level view helps the moderator to navigate the relevant intervention. Mapped in the compass (Fig. 1, p. 7) here are relationships as a starting point for energy. Nothing works without energy! The focus of our process control is therefore on the elements from which the interaction energy is created or blocked. The process control requires appropriate management functions by interventions to reach an effective flow.

Three basic management functions

The basic management functions of moderation to make the interaction energy available are (Weinreich 1994, 2005):

- promotion function
- preserving function and
- self-assertion function.

With the promotion function, the moderator can stimulate the individual participant and the team to develop creatively on the topic. However, creative development also quickly leads away from the topic.

With the preservation function, the moderator therefore catches the team members again and brings them back to the topic. Through stimulating statements, the process begins anew so that a creative process rhythm develops.

The way the conversation is conducted during the stimulation is an opening language that uses question words (How? What? Which?) to form stimulus questions on the topic or on ideas that have already been mentioned.

The language of the preservation function is an acceptable reversal of direction (back to the thread) to preserve the flow of creative energy at the core problem. The moderator can also stimulate reversals of direction in the sense of preservation by deepening ideas that are expressed that are closer to the topic.

The assertiveness function is needed when the moderator has to fight for the topic, for his process or for his role. Even a service role, such as a moderator role, can come in situations where he (she) has to assert himself against an opposing team member for the team, the topic, and the process. The language of self-assertion in the form of the moderator ego is appropriate here.

The same applies to leadership instructions in order to achieve a goal-oriented interaction in the group. Guidance instructions politely but firmly express the intention of the moderator ("I would ask you to write down as many ideas as possible on pin cards in the next five minutes, one idea per card!").

The rhythm of the process is depicted in the compass, in which the promotion function envelops and unfolds the interaction energy. The interaction energy is based on the

relationships of the participants to the topic and the socio-emotional relationships in the workgroup. The preservation function maintains the creative flow of thought while the self-assertion function maintains the role of moderator and the process (Within this core level, the moderator influences the interaction of the limbic systems (Häusel 2000)!). The inner circle of the compass formed and characterized by standard situations, from information to resolution addresses the frontal lobes of the participants' brains.

Freedom and orientation through promotion and preservation

Creativity requires ambiguity! The terms convergent and divergent thinking do not mean an exact but a principled direction of thinking in the individual but especially in a work group. The emergence of new thoughts and ideas arises from the oscillation between both directions!

Also, the classification into functional information processing situations in the compass is to be seen rather in principle. Capturing synonyms with similar information processing mechanisms leads to a taxonomy. This ordering pursues the heuristic purpose of a structure-building orientation. As addressed earlier, all other standard situations can be used as supporting situations. It is useful here to distinguish between the macro level of the foreground standard situation and the micro level of the supporting standard situation. In this way, the compass provides the moderator with structural freedom of design while maintaining the goal-directed line of thinking at the macro level. This can be illustrated by mapping the compass in each of its standard situations (Fig. 5, p 15).

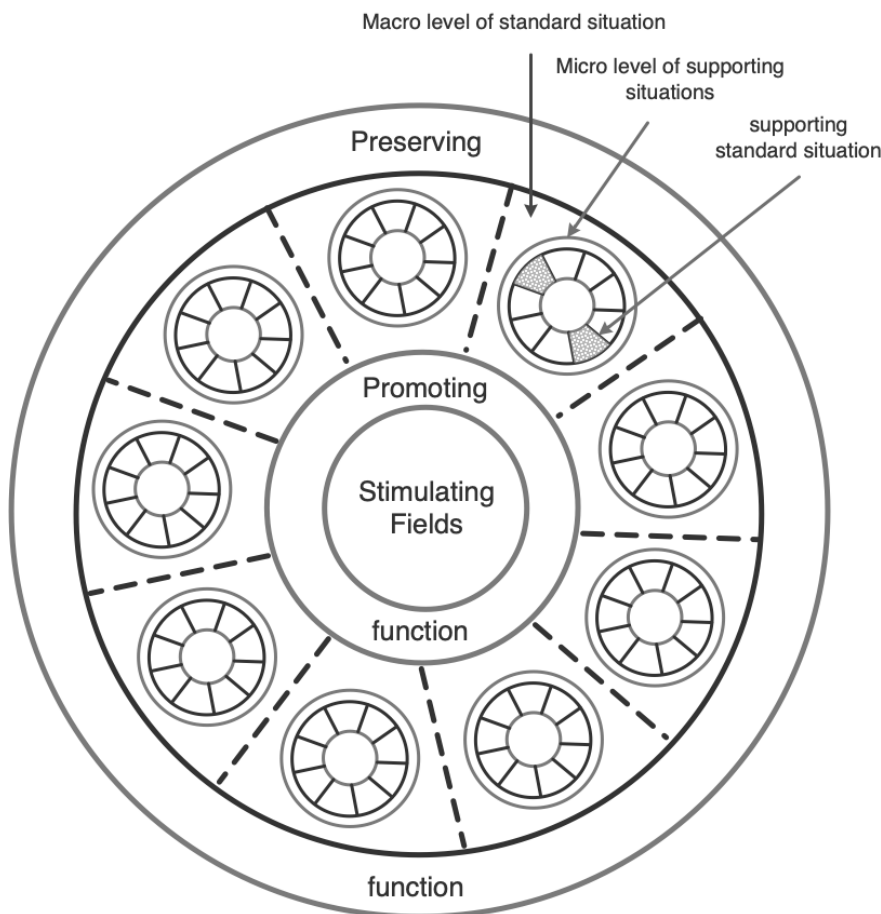


Fig. 5: Interaction of heuristic macro and micro situations. Here e.g., macro situation "analysis". Supporting micro situations e.g., "information" and "evaluation".

The compass thus helps the moderator to hold and gently assert the central thread. Orientation and freedom are in foreground to enable the flow of creative energy and its goal-oriented bundling.

Promoting and preserving interventions on the macro and micro level nurture the creative process. The experience of the emergence of new ideas and thoughts in a creative working group leads to the experience of synergistic magic!

Insights in the topic

Checking for standard situations in the problem description, representation by the client, or requirements list should give the moderator the following insights:

- in which processing situation a topic is
- which processing situations a topic to work on needs
- in which processing situation a participant is in order to have a coordinating influence on him
- which paradigms need to be nurtured and broken
- what sequence of standard situations entails a corresponding process rhythm (arc of suspense)
- what sequence of standard situations is also target-oriented with repetition, for deepening and concretization (process heuristic)
- which methods, methodological elements or techniques the toolbox of a standard situation provides to the process, etc.

Compass as coordination instrument

A moderator has created the prerequisite for fluidity when he succeeds in coordinating the participants in their creative group process to a standard situation. Only now it is possible to use the strength of the interdisciplinary potential of the group against the creative achievement of the individual. (If e.g., creative discovery is announced as a work step, it is the moderator's task to stimulate all participants to a creative discovery behavior! Only then the discovery potential of the group can unfold, which is stronger than that of an individual!)

The compass is thus a coordination instrument of the cognitive group power. Coordinated creativity, analysis, synthesis, or evaluation as examples are the goal of gentle control by moderation. It was an essential design goal of the compass. The reason in the arrangement of the standard situations was to show, to get out of the discussion phase with the ineffective competitive behavior of participants or experts, to come into cooperative work phases more easily guided by process control. From this point of view, all standard situations, apart from the discussion situation at the beginning, are designed as cooperative situations. Effectively coordinated through process control.

Standard situations in more detail

So, nine standard situations have emerged for the practical basic training of professional moderation. All standard situations contribute to the overall creative result through the moderator's guidance. Briefly we describe the meaning and purpose in more detail.

1. Information and presentation situation

Function: Inform about order at the beginning. In general, give information, request information and visualize information in a comprehensible way, eliminate ambiguities, establish a connection to the topic, deepen it.

Establish a relationship with each other, with the client and the moderator.

Cooperative learning process: Development of a common understanding of the problem, start of common language development and visualization on the topic

Result aims: common information image as the initial situation of the problem (initial situation, boundary conditions and objectives of the client). All participants have the same information about the subject, have understood the topic and can now share their knowledge. They had been grown from layman to educated layman in the subject.

2. Search situation

Function: Creative search for and discovery of new information or collecting existing thoughts and opinions, development of new creative ideas and approaches, recombination to new approaches.

Cooperative learning process: recognizing the creative potential of the group, variety of ideas in a short time, potentials for new breakthroughs

Result aims: Search results in the form of a lists of creative or newly compiled thoughts.

3. Analysis situation

Function: Creative decomposition and investigation of characteristics of the problem situation and also characteristics of solution approaches by capturing elements, structures and their networking. Reduction of complexity through focus (clusters), restructuring, development of new relationship structures, in-depth clarification of newly arising issues, comparative evaluation, identification of core problems.

Cooperative learning process: Interdisciplinary understanding of the requirements. Insight and transparency as a basis for contributing and further developing solution ideas.

Result aims: Analysis results in the form of structure or relationship images, overview images, specification images, process images. Recording, assessment and description of the core problems, even beyond the knowledge of the client.

4. Synthesis situation

Function: Creative summery, assembly, superposition, design and composition of new and/or known partial solutions to new, potential overall solutions.

Cooperative learning process: Systemic design in a team makes it easier to find innovative concepts and to recognize incompatibilities of new combinations as a creative new challenge and to solve them at an early stage.

Result aims: The synthesis results in the form of one or more solution concepts that are suitable for preparing the decision.

5. Controlling situation

Function: comparison between requirement characteristics and solution characteristics of ideas and drafts, comparison of the behavior of participants and team with the norms of productive creative cooperation and verification of the current flow with the planned process, verification of the effectiveness of the chosen methodology, verification of time resources.

Everything for the early detection of deviations. The recognition of the deviations is the basis for corrections that require the intervention of the moderator in the here and now.

Cooperative learning process: In his role, the moderator serves to guide the process and the social leadership of the working group. Factual neutrality is an important behavioral requirement.

Result aims: Timely, acceptable management instructions and interventions, resource review. Dealing with disruptions. Interruption and termination in critical situations. Feedback on the progress of solution and social development.

6. Evaluation situation

Function: Development of benchmarks/criteria, subsequent assessment, screening, scoring and ranking of alternatives with an innovative claim. Creation of transparency and traceability of the proposals coming into the final selection!

Cooperative learning process: Joint binding of high-quality assessment contributions from experts on the economic assessment, feasibility and technology impact assessment of new concepts

Result aims: Development of a potentially value-added decision preparation.

7. Discussion situation

Function: Free and structured discussion, as the basis of an argumentative learning, exchange and influencing process. Stress testing of proposed alternatives, also in terms of socio-emotional support.

Cooperative learning process: Honestly discussing the positions that have so far remained open in the joint learning process in order to prepare the viability of decisions. Out of these conflicts come to cooperative negotiating positions.

Result aims: Learners of understanding through development and testing of argumentation and persuasion images, position review and development of willingness to make a decision.

8. Resolution (Decision Making) Situation

Function: Development of factual, emotional and social security as a basis for finally viable decisions and self-commitment.

Cooperative learning process: Coming through and committing to common decisions in public. Show willingness to take responsibility and support in implementation.

Result aims: Clarification of intentions, safeguarding of decisions to the best of our knowledge and belief, final decision picture, resolution. Action plan with responsible persons.

Other standard situations to expand the basic model:

In the basic model, the "New Situation" is offered here for openness and adaptation to personal moderation requirements:

9. As an example for the "New Situation", here is the motivational situation

Function: Capture, focus and stimulate needs. Development of the relationship to the topic, to the client, to those affected and involved.

Cooperative learning processes: Recognizing gains that are only possible through creative learning processes together, in an interdisciplinary manner

Result aims: Creation of a winner/winner situation, bundling of driving force in the team for effective and efficient processing of the topic.

A popular extension of our training participants is the goal setting situation. Why it is not available in the basic compass is due to the client's task of being clear about the goals of an event in order to be able to present them in the information phase. On the other hand, all standard situations for cooperative goal setting are available in the basic compass.

Other extensions not covered here are conflict and negotiation.

Four competency levels at a glance

Our basic model of the compass can be divided into four levels of competence, training or preparation:

- the thematic level
- the process-methodical level
- the organizational level
- the level of communication.

In the preparation, the moderator can now check whether, for example, the background knowledge (subject-related level) for the nine basic situations for moderation is sufficient. For example, whether he is able to stimulate creative content-related processes with stimulating information, or who and with whom of the team members would be able to prepare these stimulants and introduce them if necessary.

The process-methodical level helps him to choose adequate methods and tools from the method kit of the standard situation (not shown in this article!).

At the organizational level, for example, he can decide which premises, methods and tools optimally support the process, whether he wants to work individually, in small groups, in plenary sessions or, for example, with experts virtually connected.

In addition to matter, method and organization, the communication level is the most important level, as it shows the moderator's leadership and organizational behavior in real-time (conversational conduct), verbally and non-verbally.

Which leadership instructions do I have to speak so that the social interaction of the participants on the topic begins successfully? What linguistic influence do I use to promote and preserve the creative flow of ideas? How do I intervene in social-emotional tensions between participants while maintaining the order of the conversation?

Which self-assertion language is appropriate to the language code spoken in the group (e.g., supervisor level / planner level / foreman level / employee level)? etc.

The four competency levels support becoming aware of the requirements of the moderation role in order to invest in the necessary preparation.

From moderator to team-moderation

Meetings, workshops, working groups and project gatherings with innovative topics are demanding and can overwhelm a single moderator. It is necessary to recognize this early on. This is for example the case where special language is spoken in depth and the moderator, e.g., as a non-chemist, would need far too long to understand and visualize an important chemical core idea. In these cases, it makes sense to prepare the process with a co-moderator who has the special knowledge and to share the role of process control. This has the particular advantage that interdisciplinary small groups can work on topics in parallel, thus further increasing the creative output.

Moderator and co-moderator depend on excellent communication and cooperation with each other. Human acceptance, appreciation, attentive participation and appropriate support and coordination help to overcome critical phases together.

Our recommendation goes here to the professional moderator team, for example: general moderator, specialist moderator, special visualizer.

Conclusion:

Professional moderation possesses the competence of thematic and socio-emotional process control, which is needed for creative, complex problem solving in interdisciplinary working groups. Methodically, it is able to go beyond the normal control behavior via agenda, the normal moderation cycle (Seifert 2002) and appropriate dialogue control via active listening (Gordon 1979), recording core problems and core statements, clear visualization and maintaining a linguistic balance.

It makes the methods or methodological elements available in a requirement-oriented manner, which heuristically facilitate progress towards the work goal, starting from the information processing situation of the topic. It is familiar with the pool of methods available today. With the moderation compass, it is able to set up appropriate moderation-sequences that do not follow rigid methods, but allow a topic, problem or agenda item to be dealt with, appropriately in a requirement-oriented manner. Professional moderation has no respect for methods of any discipline. In terms of reverse engineering, it decomposes the methods into modules, elements, steps and uses what just helps one step further in creative problem solving. This means that the specialist-moderator has the specialist methodology of relevant areas at his disposal, which he can explore for usefulness in working with groups.

Through requirement-oriented use, new methods related to the individual problem are created via the moderation sequences, similar to "personalized medicine".

Due to the effort that lies in the preparation, implementation and follow-up of demanding topics, modern professional moderation is more than individual work.

It's teamwork. A big deal of teamwork!

Our reflections aimed to show, that normal moderation skills can be extended to a professional level through breadth and depth in, for example, process control. Here, three moderation tools were discussed as success factors for complex, creative problem-solving processes.

The skillful use of these tools can help to manage the process control in an effective way. Problem-solving phases in innovation projects, such as preliminary planning, kick-off, customer-oriented actual analysis, project structure planning, project planning, the search for solution ideas, implementation, customer testing, market launch and debriefing can be more successfully prepared and carried out as interdisciplinary meetings and workshops. Process-Control, in the sense of a neutral leadership and organizational role that serves the problem-solving process and those involved, does not prevent creativity, but provides the best conditions for interaction, so that the creative potential in a group or team can be used enthusiastically and successfully can unfold. It can be a strong catalyst (Schlicksupp 1993), especially for break through situations!!

Summery

Let's summarize, important **key messages** to go:

- 1 The success of professional moderation lies in the development of a fast social basis through which accepted interventions are possible!
(Developing and use of Ground-rules)
- 2 Professional moderation develops, beyond an agenda, a process plan as an orientation plan of process control, is flexible within a process framework. The process plan is to be tested, so that the methodological way is robust! **(Developing a feasible Process Plan)**

- 3 Based on the process plan, professional moderation has time management under control. **(Proper Time management)**
- 4 The process plan contains requirement-oriented methodological proposals that are based on information processing standards and support moderation sequences by linking. **(Requirement-oriented Moderation Sequences (Fig. 2, p. 11, Fig. 3, p.12), Development of new methods by adaptation of specialist procedures)**
- 5 The **moderation compass** (Fig. 1, p. 7) provides the moderator with a taxonomy for organizing his methods in a goal-oriented manner on the basis of information processing and thus creating a personal method base. It links the mechanisms of thinking in the everyday language of clients with the mechanisms of the methods of systematic problem solving. **(Systemic goal-oriented support of creative social interaction)**
- 6 Moderation behavior is focused on stimulating and sustaining the flow of creative thoughts and is neutral to idea development.
(Mastering the Promotion and Preserving Function)
- 7 When the moderator's role, process, and proposed methodology is attacked, the moderator stands up for his prepared script, the client and the working group. But follows the group, if he is wrong. - Be careful to follow method suggestions where you are not sure in the guidance! A break is necessary then to reorganize!
(Mastering the Self-assertiveness Function)
- 8 By applying the moderation compass, the moderator leads from non-effective discussions characterized by competition and disagreement to standard cooperative situations to exploit the advantage of the group's creative potential.
(Mastering the Principle of joining creative forces by cooperation)
- 9 There are also situations where requirements and expert knowledge is better matched by individual work and small group work or virtual work. Professional moderation uses different organization forms in a workshop to get the appropriate information processing. **(Application of Organizational Diversity for Effectiveness)**
- 10 Leading creative work groups on complex problems into cooperative learning phases (standard situations) reduces the complexity of process control. It reduces conflict and negotiation situations through collaborative learning. - A moderation team has a better control span. **(Complexity reduction in Process Control, use of Team-moderation)**
- 11 Training and application of these moderation tools leads to greater effectiveness, efficiency and acceptance in the cooperation with the client and the members of the working group. Thus, moderated social interaction is more likely to be a success in creative complex problems. **(Training and Application needed for Success!)**

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