AN EXPLORATORY RESEARCH ON WORKSHOP PARTICIPANT ENGAGEMENT

het Buitenhuis

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PREFACE

I really enjoyed the Management of Technology educational program, but I decided to do the extra course 'Facilitation of Group Meetings'. I found the course even more interesting than expected; especially the idea that the efforts of a group can be enhanced when the right conditions are set appeals to me. It was during this course that it came to my mind that I wanted to graduate on this subject.
During the first quarter of the second year, I studied at the Harbin Institute of Technology, Harbin, China. There, I came in contact with serious gaming. Also this topic interested me. The similarities between the two fields are quite abundant: First, workshops and games both have to be facilitated and the better this is done, the more the workshop participants or serious game players learn from it. Second, games can be used as a method in a workshop. Third, my personal favourite, a facilitator lets others work really hard, while the task of the facilitator is to be as least visible as possible.

Back in the Netherlands, looking for a graduation project, I got the opportunity to do my research at Het Buitenhuis. In this organization workshops are facilitated to increase the innovativeness and creativity within the government. Here, I could combine facilitation and serious gaming in one research. This resulted in a research which I found interesting from beginning to end, although the writing part was not always as easy as I had hoped for.

A large influence on how I experienced my graduation period was the atmosphere at Het Buitenhuis. The beautiful villa with garden contributed to that, but most of all I would like to thank everyone for taking part in the interviews, letting me do the research in your workshops, and especially for the fun I have had! In alphabetical order: Christa Fortunati, Judith de Geus, Marion van Griethuizen,Sandra Jainandunsing, Herman Meines, Antoinette Middeldorp, Eveline van Petten, Annemarie Soeteman, and Iris Wijnveldt. Special thanks to Jur Kosterbok, who supervised my thesis.

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Special thanks to my mother, who massaged the stress away, Roxanne for revising this report, and Birgit for discussing the statistics. And of course, the rest of my friends and family who supported me.

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EXECUTIVE SUMMARY

This exploratory research investigates participant engagement in facilitated workshops with the aim to understand how participants are engaged and what the factors are that get and keep them engaged. Facilitated workshops are used increasingly to improve the productivity of a group, but participant engagement in this context has not been studied much. Because of this, a literature research on other types of engagement in different scientific areas is done. This has lead to a conceptual model in which twelve factors are visualized, all influencing workshop participant engagement. Of these factors, the factor psychological safety is the most prominent due to the many interrelations it has with nine of the other factors in the model. Therefore, the empirical research focused on workshop participant engagement and psychological safety. Eleven workshops facilitated at Het Buitenhuis were used for data collection. The workshops differ in facilitator, goal, and methods used, among other differences. During each case observations are made following a developed protocol. The participants have reported their level of engagement and psychological safety with a developed self-report. With these data, the cases are analysed one by one, followed by cross-case analyses. Due to the limited amount of data in this exploratory research, no final conclusions can be drawn, but many insights about workshop participant engagement came forth. The results show that the group size in which people work is influencing engagement and psychological safety. The most prominent result is that working in small groups increases workshop participant engagement the most, while working individually and plenary reduce it. In addition, creative methods seem to increase engagement, while using the Group Decision Room (GDR) does not. The facilitator is an important influence in the engagement, also because (s)he can increase the psychological safety among other factors of the conceptual model. This model on workshop participant engagement holds when the eleven cases are analysed, although further research is needed to the interrelationship between the factors and the amount of influence they have on workshop participant engagement. A workshop participant feedback tool is developed to let workshop participants give feedback during the workshop. Recommendations for workshop facilitators are extended with recommendations for general management practices, because the results can partially be transferred to situations where group members have to be engaged to lead to a better group result.

Key words: facilitated workshop, workshop participant, engagement, psychological safety, facilitator, group dynamics

CHAPTER 1 INTRODUCTION

Nowadays organizations use workshops more often because the need for collaboration between people has increased. The main reason is that tasks and processes are getting more complex. Decision making, innovations, process and product design, and many other activities call for the input of various professionals with different fields of expertise. Therefore, multidisciplinary teams are often made responsible for the completion of such activities. Collaboration between team members is of crucial importance for goal attainment. Since most team members have different backgrounds, communication among them is not an easy process. Another difficulty is that each member of a multidisciplinary team has its own interests, because they are all stakeholders, which might conflict with the interests of others. A workshop is an instrument to support goal achievement in groups. However, it is never a goal in itself. It is defined by the Concise Oxford English Dictionary (2002) as follows:

> '*a meeting at which a group engages in intensive discussion and activity on a particular subject or project*'

The research set out in this paper focuses on 'facilitated workshops'. These are workshops with a specific goal where someone is leading a group through the process without contributing to the content. This facilitator also designs the workshop, which usually consists of multiple steps. Each step represents a specific phase in the process through the use of a specific method or technique. This way, each step contains its own goal which is part of the main goal. All steps together have to result in an interesting workshop.
For each step a choice is made out of numerous methods and techniques that can be used. Because each group's context and goal differs, workshops are generally customized. For instance, a group in a workshop can be homogeneous or heterogeneous, which consequently calls for two different types of workshops.

Facilitated workshops have a few benefits. Firstly, a skilled facilitator directs the process of communication and goal attainment and keeps an eye on an equal contribution of the participants. Secondly, when a workshop is held outside the general workspace, people are (partially) freed from their work pattern and are able to think more out-of-the-box. Thirdly, the stakeholders are physically present in one place. Simultaneously they work on a goal and the different ideas are put on the table so everyone can respond to each other. A deeper understanding can be a resultant and also on a personal level people are getting to know each other.

As the definition of a workshop states, the participants have to be engaged in the process. This will lead to a more productive workshop. However, people are easily distracted, for example, due to modern technology like cell phones and Personal Digital Assistants or PDAs. Then again, when workshop participants are actively involved they are likely to stay attentive and engaged in the process. But, how are workshop participants engaged? What are the factors that make engagement occur in facilitated workshops? And what are the ideas behind it? This research aims to explore workshop participant engagement and to make a start with answering these questions. The empirical part of this research is executed at Het Buitenhuis, which is explained below.

1.1 HET BUITENHUIS

Het Buitenhuis is an organization with a supporting function for Dutch governmental institutions. Its goal is to contribute to the innovativeness within the government by assisting civil servants in finding solutions for organizational and policy questions in a shorter time frame. This is done by facilitating workshops tailored to the client's wishes and through the use of various creative tools.
Het Buitenhuis is a commercial service (in Dutch: baten-lastendienst), which means that they are charging their clients for the given services. Het Buitenhuis facilitates about 10 to 20 workshops per month. The setting of these workshops may vary, likewise their goals. Also the group sizes may differs well as to which degree participants are familiar with one another. Examples of workshop goals are risk analysis, integrity analysis, cultural change, developing a vision, creating support, strategy development, decision making, and many more.

1.2 TERMINOLOGY

To be able to outline this research and to prevent confusion of terms, a few expressions relating to engagement are defined. The following definitions are all taken from the Concise Oxford English Dictionary (2002). ***Engagement*** is defined as '*the action of engaging or being engaged'*, in which *engage* stands for *'attract or involve (someone´s interest or attention)'*. Furthermore, ***attract*** means '*draw or bring by offering something of interest or advantage; cause to have a liking for or interest in'*. ***Involve*** implies *'cause to experience or participate in an activity or situation'* and ***involved*** means *'connected, typically on an emotional or personal level'*.

Engagement is the more mental state whereas participation is the more physical state. Still, this distinction is not quite clear. ***Participating*** means *'taking part'* and is almost similar to ***attending*** (*'being present at'*), while its derivative ***attention*** is *'the mental faculty of considering or taking notice'*. In this research, the term engagement is used as an indicator for the mental stage, implying that someone is already physically present. A person can be actively involved, be distracted (*'prevented from giving their full attention to something'*), or be bored (*'caused to feel weary and uninterested by being dull and tedious'*), and somewhere in between.

1.3 RESEARCH FOCUS

1.3.1 RESEARCH PROBLEM

In this research, engagement of participants in facilitated workshops is investigated. As stated in the introduction, workshops have become more important due to more complex problems that have to be solved by multidisciplinary groups. The importance of participant engagement and research on this subject will be explained here.

The goal of a workshop is always a group goal. Therefore, everyone is expected to contribute. The first condition for the participants to show up is that they are engaged in the workshop's subject. There are as many reasons for engagement as there are participants. Apart from the subject, also the implications of the result or the possible consequences of not showing up can be a person's motivation to engage. Since participants all have their own expertise, attaining a complex goal with the best possible outcome needs all of the stakeholders to contribute to the process. Full collaboration improves the quality of the outcome and simultaneously creates support for the result.

The resources spent during a workshop are high, because it brings many people together who all have to invest their time and thus cannot use the time for other activities. Other expenses include the facilitator's fee and the location costs. Therefore, the balance between quality of the outcome and the resources spent, the productivity, has to be as positive as possible. When participants in a workshop are not taking notice because they have their mindset on something else, this could slow the process down. Therefore, the need for participant engagement in a workshop is generally high.

Regarding a facilitator's influence on participant engagement it is logical to say (s)he has no influence at all until the workshop is requested. Just as (s)he has no influence from the moment the workshop ends. (S)he does, however, have a great deal of influence during the session as long as it lasts and the professional facilitator can steer the group and lead them through the different steps of the workshop. During this time, the facilitator is likely to influence the engagement of the workshop participants. Understanding the conditions under which engagement occurs is important for future workshop design and facilitation.

This knowledge creates the opportunity to increase the professionalism of the facilitators. It is also expected that gained knowledge about workshop participant engagement can be transferred to settings other than facilitated workshops. For example, managers or others who take on the role of group leader for a meeting or longer projects can perhaps learn from the conditions of this engagement.

Next to the practical relevance, there is also scientific relevance for performing this study. When workshops appear in scientific literature, the topic of discussion generally centers around a workshop's content rather than the methods used (e.g, Bullough and Kridel, 2002; Chapman *et al.*, 1996; Crosby, 2009; Haggerty *et al.*, 2002; Preszler, 2009; Tanner and Hale, 2002). There is a significant amount of literature on Group Support Systems (GSS) sessions, which are a particular type of workshop where technology plays a big role (e.g.,

Clawson and Bostrom, 1993; de Vreede *et al.*,2003). The success factors of such a session as well as the roles a facilitator has are likely to play a role in workshops in general as well. In addition, research on serious games has lead to a set of important features of games that are likely to be key for workshops as well (e.g., Garris *et al.,* 2002; Harteveld *et al.*, 2009).

The concept of engagement is used in different research areas, but it is vague what the concept really entails. An extensive study of this concept and its determinants by the method of deconstruction and construction will lead later on to a proposal of a more general concept of workshop participant engagement. This research will focus on workshops in a broad sense and more specifically on factors that influence the level of participant engagement. The knowledge gap on workshops is aimed to be filled by this research.

1.3.2 Research Goal

The goal of this research is to explore the dimensions of workshop participant engagement. Not only the conditions that are needed for participants to be able to engage, but also the causes of this engagement in the workshop setting. Engagement is studied in fields like education, organizational behaviour, gaming, and group research. With this literature in mind, the goal is to find the aspects of engagement which are occurring in different settings. However, engagement specifically for workshop participants is not present in the literature except for handbooks about the practical side of facilitation. In fact, scientific research on workshops has not been prevalent at all. The empirical findings of this research will give insight in engagement trends that can be observed during workshops. The findings of this research will lead to recommendations for facilitators for the design and facilitation of a workshop and others who lead groups. The last goal is to create an instrument, which can be used as a self-report for participants on their level of engagement, among other things. This data will contain the ingredients for an evaluation of the workshop afterwards to improve future workshop design and facilitation.

The literature research in this paper explores the concept of engagement and aims to reveal determinants of engagement, which can possibly be transferred to workshops. An empirical research consisting of interviews with facilitators and data from workshops intends to reveal which factors have a positive and which a negative influence on the participant engagement in workshops. From observations and reports from participants, cause and effect become visible in trends. When the findings are combined, a more comprehensible picture of the determinants for participant engagement in a workshop and their underlying principles will be constructed.
There are no ultimate means to a successful workshop, because there are countless factors involved. Still, insight in these factors and their influence on participant engagement will most likely increase the participant engagement in the workshop. This will result in a more effective workshop and, consequently, a better end result.

1.3.3 RESEARCH QUESTIONS

The overall research question will be:

What does the concept of workshop participant engagement contain and how can it be influenced?

Because research on engagement has been done in fields like GSS sessions and gaming (Clawson and Bostrom, 1993; Harteveld *et al.*, 2009; de Vreede *et al.*,2003), these results form a stable foundation to answer this question. However, more exploration is done in these and other scientific fields such as group dynamics, learning, and organizational behaviour. Therefore, the first sub-question is:

How can the concept of workshop participant engagement be deconstructed and subsequently constructed with the knowledge from gaming, group dynamics, organizational behaviour, and learning?

During the empirical part of the research the focus lies on the observations of the participants and the facilitator. On the one hand, the process will be documented (specifying the methods and techniques used) and special attention will be given to the participant's behaviour that indicates engagement and disengagement. On the other hand, participants are asked to report on their level of engagement. Although it is unlikely that the facilitator is not actively engaged, because (s)he leads the process, it is, however, also good to monitor his or her level of engagement. Furthermore, the facilitator will probably have own ideas about positive and negative influences during a workshop which is why eleven professional facilitators are interviewed. The sub-questions leading the empirical research are:

Which factors influence workshop participant engagement, how do workshop participants experience their engagement, and how do facilitators experience workshop participant engagement?

The information derived from the observations during several workshops together with the data derived from the interviews with facilitators can result in an answer to these questions. Ultimately, comparing the results obtained in the different workshops leads to the answer of the main research question. The gained knowledge in this research is made operational for workshop facilitators. Therefore, the last sub-question is:

How can workshop facilitators use the knowledge on participant engagement to increase the effectiveness of their workshops?

1.3.4 SCOPE

The workshops that will be assessed empirically are directed to the Dutch government and are facilitated by Het Buitenhuis in The Hague. The questions and problems that are tackled during the workshops vary from risk analysis, integrity analysis, creating a vision, and other organizational questions. Almost each workshop has as goal to end with a physical deliverable. Also workshops which main focus is creating cohesion within the group or other aspects of group culture generally have a deliverable about the content as well. The motivations to take up a workshop are also divers; change of environment, guidance by a facilitator, gather the most important stakeholders, effective and efficient collaboration. The timeframe of a workshop differs from a few hours until a full day. The assessed workshops can be part of a series, although each workshop has its own goal and deliverable.

The observations during the workshops centre around participant engagement in that moment. It is expected that the initial engagement with the handled subject in the workshop and the goal to be achieved also play a part in the engagement during the workshop. The workshop's effectiveness also depends on how the attended matters in the workshop are transferred to work life afterwards. For instance, a workshop deliverable, like a new vision, can be created during a workshop, but communicating this to the rank-and-file is a step that has to be taken after the workshop. Another example is that after a risk analysis measures against high risks have to be implemented. Out of scope for this research is the follow up whether to see if implementation of the deliverable took place. The impact of the workshops on the group afterwards or on the organization is not investigated. However, it is assumed that when the participants in a workshop are engaged with the goal and support the workshop's deliverable, they will put an effort in the implementation and communication of the result. When participants are not engaged in the outcome, it is likely they do not feel as responsible for the course of implementation.

1.4 SCIENTIFIC BACKGROUND

There are many handbooks about facilitating workshops and about methods and techniques that can be used in workshops. However, the available information is mostly concentrated on the practical side of workshops, the design. Facilitated workshops in the scientific literature have not been specifically studied as such. The available literature is more about the content handled during workshops, because they are often used as a method for a various set of goals. Examples of these goals are disseminating knowledge or practices (e.g., Crosby, 2009; Haggerty *et al.*, 2002; Preszler, 2009; Tanner and Hale, 2002) and discussions among experts (e.g., Bullough and Kridel, 2002; Chapman *et al.*, 1996). The focus of these researches are different, but the use of workshops shows to be effective in reaching certain goals. Preszler (2009) found that the general learning skills and exam grades were increased for biology students after having participated in a workshop on topic. Bullough and Kridel (2002) report that conditions to maximize opportunities for

informal interaction were created during their workshop. This increased the exploration of personal and professional problems and issues. It is also shown that a workshop is not a guarantee that the ultimate goal is reached. There are examples of participants highly valuating the workshop but where implementation of the workshop's subject failed to occur afterwards (Tanner and Hale, 2002).

More attention in the known literature is, for example, given to sessions with Group Support Systems (GSS). GSS is commonly used in a workshop setting; a facilitator guides the participants through the different steps to reach a specified goal. It is likely that some of the findings in this field are applicable to a broader set of workshops. The role of the facilitator is likely to be similar in GSS sessions as in workshops without the use of GSS. Clawson and Bostrom (1993) made a list with 16 dimensions of facilitator role behaviour for GSS sessions of which only two dimensions involve technology; 'Appropriate selects and prepares technology' and 'Creates comfort with and promotes understanding of the technology and technology outputs'. Still, even when GSS is not used a facilitator is bound to design a workshop beforehand. When no computer technology is used, other methods, games, and techniques will have to be chosen and prepared. During the workshop the facilitator's role is to make sure all participants understand the methods. Therefore, even these two dimensions that originally focus on technology are important in workshops in general when technology is seen in the broader meaning of the word.

Lessons learned from failed GSS sessions also provide good insights. For instance , it is important for participants to fully understand the goal of the meeting. Moreover, this goal has to be interpreted the same way by all participants. Also the deliverables have to be apparent. During the process there should be enough time for discussion among the participants (de Vreede *et al.*,2003). These lessons are likely to be important for all kind of workshops. In some of the workshops from the empirical research GSS technology is used. To this is referred to as the Group Decision Room (GDR) further on it this research.

The field of gaming (e.g. Duke, 1974; Meadows, 1999) also implies directions for workshops. This can be divided into fields such as gaming-simulation, serious gaming, leisure game playing. Although there are many ways to classify game components, a straightforward approach is provided by Harteveld *et al.* (2009). In their serious game design philosophy, tensions exist between the three major components: Meaning, Reality, and Play. Meaning is the component that is related to the goal. With the help of theories from learning sciences, psychology, and semiotics, the game can be constructed in such a way that the participants acquire knowledge or receive a specific message. The second component Reality is the representation of reality in the game. The component Play consists of '*technology behind games, such as artificial intelligence and computer graphics; the criteria for developing good games, such as engagement, fun, and immersion; and game elements, such as rules, challenges, competition, and scores*.' (Harteveld *et al.*, 2009, p.9). All three components are important in a serious game; if it is no fun, you will stop playing; if the intended learning effect is not attained, there is no use in playing; if the

game is not realistic, it is more difficult to transfer the knowledge learned in the serious game to the regular work environment.
Besides the fact that games are sometimes used within a workshop, there are a few similarities between serious games and workshops. The most obvious parallel is that they both put the participants in an environment other than the usual. For workshops it's probable that these components, as mentioned earlier, are important too. A workshop without the component Meaning incorporated can result in a lost day for all participants because the goal is not reached. On the other hand, a workshop in which the Reality component is not present is likely not to be taken seriously by the participants. The last component Play is probably different from workshops in general. Although having fun will keep the participants engaged, fun is probably not necessary for a workshop to be successful. Seriously engaged participants can come to the projected result with a satisfied feeling afterwards without having had serious fun. Having said this, without the component Play the workshop can result in the opposite of fun; boredom. This is definitely a factor that will drop the attention of the participants.

The concept of engagement is extensively studied in the gaming literature. For example, Brockmeyer *et al.* (2009) developed an engagement scale for video game player. This scale can show the highest state of absorption in which an altered state of consciousness is reached by the video game player. While it is unexpected and undesirable that workshop participants reach this state, his engagement scale could define some basics for the research on engagement.

Yet another scientific field that explored the concept of engagement is that of organizational behaviour. Difference is made between four types of engagement; personal engagement, burnout/engagement, work engagement, and employee engagement (Simpson, 2009). An accessible questionnaire used to measure work engagement is the Utrecht Work Engagement Scale (Seppälä *et al.,* 2009). It could also be informative to look at aspects of these kind of engagements to see if elements can be transferred to the workshop setting.

1.5 OUTLINE

This research study consists of seven chapters. Chapter 2 describes the research design with its underlying principles. The choices regarding the research strategies, the case selection, the data collection techniques, and the analysis strategies are presented (section 2.2). Because measuring instruments had to be developed for the empirical research, a section is devoted on that as well (section 2.3). Chapter 3 follows with the results of the literature research. First, the concept engagement is explored in four different research disciplines (section 3.1). It becomes apparent in which contexts engagement is used and studied. Because workshop participant engagement has not been the focus of research in the past, literature on other forms of engagement is explored to discover factors that are of influence on engagement. Twelve determinants are found (section 3.2). The factors are put into a conceptual model to show how they are connected to engagement and to each

other (section 3.3). This model contains the factors, which are suspected to be important for workshop participants to engage as well. In Chapter 4, the results of interviews with workshop facilitators are presented. Professional facilitators experience a multitude of workshops in which participants and therefore their group differ constantly. These professionals' point of views about different aspects of participant engagement is invaluable information (section 4.1 to 4.4). The results are compared to those from the literature research (section 4.5).

Chapter 5 reports on the empirical findings for all of the eleven cases separately. A second analysis phase is described in Chapter 6 where the data from the eleven workshops are combined to draw conclusions concerning different variables (section 6.1 to 6.3). The twelve factors from the conceptual model on workshop participant engagement are each discussed based on the results of the analyses (section 6.4) followed by a discussion about the model itself (section 6.5). Furthermore, a workshop participant feedback instrument is developed in which workshop participants can report on their engagement and other topics during the workshops (section 6.6). The final chapter, Chapter 7, consists of the recommendations for workshop facilitators in particular (section 7.1) and for group leaders in general (section 7.2), the conclusion (section 7.3), and limitations and future research (section 7.4).

CHAPTER 2 RESEARCH DESIGN

In this chapter, the setup of the research is illustrated. The basic assumptions on which the research is based, need to be grounded to mitigate the possibility that the used methods are questioned. However, even though the research design is elaborate, the constraints of this research prevent the research from being conclusive. Time, budget and workshop availability constraints are the most important obstacles.
First, the general approach is shown (section 2.1). Second, the empirical research design including the choices made regarding the research strategies, the case selection, the data collection techniques, and the analysis strategies are presented (section 2.2). Third, the items needed to measure engagement are described (section 2.3). This includes the workshop participant engagement scale, the self-reporting instrument, the case study protocol, and the questions for the interviews with the facilitators. Last, a small paragraph illustrates how the research is concluded (section 2.4).

2.1 GENERAL APPROACH

This research consists of two parts; a theoretical part based upon literature, and an empirical part that uses the workshops facilitated by Het Buitenhuis as case studies. Both parts started simultaneously. Still, before a commence can be made with the empirical research, the research design was constructed and the measuring instruments had to be at hand. The overall research design is visualized in Figure 2.1. Below, an extensive explanation on the research design is given to transfer the line of reasoning to the reader.
The first part of the literature research focuses on constructing a valid research design for the empirical research. The proposed empirical research design and the instruments needed for this purpose are described in section 2.2.
The second and larger part of the literature research aims to get deeper into the concept of engagement. Engagement is a term used in different research disciplines and those that are to be explored are learning, serious gaming, organizational behaviour, and group research. Influential factors on engagement will afloat simultaneously. In this research engagement is explored from a workshop perspective, therefore, the findings will be reflected on this environment.

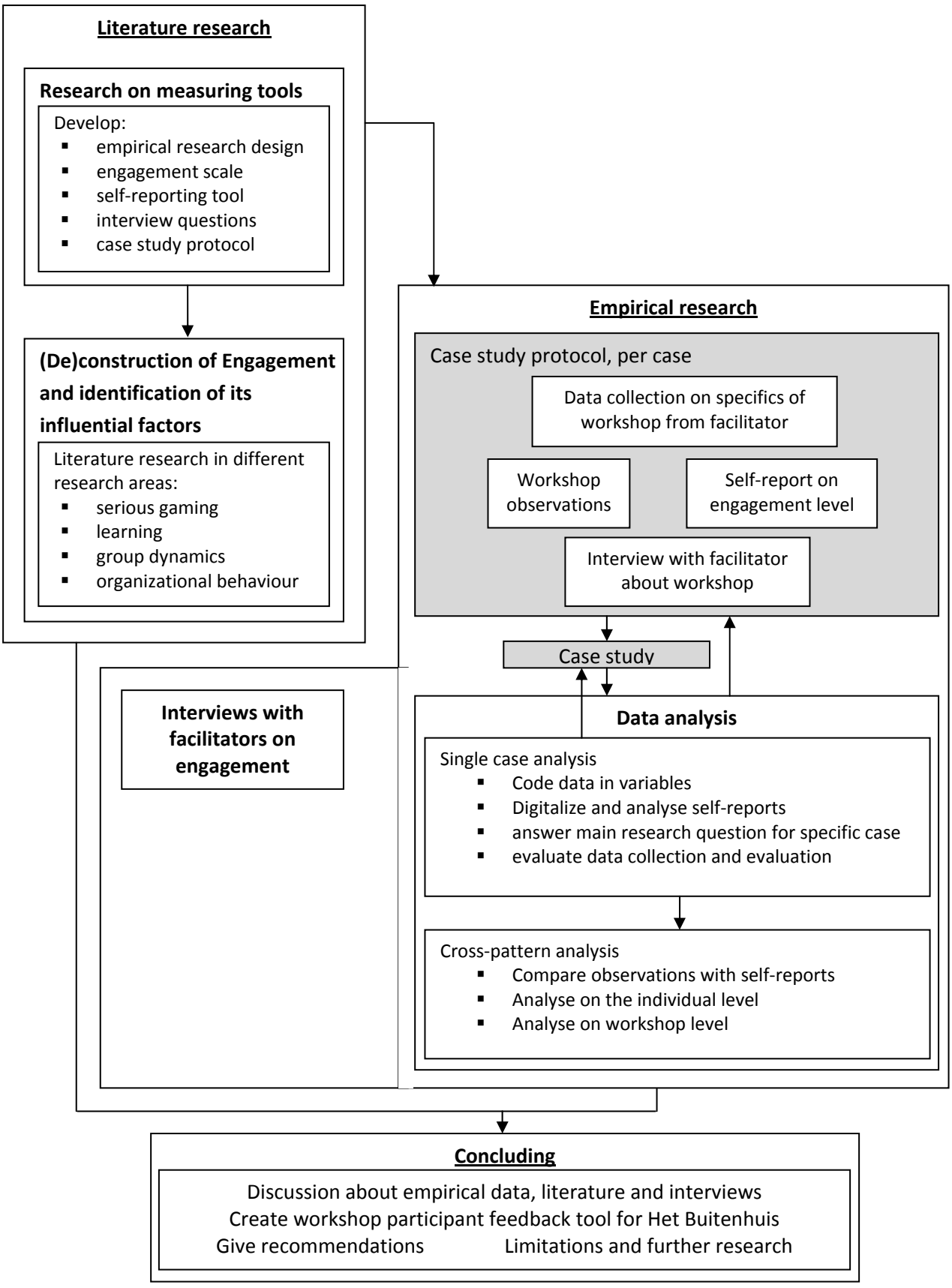


Figure 2.1: Schematic of research design

2.2 EMPIRICAL RESEARCH DESIGN

The empirical research design is based on various literature promulgating different views on how to do case study research. The incorporation of these varying views has lead to the construction of the research design as written below.

2.2.1 RESEARCH STRATEGIES

The empirical research is exploratory. The focus lies on the triggers that increase or decrease participant engagement. Each workshop is seen as one case. The research's main component is participant observation in combination with self-reports filled in by workshop participants. The qualitative approach of case study research is chosen because this is the best way to understand the occurring complexities and processes during a workshop; It is expected that, among other things, workshop methods and techniques, the role adopted by the facilitator, verbal signals, and nonverbal signals are important data. These data can only be acquired with qualitative case study research with participant observation in particular. One of the reasons is that feelings, behaviour, and interactions are hard to articulate. Secondly, the participants have to behave as normal as possible. Because human behaviour is affected by the situation in which (s)he is in, the research will have to be conducted in the most realistic environment. Therefore, an experimental setting would not be a good option. The option of electronic recording is for the same reason excluded. The final reason for a qualitative research design is the uncertainty concerning the variables that are researched (Marshall and Rossman, 1989). Hence, flexibility in de research design is very important (Glaser and Strauss, 1967). The most important variables and signs will emerge during the case studies and is supported by the iterative process of data collection and data analysis (Eisenhardt, 2002; Yin, 2003).

2.2.2 CASE SELECTION

To increase the strength of the research, a multiple-case design is chosen (Yin, 2003). Theoretical sampling (Glaser and Strauss, 1967) is the basis for the case selection. However, because this research is part of an MSc thesis it is carried out within specific resource constraints (limited time and budget). Cases are selected from the workshops facilitated by Het Buitenhuis. Eleven workshops are evaluated for this research which are all seen as relatively small, individual cases. One of the most important issues regarding case selection is external validity. Replication logic can guarantee this (Yin, 2003). Replication logic consists of two parts; literal replication and theoretical replication (Eisenhardt, 2002). Literal replication means using a diverse as possible set of cases whereas theoretical replication means testing cases with the same context multiple times. When the data collected from the last case contributes only incrementally to the emerging theory, theoretical saturation is reached (Glaser and Strauss, 1967). This will ideally be when literal and theoretical replication are accomplished as well.

The facilitators of Het Buitenhuis all have their own areas of expertise. This means that the facilitator is somewhat linked to the goal and method used in the workshop. This inhibits

literal replication, because not all facilitators can be observed in all contexts. Theoretical replication took place in risk analysis sessions where the Group Decision Room (GDR) was used, but this was the only type of sessions that occurred many times. However, the most crucial constraint in this research is the time constraint combined with the period in which this research is held. During the summer months, the amount of workshops approaches zero. Therefore, all the workshops were potential cases for this research.

2.2.3 Data Collection Techniques

Next to participant observations during the workshop, the research design includes participant self-reports (quantitative data collection) and interviews with the facilitators. The data triangulation will lead to stronger evidence (Eisenhardt, 2002) and increases construct validity (Yin, 2003).

Flexibility in the research design is crucial when theory is build from case study research (Eisenhardt, 2002; Glaser and Strauss, 1967; Marshall and Rossman, 1989; Yin, 2003). Theory is defined as 'a set of principles on which an activity is based' (Concise Oxford English Dictionary, 2002). This research can be seen as a way of constructing a theory on workshop participant engagement. Where Glaser and Strauss (1967) suggest that an observer should start their observations blank, Yin (2003) states that propositions direct the attention to something that should be examined within the scope of the study. In case of participant engagement the propositions are rather vague. It is expected that there are several factors contributing to the engagement level of participants. These are likely to be:

- Relationships between the participants (hierarchy, knowledge level or personal wise)
- Facilitator (workshop design, roles taken)
- External distractions (phones etcetera)
- Starting expectations (commitment level, motivation)
- Goal (its sort, commitment to the goal)

These factors cannot all be observed unless directly asked to the participants. However, it is expected that more factors will become visible during the observations. Because of the purpose of this research, it is important to maintain a level of flexibility in order to change, enlarge, or contract the propositions. Other aspects of data collection should also be flexible and should be adjusted when a change is expected to provide new insights for the theory (Eisenhardt, 2002).
The specific data of a particular workshop about the relationships, the facilitator, starting expectations, and goal will be collected before the start of the workshop. This information is acquired by the facilitator as preparation for the workshop.

During the workshop, the participants and facilitator are observed. The observer is an outsider and does not take part in the workshop. The basic assumptions for observation are that 'behaviour is purposive and expressive of deeper values and beliefs' and 'humans, without being aware of it, are constantly engaged in adjustments to the presence and activities of other persons' (Marshall and Rossman, 1989). Special attention will be given

on signals that show a certain level of engagement. To these signals belong verbal as well as nonverbal signals, because body language can express unconscious thoughts. Difference is made between individual and group expressions.

With the self-reporting instrument participants scale their level of engagement at the moment of measurement. The tool consists of five pictures representing different states of engagement. The engagement scale will be explained to the participants before start of the workshop. Because the workshop consists of different steps, the measuring points will immediately follow each step. This design minimizes distraction created by the research. The result of this tool is quantitative data that represents the changes in the perceived engagement level of the participants. Due to strategic behaviour, it is possible that participants behave differently than their true feelings. An assumption with this strategy is that participants report their engagement level honest and accurate (Marshall and Rossman, 1989). It is important to ensure participants there will be no disclosure of data and that the data are anonymous.
The facilitators at Het Buitenhuis will be interviewed after the workshop. Open questions are used to unravel the facilitator's ideas to reflect on the workshop and how to increase participant engagement in future workshops. It is expected that facilitators have their own ideas on how to get and keep the participants engaged, since it is one of their important roles as the facilitator.

2.2.4 Managing and Recording Data

To increase the reliability of the research, a case study database (Appendix III) is made (Yin, 2003). This database contains the raw data from the observations, self-reports, and interviews per case. After each workshop, the observations are immediately copied to prevent the original data from being mixed with analysed data. A dossier is made for each case.
To guide the data collection process, a case study protocol (see subsection 2.3.3) is made. This will increase the reliability of the study (Yin, 2003). The case study protocol contains a list with the basic information about the case. It also holds the most important instructions to make sure that all of the important aspects are communicated to the workshop participants. For instance, the explanation of the anonymity of the self-report is listed and can be checked when done. More information can be found below.

2.2.5 Data Analysis Strategies

The first step is analysing each case individually, the so-called within-case analysis (Eisenhardt, 2002). The initial transformation of the data includes:

- Code observation and interview data in relevant variables (and create if necessary);
- Digitalize data from the self-reports, plot the data in time with the sequential steps, and analyse them;
- Answer research questions for specific case;
- Evaluate data collection and evaluation and adjust accordingly.

All this information is collected in the case study database, separated from the raw material, the field notes, to prevent confusion on the moment of generation of the data. The within-case analysis should be finished before another case is assessed (Huberman and Miles, 1983). Exceptions to this rule can be made when time constraints are heavily pressing on the data collection.

The second step is to analyse the data searching for cross-case patterns. This will be done in different dimensions: 1) the data from the observations are compared to those of the self-reports; 2) the self-reports are analysed on the individual level by aggregating the self-report data based on method, group size, and other variables; 3) an analysis on workshop level is described comparing the workshops with each other. Because the empirical part is mainly exploratory final conclusions will not be drawn, but observed trends are reported.

In this research design, data collection and data analysis are iterative steps. The chain of evidence that is built in this iterative progression increases construct validity (Yin, 2003). It is expected that specific patterns become visible. These patterns will become visible during the data analysis steps. In the verification process the subsequent cases will be used to match with the proposed pattern to strengthen internal validity (Eisenhardt, 2002; Yin, 2003). Apart from building evidence, patterns will be refined after each case. When theoretic saturation is reached no more cases are added and the analysis of data is ended (Glaser and Strauss, 1967). Still, in this research the point of theoretic saturation was not reached due to time and case availability constraints.

2.2.6 Researcher's Role Management

A researcher doing empirical research by observations and interviews needs several skills. First, (s)he has to be a good listener. The words used by the workshop participants and facilitator are 'the labels for the actual process and behaviour that are to be explained' (Glaser and Strauss, 1967). Second, (s)he also needs to be a good observer, because also nonverbal signs are important to assess engagement. Third, because the concepts studied are emerging, (s)he has to be adaptive and flexible, and should be unbiased on the outcomes beforehand. Fourth, the questions to be asked in an interview have to be open and only the correct questions lead to the right answers. Last, the researcher will need a firm grasp of the issues being studied (Yin, 2003). Before the data collection during each workshop starts, the observer informs the participants about his or her role, what kind of information will be documented, what the data will be used for, and in what manner the participants could aid in the research (Marshall and Rossman, 1989).

2.3 Measuring Instruments

As mentioned, the different instruments needed in the empirical research had to be selected or fabricated. Within this section the different instruments are introduced.

2.3.1 SCALE FOR WORKSHOP PARTICIPANT ENGAGEMENT

For the workshop participants to self-report their level of engagement, a scale has to be at hand. A quick scan through literature on engagement and a broader internet search did not provide any scale that could be used directly. Therefore, an engagement scale has to be constructed from the available information. The focus of the quick scan and the internet search were expressions and signals of engagement in different settings. In-depth research was postponed to the second stage of the literature research.

The concept of engagement is used in different settings. Sometimes it is used in a very general way when it entails both participation and involvement (Hwang and Thorn, 1999). In other cases engagement is more specified, like Scott and Walcak (2009) use it. They measured engagement as a sum of absorption, interest, fun, and attention and found that concentration on and absorption by a task are indicators of engagement.

In the field of student engagement, Rumberger and Larson (1998) say that engagement is characterized by two components; social engagement and academic engagement. The first component is about the behaviour of the students and their attendance to social events. The latter is focussed on the mentality and the preparation for class. When this is compared to the participant engagement in workshops, social engagement is likely to be the reason why participants are attending a workshop and how they behave during one. Academic engagement, which could be rephrased as project engagement, is expected to be determined before the start of the workshop due to various factors, such as the familiarity among the participants. Assor *et al.* (2005) on their turn define two modes of academic engagement. Intensive academic engagement shows when a 'student invests a great deal of effort in learning and shows high levels of attention and persistence while studying'. The second mode is called restricted academic engagement. This is the case when 'students only study what is required to avoid unpleasant teacher responses or to secure decent grates'. In a work related environment this could be linked to the type and level of commitment.

In a more general setting, Kahn (1990) explores the continuum from personal engagement to personal disengagement. He pins the concept down to how people use themselves physically, cognitively, and emotionally in the role[1] they play. He found that when somebody is personally engaged, (s)he becomes physically involved in the task at hand, gets cognitively alert in/during the process, and levels with the feelings and ideas of others. At the complete other end of the continuum, being personally disengaged, the opposite happens.

Cheyne *et al.* (2009) explored disengagement. They defined three sequential states of task disengagement, also known as mind wandering. The first state is 'brief and/or partial waning of detailed processing of moment-to-moment stimulus meaning'. In the second state a person can still respond automatically while not mentally present at the task at

[1] Here, it is assumed that people occupy roles at work in which they can vary the degree of their selves. The more one can incorporate their self in a role, the more motivated one is (Kahn, 1990).

hand. When a person is in the third state, only heavy disruptions from the environment will lead to a response.

Another type of engagement that has been studied profoundly is employee engagement. For instance, Xantholoulou *et al.* (2009) described engaged employees as '[having] high levels of energy, are enthusiastic about their work, and they are fully immersed in their job so that time flies'. The Utrecht Work Engagement Scale (UWES) is a survey which has been developed to measure work engagement. It is based on three dimensions that together determine engagement; vigour (high energy level and persistence), dedication (enthusiasm, inspiration, challenge) and absorption (concentrated) (Seppälä, 2009). Management consultancies, in their findings, also report on employee engagement. Employee engagement is high when (s)he is involved in work activities and does it with enthusiasm (Seijts and Cim, 2006). Others signs of high employee engagement are longing to be a member of the organization, having a positive attitude towards the organization, and doing the best possible to contribute to the success of the organization (Hewitt, 2010). These indications, however, could also be described as commitment.

A three point scale for employee engagement was developed by Gallup, Inc. (2006). On the first level we find engaged employees who work with passion and are deeply connected to their organization. The middle level is occupied by not-engaged employees who are putting time, but no energy or passion into their work. The last level is where we find the actively disengaged employees that are busy acting out their discontent.

Brockmeyer *et al.* (2009) developed an engagement scale for video-gamers. The Game Engagement Questionnaire (GEQ) measures engagement based on a scale that starts with immersion and ends at the state of absorption via presence and flow. In this view, immersion is defined as being engaged but with responsiveness to the environment. Presence here means when someone experiences the situation as if being in a virtual environment. Flow is a description of feelings of enjoyment when skills and challenge are balanced. The highest state of engagement is psychological absorption, which is an altered state of consciousness.

The last type of engagement used in this quick scan is customer engagement. The importance of customer engagement in marketing strategies has lead to different scales. Smits (2009) displays the value for an organization as a function of the level of customer engagement. In an increasing order of engagement the scale runs from consuming to joining to participating and creating to spreading and finally to evangelizing a company, product or service. Braakman (2006) scaled it slightly different; listen, speak, activate, support, embrace. Both scales show an increase in activities carried out by the customer.

From the collected information on engagement it shows that not only the concept of engagement is used for different situations, but also concepts like absorption and involvement are used with different meanings. However, some indicators are mentioned more than others. Enthusiasm and passionate are both mentioned several times and differ

only on intensity[2]. Absorption and concentration are also mentioned multiple times, once as overlapping and once as different entities. Use of the Concise Oxford English Dictionary (2002) shows that *concentrate* means '*focus all one's attention or mental effort on*' and *absorbed* means '*engross the attention of*', which does not provide a clear cut between the two. Here, concentration is used as focussing by choice, where absorption is the state in which concentration comes automatically. Cognitive alertness, interest, and attention can also be grouped to the same category. Being physically involved corresponds with high energy levels, because these indicators can easily be observed. Yet another group can be formed with the terms being immersed, involved and connected. Five states on the disengagement – engagement continuum are distinguished (physical presence a requirement) in Figure 2.2 below.

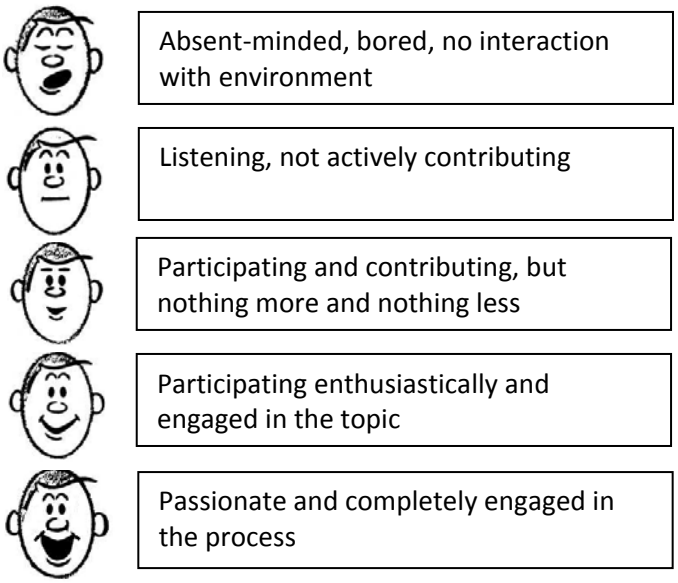


Figure 2.2: Engagement scale[3]

2.3.2 SELF-REPORTING INSTRUMENT

The reporting tool is an A6-size booklet. Appendix I shows the tool's content. The characterizations of the engagement scale are translated in statements in the I-form to make them personal and easier for the participants to identify with.

The self-report was tested during the first workshops, which can be seen as pilot cases. The explanation of the self-reports takes some time, because it is crucial that participants understand what they are judging. The explanation of the scale, which is included in the instrument, is read out loud. Because the participants have to assess the same variable several times it is of uttermost importance that the data does not get mixed up. The choice to represent the measuring points with different colours turned out to be crucial for its

[2] Concise Oxford English Dictionary (2002): *Motivation* means '*enthusiasm*'. *Enthusiasm* is '*intense enjoyment, interest, or approval*'. *Passionate*: '*an intense enthusiasm for something*'.
[3] Source original pictures: http://www.tpub.com/content/draftsman/14263/img/14263_203_1.jpg

success. Each time the colour of the measuring point is not only communicated verbally but also shown to minimize mix ups. Still, even when the importance of each data point was stressed during the introduction and the measures described here, some people still used the wrong colour. This was possible because more scales were included in the self-report than planned to avoid shortage of scales when the programme is changed during the workshop. In cases where the mistake is obvious (e.g. another blue scale is used perhaps due to (partial) colour blindness), the data can still be used. However, when it is not obvious which data belonged to which measuring point, the data from that point on are discarded. To overcome using the wrong colour, the scales on the different coloured papers were extended with a distinctive letter to indicate the step so that (partially) colour blindness is less big of a problem. The letter was read out loud together with the colour of the scale, which was also shown. In the first set of self-reports, the ordering of the colours was mixed up for a few instruments, making it unnecessarily difficult for the participants. A quality improvement in the construction of the self-reports has solved this issue.

Sometimes people stopped filling in the engagement scales about halfway. This is inevitable and also happens in researches where participants are asked to fill in a questionnaire, because participation in the research is voluntary. There is no measure to prevent this other than explaining its importance for this research.

THE HAWTHORNE EFFECT

The Hawthorne effect is the effect of the observer on the participants and the facilitator in the studied workshops. This effect should be minimized as much as possible. It is likely that participants in a workshop where the self-reporting instrument was used became more conscious of their engagement level. Assuming this, the increase in consciousness can have a negative or a positive effect on the engagement. A possible positive effect could be the realization that the group effectively works towards the set goal. A possible negative effect could be that the interruption is pulling the participants out of their work flow. Because the outcome of the self-reports does not affect the participants, there is no direct reason for them to change their perception of their engagement. In this research set-up, due to the explanation of the research and the anonymity of the self-report, it is not probable that the Hawthorne effect is large.

Attracting the attention for the self-report at the measuring points takes some time and is quite invasive on the process. Nevertheless, after two rounds this decreases significantly because the participants know what to do. Workshops in which people are sitting behind their computer, like in a GDR session, are most convenient to use the self-report. In sessions where the participants are not bound to one place, the group has to take the self-report with them or collect it on the time of measuring. Consequently, it is essential that the facilitator(s) are constantly consulted by the observer on what the next step will bring, and whether the people will return to their place or not. It is obvious that keeping a close contact with the facilitator is important because (s)he is not used to the interruption. A good cooperation smoothens the process of asking the participants' attention. When

possible, the facilitator takes over the task of directing people to the self-report to reduce the invasiveness of it even more.

2.3.3 CASE STUDY PROTOCOL

The case study protocol comprises what the participants are told and which data has to be gathered before, during, and after a workshop. An important part of the protocol is the recording method of the different steps and the participants' and facilitator's reactions. At the end of the workshop, the facilitator will be asked a few open questions. Depending on the progress and atmosphere during the workshop questions can be added focussing on particular events. Clarifications of steps will also be part of the interview when need for the information arises. The protocol was tested during the first attended workshop to see whether the objectives are feasible (Yin, 2003). See Appendix II for the case study protocol.

At the start of the workshop, during the introduction round, time is taken to explain the research and the measuring instruments. The first time, the story was not as solid as required and this was improved in the following workshops to ensure a complete story towards the participants. Experience has shown that the explanation of the research and the self-report should be at the start of the workshop, right after the general introduction of Het Buitenhuis and before the goal of the workshop is explained. Immediately following this introduction the participants are asked to report on their initial level on engagement.

With the information from the facilitator it was possible to fill the basic workshop statistics in on the case study protocol beforehand. The sequential steps of the script are determined. However, in all the pilots, the workshop script was changed due to the situation that presented itself during the workshop (e.g. steps take longer, order of steps change, steps change). The initial idea to discuss the different steps more thoroughly with the facilitator beforehand and to ask for the corresponding estimated time is rejected based on the evident unpredictability of the process. The planning of the measuring moments can be improved with more information, but changes in the workshop programme cannot be prevented. The facilitator has the obligation to steer the group in his/her best possible way, which requires flexibility. This shows the importance of communication between the observer and the facilitator.
The case study protocol supported the observations very well, due to the directions for observations This was done by four categories in which comments can be made (external/facilitator influences, actions, verbal responses, body-language responses).

2.3.4 Interview Questions for Facilitator

All of the facilitators of Het Buitenhuis and five external facilitators are interviewed about the concept of engagement. Guidance during this interview were seven open questions that were posed. Some questions focussed on examples and others focussed on perceptions. The questions tried to approach the concept engagement from different angles. The questions are:

- How do you notice the engagement of the participants? To what do you pay attention?
- When do you not want a high engagement level of the participants? And when do you want a high engagement level?
- How much importance do you ascribe to participant engagement? Why is that?
- Do you have examples of a sudden decrease in engagement? What caused it?
- Do you have examples of a sudden increase in engagement? What caused it?
- What do you see as the most important determinants of engagement? Which factors can you influence and which not?
- Do you try to influence the engagement of participants? How do you do that?

2.4 Concluding The Research

When data collection and evaluation of the separate parts are completed, the data will be combined. The findings are discussed in the light of the literature review and the interviews with the facilitators. From these discussions, recommendations for workshop facilitators and recommendations for other group leaders are given. In addition, a self-reporting instrument that can be used for future workshops is developed for Het Buitenhuis. After an section about the overall research conclusions, the limitations of this research are discussed and further research on workshop participant engagement is proposed.

CHAPTER 3 WORKSHOP PARTICIPANT ENGAGEMENT

As described in Chapter 2, a literature review on engagement is performed. Engagement specifically of workshop participants has not been studied before. Therefore, research results of engagement in other settings can be used to build a conceptual model in which the influential factors on workshop participant engagement can be visualized. The first objective of the literature research is to deconstruct engagement by listing what kinds of engagement are scientifically studied. The perceived connection with workshop participant engagement is elucidated which will form the circumstances to construct the concept of 'workshop participant engagement' (section 3.1). When the relevant scientific contexts are explicated, the factors influencing engagement are listed. In this inventory, the significance of the factors that are of influence on the engagement of workshop participants is also discussed (section 3.2). The preliminary model of the identified determinants of workshop participant engagement is built, showing the interrelation between the factors (section 3.3). This model is a first step towards the answer to the main research question how participants are engaged in workshops.

3.1 (DE)CONSTRUCTING 'ENGAGEMENT'

The literature used for the investigation into engagement is not always easy to classify into a certain scientific research area, because of overlapping topics. A good as possible distinction is made for structural purposes. A classification into four research areas has resulted in a distinction between serious gaming, learning, organizational behaviour/working, and group research. In the following subsections, the different forms of engagement are discussed. Flow, a concept introduced by Czikszentmihalyi (1990), receives more attention since it has many similarities with engagement Concluding this section, the findings in literature create the conditions to define the concept of weorkshop participant engagement.

3.1.1 ENGAGEMENT IN GAMING

Engagement is a very important concept in gaming. Engagement is inherent to gaming. Obviously, an engaged person will continue playing, while a disengaged person will stop. Commercial games need players to be engaged, because that will mean that the game is fun and, consequently, more games will be sold. Serious games have another main purpose; players should learn by playing. However, this does not reduce the importance of the game being engaging. Harteveld *et al.* (2009) have identified three equally important components that need to be balanced in the development of games. These components

are Meaning, Reality, and Play. Meaning is the component which is related to the goal. With the help of theories from learning sciences, psychology, and semiotics, the game can be constructed in such a way that the participants acquire knowledge or receive a specific message.
The second component Reality is the representation of reality in the game. The component Play consists of "*technology behind games, such as artificial intelligence and computer graphics; the criteria for developing good games, such as engagement, fun, and immersion; and game elements, such as rules, challenges, competition, and scores."* (Harteveld *et al*., 2009, p.9). In this view, engagement is a factor that determines Play together with fun and immersion.

In the gaming literature, there is no unanimous meaning for concepts like engagement, immersion, absorption, and many others. Brockmeyer *et al.* (2009) developed an engagement scale for video-gamers, in which the concept engagement is used as a generic indicator for game involvement. On this scale engagement is depicted starting at immersion followed by presence to flow and ending at psychological absorption. On this scale; immersion is the state of being engaged in playing while maintaining some consciousness of the environment; presence is having the idea of being inside a virtual reality; flow (see subsection 3.1.5) is the state of enjoyment in which the player feels one with the activity and lost the connection with time; psychological absorption happens when total engagement in the present experience occurs with an altered state of consciousness. Psychological absorption differs from flow because its experience does not have to be intrinsically motivated. Because the video-game engagement scale perceives immersion as a state of engagement, it is useful to look at the necessary conditions to create immersion in video-games. Mentioned are the user expectations that have to be taken into account, the possibilities in game play for the player, and the consistency in the game environment (McMahan, 2003).

The definitions of immersion and absorption used by Pine and Gilmore (1999) (Ermi and Mäyrä, 2005) seem to be swapped compared to those used by Brockmeyer *et al.* They conceptualized four game play experiences along two dimensions. The first dimension is active versus passive participation, and the second dimension is the connection with the environment, running from absorption to immersion. They define absorption as the state in which direct attention is given to an experience, for example when watching television. Immersion is the feeling of being physically or virtually part of the experience itself, like when playing a video game. The resulting game play experiences are entertainment, aesthetic, escapist, and educational (absorption and active participation). Ermi and Mäyrä (2005) explored the concept of immersion and came to a subdivision in three aspects; sensory immersion (due to the audiovisual aspects of a game), imaginative immersion (due to identification with the game), and challenge-based immersion (due to the necessary skills). Despite of the fact immersion in this definition is unlikely to happen during a workshop at Het Buitenhuis, the principles underlying the different aspects can be important for participant engagement.

The last model discussed from the gaming literature is the game cycle. Commercial games are played repetitively because of the recurring loop of user judgements, user behaviour, and system feedback. When this game cycle can be realized in serious games, players will stay engaged due to the motivational forces of the game features. This active engagement is supportive for learning. However, instructional support is essential for a transfer of the learned aspects from the game to real life in order to create an effective learning environment (Garris *et al*., 2002).

Summarizing, engagement in the serious gaming literature is quite conceptualized. In different models engagement is connected with concepts like immersion and absorption, but the definition of the terms are not always identical. The importance of engagement lies in the fact that for a serious game to facilitate learning behaviour, game players have to play the game. Only an interesting enough game will keep the game players playing and thus learning. When these findings are translated to workshop participant engagement, this could indicate that a workshop ought to be interesting enough for the participants to contribute to goal attainment in the best possible way. Also, active engagement seems to be supportive of the participants' learning in the broader sense.

3.1.2 Engagement in Learning

In educational settings engagement is studied extensively. School dropout and school achievement are two of many reasons why the relationship between education and engagement is investigated. Based on student beliefs and goals six styles of engagement with learning can be distinguished. The engagement styles depend on the learning strategies adopted, for example the way to prepare for an exam, and the school achievements (Ainley, 1993). It was found that the behavioural dimension of school engagement, consisting of school attendance and discipline, can be used as estimation for school drop-out. Two other dimensions of school engagement, affective engagement (liking school and interest in school work) and cognitive

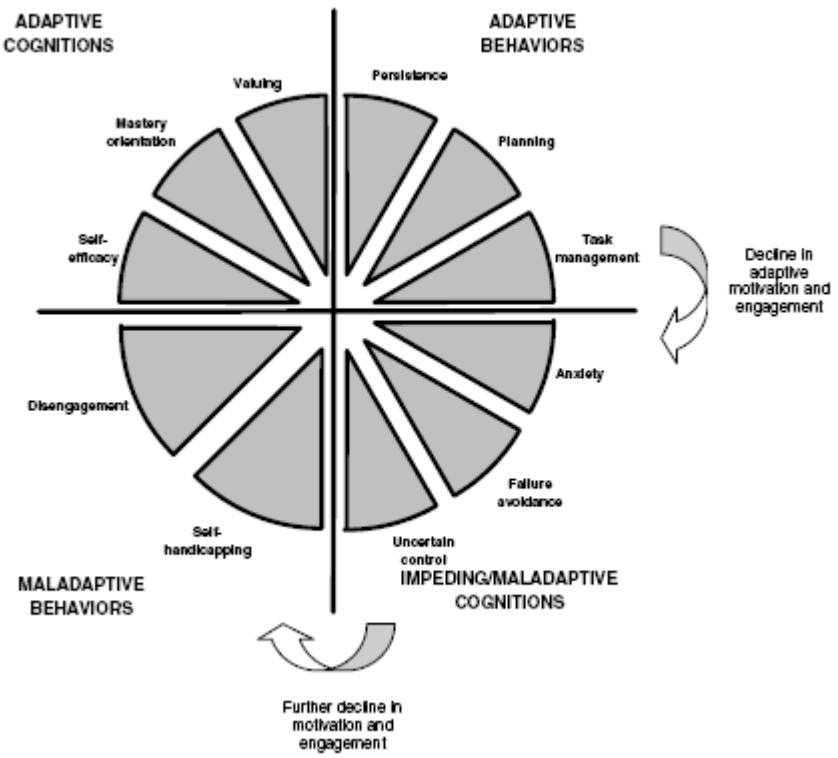


Figure 3.1: Engagement and Motivation Wheel (Martin, 2008)

engagement (the willingness to learn a language or mathematics), seem not to be related to school drop-out (Archambault, 2009). Research shows that student engagement in educational activities is positively related to learning, personal development and educational effectiveness. For instance, student success is higher for students participating in a learning community (Zhao and Kuh, 2004). Also the engagement of universities in their community seems to have a positive effect on the learning outcomes of their students. This for example shows the importance of the acts of an educational body in terms of educational engagement (Swanson, 2009).

Engagement theory can also be used to analyse educational programs. The four major requirements are diverse and engaged participants, a culture in which students and the educational body can meet outside the classroom, interactive learning experiences, and adequate financial and administrative resources. Moreover, engagement can also be an indicator of how the education meets the wishes of the students (Newswander and Borrego, 2009).

Yet another approach is taken in the Engagement and Motivation Wheel (Figure 3.1), which was created out of the need to combine theory and practice in a conceptual model. The slices are categorized in one of four dimensions including adaptive cognitions, adaptive behaviours, impeding / maladaptive cognitions, and maladaptive behaviours. Intervention on one or more of the sublevels increases student motivation and engagement and consequently decreases school dropout (Martin, 2008). Other research has focussed on how to increase student engagement by using tools (e.g. King and Robinson, 2009; Scott and Walcak, 2009) (see subsection 3.2.13).

The parallel of engagement studied in learning literature and game player engagement is that engagement of the student is also necessary for him/her to learn. School achievements depend on the engagement. A student not going to school is likely to become a school dropout; participation keeps student engaged with their school, which leads to better results. Intervening on student engagement reduces school dropout. For workshop participant engagement this indicates that participation might be important to stay engaged in the process, but also in the subject. Intervening on participant engagement can increase their learning and can lead to better results.

3.1.3 Engagement in the Work Space

An engaged employee is someone who is emotionally connected to the organization and cognitively vigilant. It means that the employee is committed, fascinated, attracted to, and inspired by their work. When employees are not engaged to reach the business objectives, it is very unlikely that these objectives will be reached. When management itself is not engaged, it is improbable that they can inspire their subordinates to be engaged with their job. Research has shown that employees who are highly or moderately engaged are of the opinion that their effort can make a positive contribution to the organization they work for. Additionally, employee engagement drives results. Consequently, organizations are looking for the factors that increase employee engagement (Seijts and Crim, 2006).

Another fact is that teams are used more often as a tool to accomplish tasks. Hence, teams are studied extensively. Apart from the factors that enhance team performance, effectiveness and other related outcomes, engagement of team members is examined. An example is the research on the effect of familiarity between team members. Results in this particular field are inconsistent. On the one hand, familiarity seems to increase the cohesiveness and, on the other hand, familiarity seems to enhance the chance on conflict within the team. However, speed levels and quality output is indeed higher for teams of which the members knew each other compared to teams consisting of members who did not know each other beforehand (Harrison *et al.*, 2003).

Table 3.1: Psychological Dimensions of Personal Conditions for Engagement and Disengagement identified by Kahn (1990)

Meaningfulness	**Psychological safety**	**Psychological availability**
Task characteristics ▪ Challenging ▪ Clear goal ▪ Varied ▪ Creative ▪ Autonomous	Interpersonal relationship ▪ Power and position differences are threatening ▪ People withdraw sooner from conflicts with superiors ▪ Trust and support	Physical energy ▪ Physical energy ▪ Strength ▪ Readiness
Role characteristics ▪ Work roles depend on job characteristics ▪ Roles carry status and influence	Group & intergroup dynamics ▪ Every social system has its own (unconscious) mentality	Emotional energy ▪ Employing and expressing the self in tasks uses emotions
Work interaction Rewarding interpersonal interactions with co-workers and clients promote: ▪ Dignity ▪ Self-appreciation ▪ Worthwhileness	Management style and process ▪ Supportive, resilient and clarifying management ▪ Authority figures have to show competence to secure path for subordinates	Insecurity ▪ Abilities, status, focus on tasks ▪ Self-consciousness level ▪ Perceived fit with organization and its purposes
	Organizational norms ▪ Work roles within the boundaries of organizational norms ▪ Norms regulate emotional and physical labour	Outside life ▪ Level of involvement in personal life ▪ Inspiration

In 1990, the psychological conditions for personal engagement and disengagement at work have been studied (Kahn, 1990). He defined three dimensions – meaningfulness, psychological safety, and psychological availability – in which other factors are listed. Table 3.1 summarises Kahn's findings. Now, twenty years later, this research still seems to be the most relevant one for this study. However, in the following twenty years many related concepts have been studied in different fields, which will be discussed in section 3.2. The findings in Kahn's research will be discussed in the subsection of the related factors.

Workshop participant engagement as studied in this research is a form of employee engagement. The workshops at Het Buitenhuis are for organizational purposes. Participants enter the workshop with a certain level of engagement on the subject. This research focuses on workshop participant engagement, because it drives the workshop's results.

3.1.4 Engagement in Groups

This part introduces research which cannot be classified under the previous sections. Poole *et al.* (2004) showed that, although the fragmentation of research in the field of group research, there are many overlapping perspectives. They identified nine perspectives based on the definition of groups, the focus, and the relative emphasis on various variables. For this research literature the psychodynamic, the functional, the conflict-power-status, the symbolic-interpretive, and the social identity perspective are used. These perspectives will not elaborated on in this research, but it gives an idea on what sources are consulted.

The psychodynamic perspective has a main focus on the emotional side of groups with past projects and problems as key inputs. The functional perspective focuses on group effectiveness and performance with the assumption that groups are goal oriented and that their effectiveness can be measured. The conflict-power-status perspective assumes that there are inequalities among members which influence group processes and outcomes. The symbolic-interpretive perspective concentrates on the social construction of groups and study outcomes like a common vision and member satisfaction. The last perspective discussed here, the social identity perspective, sees groups from the members' point of view in light of their identification with the group.

The engagement in groups is mostly overlapping with engagement of work teams. Most research on groups is done with work teams, but also laboratory settings in which students are used as test objects take place. Because the workshop participants are part of a group engagement of group members is of importance for this research.

3.1.5 Flow as Interpretation of Engagement

The flow concept originates from Czikszentmihalyi (1990). He describes flow as the state of enjoyment when a person is in the flow channel. The flow channel is the area in which somebody's skills match the challenges provided by the activity that person is doing (see Figure 3.2). Dependent on the task somebody can use a certain set of skills. When the difficulty of the task is too low compared to the skills, the person becomes bored. On the other hand, when the difficulty of the task is too high compared to his/ her skills, anxiety takes the overhand.
A requirement for flow is that the activity must be intrinsically rewarding. Czikszentmihalyi determines seven elements that are present – not necessarily all seven at the same time – when a person experiences flow. These are:

- A challenging activity that requires skills
- The merging of action and awareness; people stop being aware of themselves as separate from the actions they are performing
- Clear goals and feedback is immediate
- Concentration at the task at hand
- The sense of exercising control on the task at hand
- The loss of self-consciousness
- The transformation of time (Czikszentmihalyi, 1990)

Flow has mostly been studied in gaming literature. The elements of flow as described by Czikszentmihalyi can all be found in games (Cowley, 2008). As mentioned before, Brockmeyer *et al.* (2009) identified flow as a level of engagement. The concept of flow has been modified for games specifically into GameFlow. This construct has eight elements (concentration, challenge, player skills, control, clear goals, feedback, immersion, and social interaction) and corresponding criteria to ensure these elements are incorporated in the game (Sweetser and Wyeth, 2005). Based on this, Chen (2007) followed with a methodology for the design of games; elements of flow should be mixed and matched, user's experience should stay within his or her flow channel, users should be able to choose their own challenge level, and flow should not be interrupted during play.

Also in the scientific learning community flow has not stayed unnoticed. Research into e-learning has shown that flow experience creates a positive influence on the learning outcome. Additionally, the experience of flow results in a more positive attitude towards using a computer, which has a positive effect on the learning outcome (Ho and Kuo, 2010). This adds up to what Gee (2003) has found on how video games provide the right context to facilitate learning. His 36 learning principles include the flow elements, suggesting that flow is indeed promoting learning.

Flow in a workshop determines whether the participants experience the workshop as boring or too difficult. The first situation can happen when the methods are too straightforward or when the content discussed is of no importance to the group. The second situation can happen also content-wise or due to the method used.

The steps in a workshop have their own sub goals and feedback is immediate, because the group is simultaneously working on the same goal and everybody is physically present.

The comparison between flow and engagement can be made based on the seven elements mentioned above. When participants are fully engaged in a workshop, they have a clear goal in mind and get immediate feedback from their group members. While using their skills,

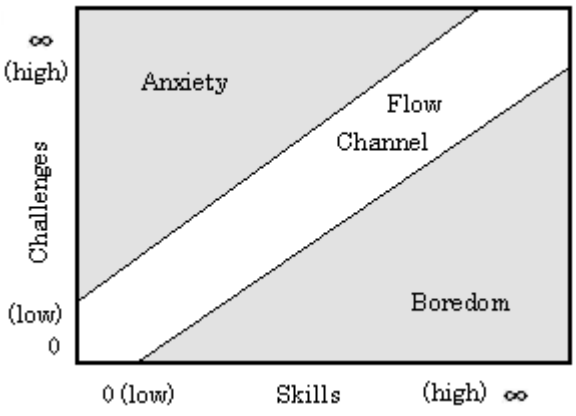


Figure 3.2: The flow channel (Czikszentmihalyi, 1990)

they will have the feeling that they can exercise control on the task at hand. Being concentrated at their performance, they could lose track of time. These five flow elements are elements of engagement as well. Two of the elements, the loss of self-consciousness and the merge of action and awareness, are less likely to occur in workshops in a work environment. Loss of self-consciousness is generally not advisable when high stakes are involved in a complex context. Therefore, it can be concluded that full engagement is a requirement for flow to occur, although this goes against Brockmeyer's interpretation of flow being a level of engagement.

3.1.6 CONSTRUCTION OF 'WORKSHOP PARTICIPANT ENGAGEMENT'

The deconstruction of the concept engagement is done by exploring the different types of engagement reported in scientific literature. The next step is to construct the concept 'workshop participants engagement'. With the use of section 1.2 Terminology, the following definition can be formulated.

***Definition workshop participant engagement**:*

The action by a participant of being connected on an emotional level to and having an interest in the (subject of the) workshop

The similarities between flow and engagement have lead to the following statement:

A **highly engaged workshop participant** is passionately interacting with his group members, while being concentrated on a clear goal, using his skills because he believe he can exercise control on the goal, while perhaps even losing track of time

Furthermore, the deconstruction of engagement has lead to the following implications of workshop participant engagement. These implications are important when workshop participant engagement is assessed in the empirical workshop, because they are the basis on which observations are made during the workshops at Het Buitenhuis.

Implications of workshop participant engagement:

- *A participant participates in the process*
- *A participant finds the (subject of the) workshop interesting enough to contribute to goal attainment in the best possible way*
- *A participant is actively learning more than when not engaged*
- *The workshop outcome will be of more quality compared to low engagement*
- *It can be influenced by interventions*

The scale for workshop participant engagement, defined in subsection 2.3.1, constitutes of five stages on the engagement – disengagement continuum. This scale makes the workshop participant engagement level operational. However, the appearance of the participants do not have to reflect their actual level of engagement. It can happen that participants are highly engaged, but do not want the other participants to know so. In contrary, it can happen that a participant acts if (s)he is highly engaged, but in fact does not care about the subject or the result of the workshop and acts because of ulterior motives. This strategic behaviour is shown by participants to fool others. It is therefore not possible for an observer to see past this behaviour when the observer has no extensive information about the context.
This strategic behaviour has to be taken into consideration when participants' observations during workshops are evaluated. The research design in this study combines self-reports of the engagement level with observations. Assuming that the workshop participants report on their true level of engagement due to the anonymity of the measuring instrument, it is probable to get some notion of strategic behaviour in workshops.

3.2 Determinants of Engagement

The concept of workshop participant engagement is the dependent variable in this research. The next step is to find out what the independent variables are that influence workshop participant engagement. The factors influencing engagement, which came forward from the literature on different kinds of engagement, are listed below. However, this list in this section is not complete. Due to time constraints a choice has been made to mention concepts that emerged in different scientific fields in the study on engagement.

The factors can be divided in three segments. The first segment consists of factors related to the individual workshop participants. Factors that are related to the group participating in the workshop belong to the second segment. The last segment comprises of external factors.
Each factor is explained together with its relation to engagement. The specific definition of the factor for this research is stated in a coloured frame, together with its relation with workshop participant engagement and how the factor can be observed during workshops. In section 3.3, the interrelatedness between the factors is illustrated.

3.2.1 Factors on the Individual Level

The factors belonging to this level are psychological safety, motivation, commitment, and personality and are elaborated below.

Psychological Safety

The need of psychological safety for learning behaviour has been shown in many cases. Psychological safety is defined by Edmondson (1999) as '*a shared belief held by members of a team that the team is safe for interpersonal risk taking*'. Members of a team face specific risks like being seen as *ignorant* as a result of asking questions, *incompetent* when

admitting mistakes or asking for help, *negative* when performance is being reflected on, or *disruptive* when imposing upon the time of others. However, all these actions are generally necessary for learning behaviour in a group. For instance, the fear of speaking up because of the interpersonal risks attached to it prevents novel or unconventional ideas being expressed and, consequently, innovations are hampered (Edmondson, 2002).
When a safe environment is created the learning behaviour is positively affected, which leads to a better team performance. Psychological safety is also a mediating factor between context support and team leader coaching on learning behaviour. Team leader coaching is the behaviour of team leaders that facilitates the group process and provides clarification and feedback (Edmondson, 1999). Psychological safety is also desirable when a group wants to set a high goal, because it aids the group in their learning and collaboration (Edmondson, 2002). Extending research has shown that psychological safety is positively associated with engagement in quality improvement work. When quality is assessed, people have to be invited to question the present system and to propose innovative ideas. It is expected that for tasks involving improvements, out-of-the-box thinking or similar activities, psychological safety is a requirement (Nembhard and Edmondson, 2006). Van den Bossche *et al.* (2006) have shown that psychological safety is one of the aspects of the interpersonal context that are critical for engagement in team learning behaviour. This behaviour subsequently leads to mutually shared cognition which increases the perceived team effectiveness.

The gaming literature sheds light on safety from a completely different angle. Research on a game with an augmented reality interface focussed on presence and engagement of the game players. They found that when presence is too high, players feel too close to the action and are not as engaged in the play. It was proposed that players seem to have difficulty in creating a safe environment when the game is too realistic (Dow *et al*., 2007). Another form of safety is the safety a game provides to test game player skills or to simulate the reality. Games are used as testing material, providing a safe environment to make mistakes without real consequences.

Kahn (1990), who extensively explored engagement (Table 3.1), came to the conclusion that psychological safety is one of the three dimensions needed for engagement. This dimension was built in four different branches, which can all be ascribed to other influential factors of engagement as well. This means that all the branches that belong to the dimension psychological safety are connected to other determinants of engagement as well. In short, these connections are described. The *interpersonal relationships* strongly depend on the communication structure (subsection 3.2.2) and interdependence between people (subsection 3.2.2). The *group and intergroup dynamics* shape the group-efficacy (subsection 3.2.2) and the cohesion within the group (subsection 3.2.2). The effects of the *management style* (subsection 3.2.3 Group Leader) on the group members is quoted. Good leaders can create the right environment and are the initiators in forming a safe environment. The last branch is about the *organizational norms*; rules within the organization that fit individual norms (subsection 3.2.2 Values and Norms), which are deduced from personal and work values. Roles are carried out best when people feel that

they are not scrutinized by their colleagues. The branch *feelings of insecurity* within the dimension psychological availability is of course also associated to psychological safety. Kahn found that feelings of insecurity depend on the personality (subsection 3.2.1), self-efficacy (subsection 3.2.2 Group-Efficacy), and interdependence (subsection 3.2.2). The interconnection of psychological safety with other factors that influence workshop participant engagement is hereby shown.

Returning to workshops, the ideal situation is that the participants feel psychologically safe. Interpersonal risk taking should not be an issue, because of the reasons mentioned above. To reach the goal in the best possible way, everybody should dare to ask questions, to think out-of-the-box, and to identify points of improvements

Psychological safety is the participants' belief that interpersonal risk taking does not lead to negative personal consequences during and after the workshop

Relationship engagement: participants need to feel psychologically safe to be able to contribute and express themselves, which is part of engagement

MOTIVATION

Motivation refers to the drive for action into a certain direction with a certain intensity and of a certain duration. This is respectively the same as the choice, the effort, and the persistence someone exerts due to his or her motivation (Locke and Latham, 2004). Someone has to be motivated (enough) to fulfil a task or to think about a subject to get engaged in it. Motivation can either be intrinsic or extrinsic.

Intrinsic motivation is the motivation for the activity itself and extrinsic motivation comes from the rewards the activity may bring. People who are highly intrinsically motivated for an activity are likely to participate more often and spend more time engaged in them (Abuhamdeh and Csikszentmihalyi, 2009). A trichotomy of intrinsic motivation can be made based on the intrinsic motivation to know, to accomplish, and to experience. Respectively, this means that a person is engaged by wanting to learn, by exceeding previously reached goals, and by the sensations that go hand in hand with the experience. Where extrinsic motivation can be stimulated by the prospect of status, money or other rewards, intrinsic motivation cannot be influenced in such a straightforward manner. Many people are intrinsically motivated for playing games. Additionally, there is a claim that intrinsic motivation leads to deeper learning. Combining these two propositions leads to the suggestion that elements of games can augment the engagement of learners with an expanded learning result (Habgood, 2007).

Research on knowledge transfer shows that the motivation of knowledge providers and of knowledge recipients is crucial for the process to occur successfully. Knowledge providers have to overcome their information ownership and also have to put time and effort in the transfer. On the other hand, knowledge recipients have to be articulate that they will use

the knowledge so the provider knows his or her knowledge is not wasted. It is stated that the motivation can be increased by emphasizing group performance, creating norms on knowledge sharing, creating trust, and creating a positive atmosphere (Quigley, 2007).

Comparing the factor motivation with the work of Kahn (1990) leads to the conclusion that he does not talk about it as one of the conditions for engagement. Still, within the dimension meaningfulness the *task characteristics* and *role characteristics* can be linked to it. A person will only be motivated to execute a task when the task is enjoyed (*task characteristics*) and when the consequences are beneficial, for example prestige (*role characteristics*). The third dimension Kahn mentions is psychological availability. *Psychical energy*, *emotional energy*, *life outside the work place*, and *insecurity* are pointed out. The energy levels are difficult to really influence anyone other than the individual. One can encourage someone with a low energy level to refill by taking a break or vacation for example. However, the final responsibility (of a sane person) lies within the person itself. *Emotional energy* and *outside life* are strongly related to motivation though, because when a task is enjoyed a person is willing to express the self in it and to keep distance from personal matters for the time being. Because the dimension of psychological availability is the least influential by group leaders or facilitators, this dimension will not be taken into account extensively.

In workshops, the motivation for participation can be diverse. Intrinsic motivation for the subject will bring the participants physically to the workshop. People who like the work forms used in a workshop due to, for example, the creativity are perhaps intrinsically motivated, like videogame players can be. However, also extrinsic motivation can be a factor when the participants are sent by their superiors or when the result of the workshop has direct consequences for his/her position.

Motivation is the drive to participate and contribute to the workshop's goal which can be intrinsic (enjoy the content or the work forms) or extrinsic (rewards for participating)

Relationship engagement: Motivation is needed to get engaged, because otherwise other stimuli will get the participant's attention

COMMITMENT

Goal attainment requires resources like time, knowledge, and effort that have to be spent by individuals. The force that binds an individual to spend those resources is called commitment (Meyer and Herscovitch, 2001). Commitment is essential for collaboration (Kolfschoten *et al*., 2010) and engagement, because engagement in any process or subject means that at least some resources are being used. Research has focused on different foci of commitment, like the organization, occupation, job, the work itself, and the workgroup. Cohen does not only show that cultural values are related to the various commitment forms (Cohen, 2007), but also individual values (Cohen, 2009). Especially benevolence, a

value that underscores the importance of positive personal contacts, is highly related to commitment to fellow employees. This leads to the proposition that when people have good relationships with their group members their commitment in reaching a group goal is higher.

Commitment has three component; an affective component, which is based on emotional attachment, a normative component, which is based on a perceived obligation, and a continuance component. Continuance commitment is based on the perceived costs of leaving an organization. A meta-analysis shows that high affective commitment correlates most strongly to performance among other outcomes. Continuance commitment is in its best not related to performance and otherwise even negatively related, because it does not provide drive (Meyer *et al.*, 2002). This leads to the proposition that people who feel affective to a subject are more easily engaged than people who are only committed due to the fact they cannot leave the organization easily.

Kahn (1990) does not mention commitment as one of the conditions for engagement, but the *task* and *role characteristics* within the branch meaningfulness can be linked to it. A person will only be committed to a task when the task is enjoyed (*task characteristics*) and when the consequences are beneficial.
Commitment to the workshop's goal is important for, to begin with, the participants to show up. Participating in a workshop means spending time, which cannot be spent on something else. Other resources, like knowledge and effort are then needed to reach the goal. Continuance commitment in a workshop environment is not likely to contribute to the result as well. Especially in cases where jobs are on the line due to an organizational change. Emotional attachment, however, can in these cases also be a problem, because changes often go hand in hand with leaving current working methods and habits behind, which could cause friction with future changes.

Commitment is the force that binds a participant to spend resources like time, knowledge, and effort to reach the workshop goal

Relationship engagement: When a participant is committed to the (goal of the) workshop, (s)he will desire to spend resources needed and is likely to stay present and contribute, which is part of engagement

PERSONALITY

Research on personality traits is extensive, because they explain variance in interest patterns and preferences. Especially the field of Human Resources is interested in the predictive value for behaviours and job preferences. There are many different dimensions on which traits are plotted. The most famous are the Big Five dimensions (Extraversion, Agreeableness, Conscientiousness, Neuroticism/Emotional Stability, and Intellect/Culture), and the adapted Five-Factor Model with the same dimensions except for Intellect/Culture. This dimension is replaced by Openness (Berings *et al.*, 2004).

Personality is also explored as a determinant for group performance. Bradley and Hebert (1997) used four scales on which people differ in perceiving and processing information to look at the effect of personality-type group composition on the performance. The scales include how a person is energized (extrovert versus introvert), what information a person filters (sensing versus intuition), how a person makes decisions (thinking versus feeling), and the life-style a person adopts (judging versus perceiving). These scales are taken from a personality type theory. The research shows that a balanced group on the thinking versus feeling dimension leads to the highest performance. Personality also determines whether the *role characteristics* and *work interactions* as identified by Kahn (1990) lead to an increase in perception of meaningfulness in the task, a precursor for engagement. The *role characteristics* carry status and imply certain work roles. A personality affects the characteristics that are enjoyed.

In a workshop, the group's composition is generally determined by the goal. The important stakeholders are preferably invited to contribute to this goal. However, this is not always the reason. Different personal preferences have a different influence on the engagement of the participants. The methods used vary from technology based to analogue, from working individually to working in groups, and from very creative to more straightforward methods. Therefore, responses to these methods are likely to vary quite a bit and depend on the personalities present in the group.

Personality is the combination of characteristics that form a workshop participant's distinctive character

Relationship engagement: the participant's personality influences which methods and techniques, but also which setting, (s)he feels most comfortable with, leading to engagement

3.2.2 Factors on the Group Level

The factors high goal setting, communication, interdependence, group-efficacy, cohesion, and shared values and group norms are all about the group that participates in the workshop.

High Goal Setting

Besides the fact that goal setting is one of the elements of flow, much research has been done on the influence of goal setting on team performance. It has been shown that goals have a positive influence. By setting specific goals, group members increase their expectation of the group, which subsequently motivates the behaviour of the group (Shepperd, 1993). The act of goal setting creates a shared understanding among the group members about the tasks to be taken on. It can also help the group to cooperate on reaching the goal. Shared understanding is identified as one of the key conditions for

collaboration (Kolfschoten *et al*., 2010). Therefore, setting a group goal can in some cases be more important than the actual goal itself (Edmondson, 2002). Also knowledge sharing is enhanced when the group performance is highlighted (Quigley, 2007). Kahn (1990) identified goal setting as part of *task characteristics* as a condition for engagement in work.

It has been shown that high goals and feedback on the progress towards the goal are forecasts of people feeling successful. People feel more satisfied when they pursue and realize important and significant goals; the more effort is needed to reach goals the more motivating it is to reach the goals. Positively framing a situation also contributes to higher achievements than when the situation is focussed on failure (Locke and Latham, 2006a). When performing well in reaching the goal, the executed tasks to attain the goal are evaluated more positively than at the start of those activities. The feelings of success due to accomplishment are based on the performance proportionate to the goal set. The actual level of performance is less important (Locke and Latham, 2006b).

The previous performance of the group and the group-efficacy among other factors influence the difficulty level of the goal (Locke and Latham, 2006a). The final performance of the group is mediated by the level of the personal goals of the group members, the compatibility of the personal goals with the group's goal, the commitment to the goal, the required knowledge and skills to attain the goal (Locke and Latham, 2006a), and teamwork quality (Hoegl and Parboteeah, 2003).
However, it has to be kept in mind that there are also difficulties concerning goals. Locke and Latham (2006b), authorities in the field of goal setting have identified pitfalls for group goal attainment:

- Lack of knowledge and skills
- A conflict among group members
- Opportunistic behaviour due to framing the goals as competitive (Solution: create a shared vision among the group members to get cooperative interdependence)
- Framing of the goal as a threat instead of a challenge
- Lack of psychological safety, people are punished for their errors
- Too quickly wanting to attain the goal, groupthink (Solution: incorporate sub-goals to increase in information feedback or push for constructive conflict)
- Coupling of goal attainment to money, because people who are close to goal attainment but fail, overstate their performance
- Aspects that are not coupled to a specific goal can be ignored
- Goals may induce stress

The pitfalls apply to workshop as well, because each workshop has its own goal. The tension in goal setting is also obvious; setting a high goal motivates and improves collaboration, but a goal too high can lead to workshop failure.

High goal setting means that the group agrees on a workshop goal that requires an effort

Relationship engagement: When a high goal is set by a group and when it is unambiguous, the group knows that they should put an effort in attaining the workshop goal, which leads to engagement

COMMUNICATION

An essential part of high teamwork quality is communication. Without communication among members of a team collaboration cannot take place. Therefore the right means of communication should be present (Kolfschoten *et al*., 2010). Furthermore, communication reduces social loafing (reducing input compared to working individually) among group members. Team members who already know each other are also less susceptible to social loafing (Erez and Somech, 1996). Also, teamwork quality is higher when the environment is supportive of posing questions and providing help (see subsection 3.2.1 on psychological safety). These types of communication lead to sharing problem solving strategies for the task at hand (Olivera and Straus, 2004). A clear communication structure in which group members are honest and open contributes to the process of knowledge transfer (Quigley, 2007). Looking at at the work of Kahn (1990) it can be concluded that communication forms part of many of the conditions he identified within the dimension psychological safety; *interpersonal relationships*, *group dynamics*, and *management styles* all depend on the communication structure. Also *work interaction* (meaningfulness) depends on communication.

Because communication is crucial for collaboration, it is also crucial in workshops. People are working on the same task simultaneously and when signals are interpreted in the wrong way or not at all, this could result in participants losing their interest. As the connection with psychological safety is made, a good communication structure is needed for everyone to contribute openly and honestly.

Communication is the way information and ideas are verbally and nonverbally shared among the participants in the workshop

Relationship engagement: When a participant's ideas and information are not heard, (s)he can think that his/her ideas and information are not appreciated, resulting in a negative influence on engagement

INTERDEPENDENCE

Interdependence is one of the identified aspects of the interpersonal context that are key for engagement in team learning behaviour which eventually leads to group effectiveness (van den Bossche *et al.*, 2006). Interdependencies between group members are motivators

to engage in knowledge sharing when goal attainment is coupled to an incentive structure somewhere on the continuum between purely group-based and purely individual-based rewards (Quigley, 2007). Interdependence creates a situation in which all members are actively involved. When group members can jointly decide on the strategy how to cope with a task instead of an imposed strategy, the implementation of the strategy will be better (Durham *et al.*, 1997). Work interaction promotes dignity, self-appreciation, and worthwhileness (Kahn, 1990). Interdependence is also a necessity for the emergence of group-efficacy, which on its turn has an effect on group performance (Katz-Navon and Erez, 2005).
In a workshop there is always a form of interdependence among the participants. Together a task is executed and the participants provide one another with immediate feedback.

Interdependence is the necessary dependency of the participants on each other to reach the workshop goal and to create support for the outcome

Relationship engagement: A participant has to see that his/her contribution is needed and therefore valued. If not, (s)he does not feel the need to participate which results in disengagement

GROUP-EFFICACY

The group members have a collective belief in their group ability to attain a certain goal. This construct is called collective-efficacy (Katz-Navon and Erez, 2005) or group potency (van den Bossche *et al.*, 2006), but here group-efficacy will be used. This group-efficacy is not the total of the individual self-efficacies of the group members. It is formed during the cooperation in the group by experiencing the group performance, which constantly affects the efficacy perception. For group-efficacy to emerge there has to be interdependence between the group members (Katz-Navon and Erez, 2005). Kahn (1990) calls it the *work interaction* that leads to self-appreciation. Together with interdependence, task cohesion, and psychological safety, group-efficacy is one of the aspects that are crucial for engagement in group learning (van den Bossche *et al.*, 2006). Because group-efficacy affects group work in general this is also a factor in workshops where a group goal has to be attained.

Group-efficacy is the collective belief of the participants in their ability as a group to attain the workshop goal

Relationship engagement: When a group is determined they can reach the goal, its participants want to put energy in it which positively influences engagement

COHESION

Group cohesion is the strength of the bonds linking members to a group and develops over time (Forsyth, 2009). In a group where there is strong cohesion, members can resolve conflicts sooner and with less remaining antagonism. There is also an increased consistency on norms within the group (Bradley and Hebert, 1997). Van den Bossche *et al.*(2006) found that task cohesion, which is the shared commitment to attain a goal within a group, is necessary for engagement in learning behaviour. When groups are successful, they become more cohesive. When groups get more cohesive, they become more successful. This is due to the fact that they are on the same page about tasks to be done to reach the goal and due to the improved coordination between the group members (Forsyth, 2009). Bradley and Hebert (1997) even state that lack of cohesion and thus a lack of understanding are the cause of political problems.
In workshops there is one goal to be reached so task cohesion should be present within the group. Also group cohesion leads to success and vice versa, which is aimed to be reached in a workshop.

Cohesion is the strength of the bonds linking the participants to the workshop group

Relationship engagement: A strong cohesion means that participants feel responsible for the workshop result and are easier engaged

SHARED VALUES AND GROUP NORMS

Everybody has certain values, matters that are worth striving for. It is believed that a person's values influence goals and attitudes, which on their turn influence his or her actions (Roe and Ester, 1999). Therefore, values have motivating power for certain activities. Work values are values that influence work-related goals and attitudes. Therefore, research has focussed on how values affect job satisfaction, motivation, organizational commitment, and work performance. It is also believed that values are related to work environment and job characteristic preferences (Berings *et al.*, 2003) and that they influence organizational commitment (Glazer *et al.*, 2004). It has been shown that all five dimensions of personality traits (subsection 3.2.12) predict work values (Berings *et al.*, 2004). Because of the motivational impact of values on goals, shared values that are related to the goal among group members is desirable. It is believed that shared values improve cooperation and reduce conflicts. However, verifying whether values are shared is not straightforward (Roe and Ester, 1999).

Norms are the behavioural rules that are defined by values. They describe how to act in specific situations and are consequently less abstract than values. From interaction among group members shared norms are built, which are relatively stable over time. Research shows support for the positive influence norms can have on knowledge sharing. Trust, a related notion, facilitates knowledge sharing as well as knowledge utilization (Quigley,

2007). The values and norms are related to the *group & intergroup dynamics* that shows the mentality of the group as defined by Kahn (1990) as conditions for engagement.
Groups in a workshop are sometimes consists of participants who know each other well, because they are working together on the same project for instance. In these groups it is likely that values are shared among the group members and that group norms have evolved. Other groups are individuals put together without knowing each other beforehand. In these groups, everyone brings in their own values and norms, but a mutual perception of these concepts are not present yet.

Shared values and group norms are the shared ideas among the workshop participants about what to strive for and how to behave among each other

Relationship engagement: When a participant understands what is valued by the others and knows the rules of conduct, one can expect how the group will react. This form of predictability increases engagement

3.2.3 FACTORS ON THE EXTERNAL LEVEL

The two external factors that influence workshop participant engagement are the group leader and the technology used.

GROUP LEADER

The group leader has an important influence on the group performance. Bostrom *et al.* (1993) classified facilitator roles that could improve group processes and outcomes in the following: allying structured processes, encouraging effective task behaviours, encouraging effective relational behaviours, and training. Fuller (1994) described eleven task roles and seven socio-emotional roles for facilitators. In the following decade, the body of knowledge concerning the influence of a group leader has extended. When being technically proficient (Galanes, 2003), the group leader can increase the formation of psychological safety within a group by setting an example. By being accessible for the group members, being personally involved, being honest and open, and following through on commitments, the group members are encouraged to cooperate. By recognizing one's own shortcomings, taking interpersonal risks, and not punishing group members when well-meant risks turn out wrong, it is demonstrated that failure and errors are tolerated (Edmondson, 2002; Quigley, 2007). Being an example of high performance and moral standards builds confidence among the group members (Seijts and Crim, 2006). Leader inclusiveness describes behaviour of the group leader trying to include the group members in discussions and decisions in which their voices and perspectives might otherwise be absent. This also has a positive effect on psychological safety, because people dare to speak up due to the effort of the group leader. It has been shown that leader inclusiveness is a good estimator for engagement in quality improvement work (Nembhard and Edmondson, 2006).

Furthermore, group leaders can construct a climate in which group members collaborate due to structuring and managing the power relationships (Edmondson, 2002). It is shown that group members with a higher status feel psychologically safer than members with a lower status. For teamwork, it is necessary to cooperate despite of the status difference, but the consequences of status differences cannot be ignored. This tension is for the leader to manage (Nembhard and Edmondson, 2006). This can be done by restricting dominant behaviour of high-power individuals and empowering people who have less power. Team leaders can also shape, communicate, and keep focus on the group goal. To reach the goal, they can define sub goals, set priorities among the actions, and manage the group performance (Edmondson, 2002; Galanes, 2003). A leader can also reframe problematic statements to positively affect self-efficacy and consequently group-efficacy (Locke and Latham, 2004). Vice versa, a leader who is ineffective can negatively influence the productivity of the group (Bradley and Hebert, 1997). Kahn (1990) points out that *management style and process* are indeed important for the psychological safety, which on its turn is one of the dimensions of engagement.

The workshops in this research are all facilitated. Therefore, the role of this facilitator and his/her influence is very important. During the workshop the facilitator is the leader of the group concerning the process. Generally the leader of the group is the client and therefore the contact for the facilitator in the preparation phase. This person is responsible for the content, although the quality of the workshop result is the responsibility of all participants.

Group leader is the facilitator who guides the participants through the workshop to reach the predetermined goal

Relationship engagement: a good workshop design is a step-by-step approach to reach the goal recognized by the participants. The interventions can redirect the group, equalling the participants (e.g. contributions, hierarchy, atmosphere), which influences engagement

TECHNOLOGY

Nowadays, technology is ever more penetrating daily life and is used as a supporting tool in many processes. Technology is being developed for a very broad set of applications. Since computers are affordable, the use of the computer has been expanded. Serious games are developed in an increasing amount, e-learning is possible, and collaboration support software has entered the market. It has become a general belief that use of the computer is intrinsically motivating (see subsection 3.2.1 on motivation). For example, interactive computer-based training can result in higher engagement due to stimulation of the senses (Chapman *et al.*, 1999). In the field of learning, computer usage is said to lead to an increased understanding and learning objectives are better remembered. It is being seen as a replacement for classroom activities. Also, computer usage in the classroom ought to augment learning (Serva and Fuller, 1999). The reason for this is that tools with a element

of playfulness are motivating due to the enjoyment that is accompanied (Scott and Walcak, 2009). Research to the use of an electronic voting system in a classroom shows an increase in student participation and engagement. Students can vote on topics provided by the lecturer and the results are immediately visualized for the whole audience. Even students who were not convinced about the value of the system said to be more willing to participate during the lecture. Student responses stating the reason for the positive evaluations of the electronic voting system include the opportunity of feedback, interactivity, anonymity, and fun (King and Robinson, 2009).

Group Support Systems (GSS) is technology to enhance collaboration. Although a good facilitator to lead collaboration processes is needed next to the use of the technology (Bostrom *et al*., 1993), it solves many problems of collaboration without any support system. For instance, the anonymous contribution of the group members prohibits groupthink to happen and makes it a safe environment to contribute ideas regardless of hierarchy within the group; The time pressure is reduced because of increased focus on the goal, which becomes more clear in itself (Nunamaker *et al*., unpublished).
Because of the variety in supporting communication software, it is important to know when to use technology and when not, to keep the processes most effective. When software is used in a group, some time has to be sacrificed for the explanation of the system. Messages have to be typed, which takes longer than a verbal message, and cannot be accompanied by nonverbal signals. However, the group members can contribute their ideas all at the same time and everything stated is automatically stored. During a later discussion, earlier messages can be reviewed and commented on. Face-to-face groups have access to the complete spectrum of verbal to nonverbal signals with the disadvantage that only one person can be listened to at the same time. There is also a lack of complete documentation without the use of recording material (Arrow *et al.*, 1996).

Workshops consist of different steps in which a certain method or technique is applied. There are countless analogous work forms. However, the Group Decision Room (GDR) is a work form in which GSS are used as explained above. It is important to know for which purposes the use of the technology is suitable. Is anonymity needed or all of the contributions have to be automatically stored, then use of GSS could provide a solution.

Technology (in this context) is the use of software like GDR to help collaboration in a workshop

Relationship engagement: Technology like GDR offers anonymity, which eases sharing ideas. Some, however, do not like technology and this can have a negative effect on participant engagement

3.3 Interdependence between Determinants of Engagement

The twelve factors found to be of influence on engagement and which seem to be relevant for workshop participant engagement in particular are listed in section 3.2. Still, the attentive reader realizes that these factors are interrelated as well. For the ease of interpretation, the relations between the twelve factors are visualized, described, and referenced in the preliminary model of Figure 2.2. The relationship of these factors to engagement is not explicitly shown, but each factor has a presumed direct influence on engagement. The font size of the factors in the model depends on the amount of connections a factor has with other factors that influence engagement; the more connections, the larger the font size.

The factors high goal setting, motivation, group-efficacy, cohesion, and shared values and group norms are all connected to four other engagement determinants. Psychological safety has by far the most connections with other factors that influence engagement, being influenced by seven factors and influencing three. Only three of the factors are not or not directly related to psychological safety. This visualization shows that this factors is the perceived most leading for workshop participant engagement. Therefore, the empirical research has focused on psychological safety, which will be elaborated in Chapter 5.

3.4 Conclusion Workshop Participant Engagement

From the literature review can be concluded that engagement is studied the most in the scientific research areas serious gaming, learning, organizational behaviour, and group research. With the help of the literature found on different types of engagement, the dependent variable in this research 'workshop participant engagement' is constructed. The similarities between flow and engagement have lead to the statement that "a highly engaged workshop participant is passionately interacting with his/her group members, while being concentrated on a clear goal, using his/her skills because (s)he believe (s)he can exercise control on the goal, while perhaps even losing track of time". In addition, the most important implications of workshop participant engagement are listed (subsection 3.1.6).

Also depriving from these scientific fields, twelve factors have been identified that influence engagement one way or the other. These are the independent variables of workshop participant engagement. For each factor a definition is given in the context of workshop participant engagement together with the influence it has on workshop participant engagement. An overview of the factors, their definition, and their relationship with workshop participant engagement is presented in Appendix III.

The interrelation between determinants of workshop participant engagement shows the supposed importance of each factor, as is visualized in Figure 3.3 by font size. This preliminary model is built on engagement literature, but not specific for workshop participant engagement. Hence, this model should be empirically tested to investigate

whether these factors are indeed determinants of workshop participant engagement. This empirical research is described in the next chapters, first by interviews with professional facilitators and then by workshop observations.

Determinants of Workshop Participant Engagement

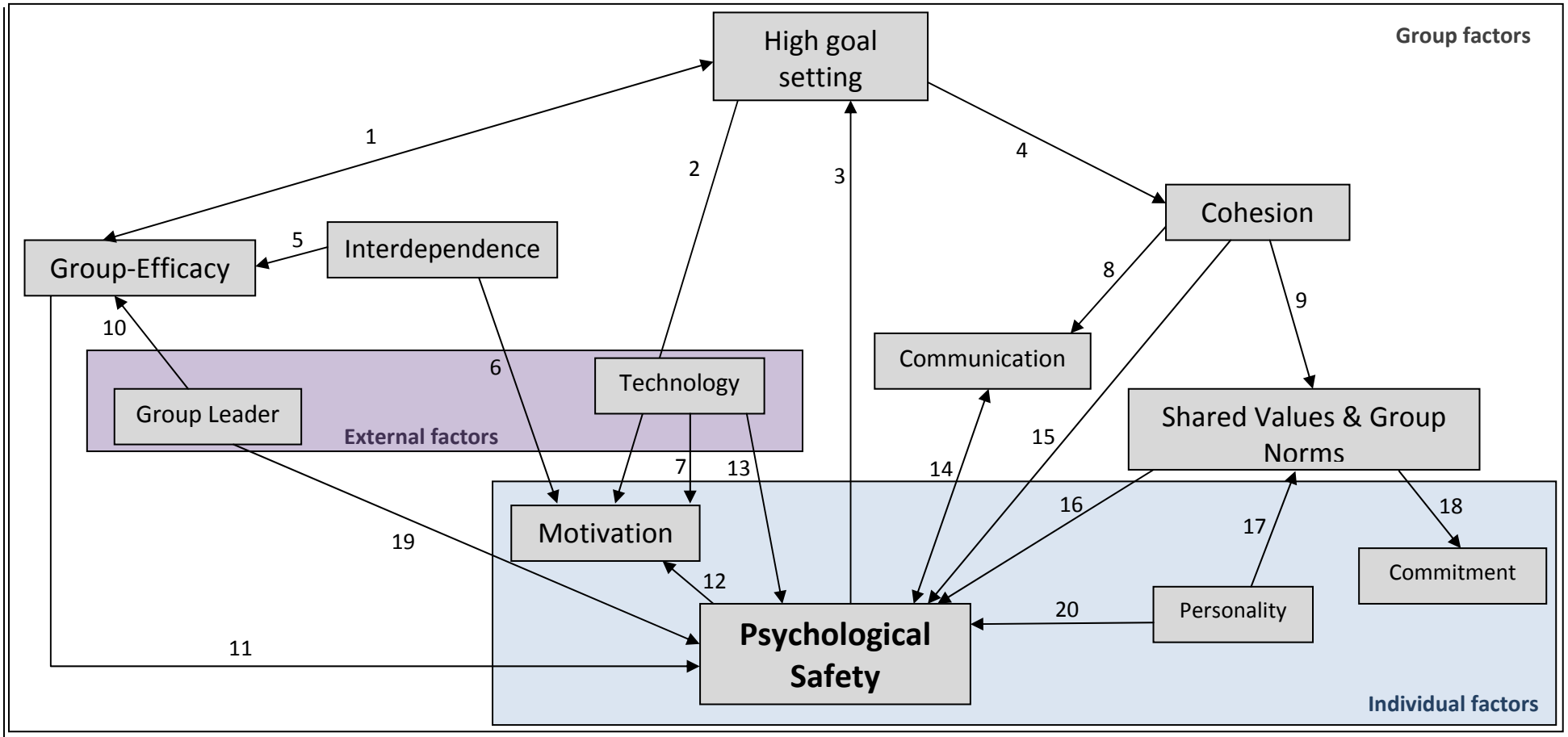


Figure 3.3: The interrelation between the perceived determinants of workshop participant engagement. The numbers refer to the references in section 2.3. The higher is the amount of interrelationships, the higher are the font sizes of the concepts. All concepts have an influence on engagement, but for interpretational purposes these connection are not visualised.

1) By setting specific goals, group members increase their expectation of the group, the group-efficacy (Shepperd, 1993). The group-efficacy, among other factors, influence the difficulty level of a set group goal (Locke and Latham, 2006a). Thus, the constructs influence each other.
2) When a high goal is set, the motivation to attain the task is higher (Shepperd, 1993)
3) Psychological safety is desirable when a group wants to set a high goal, because it aids the group in their learning and collaboration (Edmondson, 2002).

4) Goal setting creates shared understanding (Kolfschoten *et al*, 2010) and cohesion create shared understanding as well (Bradley and Hebert, 1997).
5) For group-efficacy to emerge there has to be interdependence between the group members (Katz-Navon and Erez, 2005). Kahn (1990) identified *work interaction* leading to self-appreciation, which on its turn influences group-efficacy.
6) Task interdependence between group members positively affects the motivation to do the task (Quigley, 2007).
7) The use of a computer is intrinsically motivating (Chapman *et al.*, 1999; Habgood, 2007)
8) A strong cohesion within a group strengthens the communication between the group members (Forsyth, 2009).
9) In a cohesive group there is an increased consistency on norms within the group (Bradley and Hebert, 1997).
10) A group leader can frame statements to alter the self-efficacy of people, while this self-efficacy influences the group-efficacy (Locke and Latham, 2004).
11) Self-efficacy of which self-consciousness level and a perceived fit with an organization are part, has an effect on group-efficacy. Kahn's (1990) *group and intergroup dynamics* are part of group-efficacy influencing psychological safety.
12) Motivation is increased when trust is build and when a positive atmosphere is created (Quigley, 2007), which are also indications of and precursors for psychological safety.
13) Technology can provide an anonymous environment which makes it a psychological safe (Nunamaker *et al.*, 1997).
14) The *interpersonal relationships*, *group dynamics*, and *management styles* are part of a communication structure that determine psychological safety (Kahn, 1990). A supportive environment for posing questions and providing help (psychological safety) leads to good communication (Olivera and Straus, 2004). The relationship is reciprocal.
15) The *group and intergroup dynamics* are an element of cohesion within the group, which influences psychological safety (Kahn, 1990). In a group where there is strong cohesion, members can resolve conflicts sooner and with less remaining antagonism, making it a psychological safer environment (Bradley and Hebert, 1997).
16) Kahn (1990) states that organizational norms shape expectations and therefore increase psychological safety. Trust is a basis for psychological safety and this is easier created behavioural rules apply (Quigley, 2007).
17) Personality influences individual and work values, which influences the group values and norms (Berings *et al.*, 2003, 2004)
18) Cultural values are related to various commitment forms (Cohen, 2007). Values and norms have an effect on organizational commitment (Glazer *et al.*, 2004).
19) A group leader can create conditions that increase psychological safety in the group. Examples are team leader coaching behaviour (Edmondson, 1999) and leader inclusiveness behaviour (Nembhard and Edmondson, 2006), but also other managerial actions like exemplar behaviour (Edmondson, 2002; Kahn, 1990; Quigley, 2007).
20) Kahn (1990) has a branch *feelings of insecurity* within the dimension psychological availability that is based on the personal preference.

CHAPTER 4 FACILITATORS ON WORKSHOP PARTICIPANT ENGAGEMENT

Having built a conceptual model of workshop participant engagement and its determinants in Chapter 3, this is validated with facilitation professionals. These professionals are specialized in facilitating workshops and have experienced a lot of different situations in which participant engagement was more or less important. The model is tested by comparing it with the interview answers. The interviewees are the seven facilitators at Het Buitenhuis. For verification, five other facilitation professionals as interviewed as well. Each interview consists of open questions specifically focused on workshop participant engagement. In these questions, engagement is addressed from different viewpoints. Illustrating the answers with examples is encouraged. At the start of each interview, a short introduction on the research is given, although this is kept very basic to avoid influencing the interviewees. Below, a summary of the findings is given.

The facilitators all have different personalities and, therefore, varying working styles and views on what is important in their role as facilitator. However, it rarely happened that contradicting answers were given. Most answers were recurring and overlapping. The experience of the facilitators differs as well; varying from less than a year to over five years.

In this chapter, first the knowledge of professional facilitators on workshop participant engagement is shared (section 4.1). In the second section, the results of the literature review on the twelve identified factors and the identified factors of influence in the interviews are combined (section 4.2). This leads to a description of how the factors can be observed during a workshop. In the last section, a conclusion is drawn confronting the results of this chapter with those of last chapter (section 4.3).

4.1 INTERVIEW RESULTS

4.1.1 ENGAGEMENT OF THE FACILITATOR

A facilitator is highly engaged in reaching a good result. This means that there is a strong interest in the client, which expresses itself during the intake with the client as preparation on the workshop. The facilitator does not have to be engaged in the subject of the workshop to facilitate the group process in reaching their goal. However, enthusiasm for

the workshop content is an advantage because this enthusiasm can be transferred to the workshop participants.

A pitfall for a facilitator can be a too high enthusiasm and involvement on content or on personal basis. When facilitators are too engaged, they can exert their power in the discussion during the workshop, lose sight of the contributions made by other group members, and drop out of their independent role. Experience seems to reduce the engagement of the facilitator content wise. With the knowledge gained from the client, the methods and techniques are chosen for the workshop. During the workshop the facilitator puts the most effort in creating support for the goal among the participant without getting emotionally involved with the group. This is done by giving clear explanations during the process, steering and responding to the group, and inspiring the participants. The facilitator has to be present and at the same time has to be as invisible as possible. The facilitator has to forget personal inconveniences and level with the group. The professionalism of the facilitator is demonstrated when the level and rhythm are adjusted to the group during this 'dynamic game' in the workshop. The methods and techniques are subordinate to goal attainment and are therefore subject to change. This is necessary when, for instance, the participants are not engaged enough in the process and the facilitator chooses to change the workshop design.

4.1.2 Importance of Participant Engagement

Because most of the workshops involve some decision-making, it should be important for the participants to engage. It is their opportunity to get their ideas and opinions taken into consideration. For the facilitator, the most important is to reach the goal of the workshop. For this to happen, it is important that the participants are engaged in the process. Eventually, it is not even important that the participants are engaged in the final goal, as long as they are engaged in the process and in reaching the sub goals. When the needs of the group are not in line with the goal of the workshop, either due to a conflict or a proposal to change the goal, it is likely that the engagement of the participants decreases. Because this is not desirable, the client will be asked whether (s)he has objections when the workshop design is changed. When the client agrees, it is likely that the engagement level due to the changes will rise again.

Furthermore, when participants are engaged and enthusiastic the work of the facilitator gets more fun. Working in a nice atmosphere eases the connection with the group. Although not a necessity, participant engagement increases the facilitator's working pleasure. It is satisfying when participants indicate that they have 'accomplished a lot' and 'learned something' at the end of the workshop.

4.1.3 Responsibility for Participant Engagement

The communication towards the client, especially during the intake, is one of the most important influences a facilitator has on the engagement of the participants. During this conversation the client is asked and advised to increase the engagement of the workshop

participants. This includes managing the ambition concerning the workshop and asking the participants for input about the goal beforehand. The responsibility for the engagement of the participants lies with the participants themselves. They choose to be engaged or not and base that choice on many aspects lying outside the facilitator's influence. The quality of the workshop result is as well the responsibility of the participants.
During the workshop, the responsibility of the facilitator is to stimulate the participants and create the conditions and atmosphere for the participants to get the right mindset. The professionalism of the facilitator is a tool, which supports a high participant engagement due to process choices made before and during the workshop.

4.1.4 Indications of Participant Engagement and Disengagement

Because of the importance of participant engagement, the facilitator is continuously exploring indications for engagement or disengagement. As the facilitator is part of the process, (s)he notices the state of mind of the participants intuitively. Especially enjoyment and heavy resistance in the group expresses itself easily.

During the intake, the facilitator asks the client questions to get an idea about the group, because the signals of the client predict participant engagement to a certain level. Here, attention is given to how the future participants regard the collaboration, the goal and how they are approached. In the workshop the participants express themselves verbally and non-verbally. Afterwards, the atmosphere at the drinks are an indication on how they have experienced the workshop. When there is an euphoric frame of mind, it is expected that they have reached their goal and are still engaged in the subject. For the workshop itself, the level of participant engagement afterwards is of no importance. Nevertheless, the workshop is a means to an end and in almost all cases the result has to find support afterwards, among and outside the group of workshop participants. For that reason, participants highly engaged in the result are certainly a desirable outcome to enhance the chance of implementation.

The most obvious indications of engagement are verbal. Participants who are engaged create their own opinion about the subject, have input in the discussion, and are asking each other or the facilitator questions. Verbal expressions like 'I don't feel like teambuilding' or other negative comments on the process are mainly indicative for low engagement. However, negativity or anger do not imply disengagement. Generally, strong emotions are true indications of high engagement (opposed to indifference). Furthermore, the same accounts for silence; the participant can be carefully listening and forming an opinion or staring while being mentally absent. To draw the right conclusion, it is important to incorporate the non-verbal behaviour of the participant.

As the example of a silent participant shows, non-verbal behaviour needs a much more delicate interpretation than verbal expressions. The most obvious indicator is distraction by phone or email. The position, facial expression, and position of the arms are also important clues. The participants can sit back relaxed, sit straight, or lean forward in an active

position. When arms are crossed, it mostly indicates some resistance and implies a closed attitude. The facial expressions can range from bored to excited, from irritated to enjoyed and many others.

Eye contact can be a helpful indication. When a participant is not making eye contact, it is not very likely that (s)he is engaged. When a participant is looking everyone in the eyes, (s)he is making contact indicating a connection with the group. An overall interaction pattern in which communication is high means active participation and implies strong engagement by the participants. The same counts for a strong cohesion within the group.
There are also indicators that could either mean a high level or a low level of engagement. Next to silence, the time taken to get coffee is one of them. It can imply that the participant rather does something else than engaging in the process, but it can also be that (s)he is intensely discussing the subject with a colleague because of his/her high engagement. Last, the energy of the group is also largely dependent on the composition of the participants; a group of female participants in the social field can express their engagement totally different than a group of lawyers. As is illustrated, conclusions about the engagement level are not straightforward and should be drawn with care.

4.1.5 Necessity of Participant Engagement

Engagement is never the final goal of a workshop. Therefore, it is not the most important aspect of a workshop. However, participant engagement is always wanted in a workshop. Because of the collaboration in the group, interaction and feedback among the participants are constantly present. It is not likely that the engagement can continuously stay extremely high during the whole workshop. Hence, moments of relaxation – best during breaks – are necessary to keep the attentiveness over the whole workshop. Nevertheless, the desirable average engagement over the complete workshop is normally as high as possible.

The average level of engagement partially depends on the kind of workshop. In workshops where teambuilding is the primary goal, enthusiasm is necessary together with a form of engagement. On the other hand, there are some examples in which participant engagement should not be too high. Six examples came to the table. Firstly, workshops in which the client needs a predetermined outcome, in which real decision-making is not at hand, and where support only has to be suggested to the client's superior. Secondly, in the case of a very tight workshop programme in which the goal has to be attained. Thirdly, workshops where an acceleration of the process is needed due to a high client ambition. Fourthly, cases in which too many stakeholders are invited because of the client's uncertainty and fear to exclude important parties, which leads to an overly complex situation. Fifthly, workshops in which the client is not as far as the group, and therefore the group has to go slower than their original group pace. Last, when participants only bring in information, they need a certain amount of engagement in the content, but they do not have to be engaged in the process.

A too high engagement can lead to a situation in which all the participants want to decide on the outcome. This can, for instance, result in a too large delegation from one party,

which can lead to vote preponderance in a GDR setting. Participants can focus too long on futilities because they want to press their ideas through. It can also hinder the facilitator because method and technique choices are constantly questioned.

Table 4.1: Determinants of engagement that cannot be influenced by facilitator

Determinants	**How it influences workshop participant engagement**
Future insecurity (of job or personal goal)	Insecurity can lead to opportunistic behaviour
Hierarchy	Higher-status generally implicates a stronger voice in the outcome and ultimate decision power
Physical state of participants	A participant who is ill, has personal or psychological problems, will be more difficult to engage in the process
Individual interest in workshop	Some participants have different interests, some have their regular job and project work; goal and interest of those can conflict
Organizational interest in workshop	When stakes are high, people are more likely to engage when there are no conflicting personal goals
Personality participants	Personality types have different preferences for certain working styles influencing their engagement level
Knowledge on subject (participants)	Lack of necessary knowledge and understanding leads to disengagement
Price (monetary, time vs yield)	High personal yields will increase engagement; a too high price will increase disengagement
Degree of learning factor	Participants expecting to acquire useful knowledge are more likely to engage
Level of appreciation	When the group members show appreciation to each other and people listen to each other, participants are more willing to get and stay involved and engaged
External factors during process	Interruption of the process, e.g. personal messages about family matters or electricity malfunction when using GDR
Communication within group beforehand	A shared understanding is positive for goal support and participants know where they stand. Bad communication increases the participants' insecurity.
Successfulness of group beforehand	A positive view on what the group can attain inspires participants to contribute
Image client	Participants have ideas on the reason for the client to organize a workshop, which influence their state of mind
Connection between people	People have preferences for certain other people and this can stimulate or reduce the connection between the participants and between the facilitator and the participants

4.1.6 Determinants of Participant Engagement

Three questions were focused on factors that have an effect on the engagement of the workshop participants. The answers are combined and sorted, which resulted in a list of determinants of workshop participant engagement together with a short explanation on how the factor influences it. First, the factors are divided based on the influence of the facilitator. Table 4.1 shows the determinants of engagement that cannot be influenced by the facilitator. Second, the factors which a facilitator can manipulate are listed in Table 4.2. Because of the large amount of factors influenced by a facilitator, they are classified under six headings; client, participants, group, workshop script, external, and facilitator. In this table, not only the mechanism of how the factor influences workshop participant engagement is given, but also what the facilitator can do about it. Both tables are made from the facilitators' perspective.

One contradiction was found in the answers of the different facilitators; explaining the workshop programme beforehand was said to be engaging because the participants know what to expect, while another answer was that concealing the programme to keep the participants curious is a stimulus for engagement. Because of this inconsistency, this is not included in the tables.

4.2 How to Observe the Influential Factors of Workshop Participant Engagement

In Chapter 3, the results from the literature review regarding engagement are reported. In section 4.1, the interviews with professional workshop facilitators are illustrated, simply based on the information given by the facilitators. This current section will interpret and combine the findings of both chapters.

The assembled results are visualized in Table 4.3. Almost all of the factors that came forward during the interviews can be categorized under one or two of the twelve determinants for engagement. This categorization is based on either being an aspect of or an influence on the factor in the left column. The information for the categorization is partially gathered from the literature review and partially from the interviews with the facilitators. The 'physical state of the participants', 'the price', and 'external factors' cannot be grouped, but these factors cannot be altered by a facilitator in a workshop. Therefore, these three aspects are omitted in further analysis.

With the classification in Table 4.3 and the indications of participant engagement and disengagement (subsection 4.1.4), the influential factors on engagement are further made operational below. This is the basis for how these factors can be observed in a workshop. The factors are divided in the same level as in previous chapter. An overview of the factors, their definition, their perceptibility, and their relationship with workshop participant engagement is presented in Appendix III.

Table 4.2: Determinants of engagement to be influenced by facilitator

Determinants	How it influences participant engagement	What the facilitator can do about it
Client		
Voluntary vs. mandatory participation	People who are forced to participate are hardly motivated to engage	Advise client to make participation on a voluntary basis
Expectations workshop	High expectation on workshop will increase the engagement of the participants	Advise client to involve all the participants beforehand and clarify the goal of the workshop. This will increase support for satisfaction of workshop; lessen the expectations at the start of the workshop to prevent disappointment and increase satisfaction process afterwards
Expectations result	High expectation on result will increase the engagement of the participants	Advise client to involve all the participants beforehand on the goal and allow input from the participants before the workshop. This will increase support for implementation after workshop; lower the expectations at the start of the workshop to prevent disappointment and increase satisfaction outcome
Complexity subject	A too difficult task does not fit the self-efficacy	Ask client about difficulty task for knowledge level of group members and advise
Participants		
Dominant personality	Overrules other participants, leaving no room for others to contribute, does negative expressions (e.g. 'I'd rather do...', 'not important' or 'we're not going to do that!') creating a negative atmosphere	Correct behaviour
Criticize method	Questions the professionalism of the facilitator, creates a negative atmosphere	Let the group react; summarize critique and proceed with process
Level of self-reflection		
Sense of responsibility	Participants who feel responsible for the outcome will be more engaged	Create a stimulus by e.g. telling the participants at the start of the workshop that they have to evaluate their own contribution during the workshop

Determinants	How it influences participant engagement	What the facilitator can do about it
Motivation	Highly motivated participants will be highly engaged in the process	Give appealing examples to trigger interest; bring disinterest to the surface and discuss, try to park issues
Interest in subject	The more interested in the content, the more engaged in the whole workshop	Give appealing examples to trigger interest
Energy level	When tired or too static, more effort is needed to get and stay engaged	Allow for enough breaks; realize that food needs energy to be processed and take this into account for the workshop program; switch between sitting, standing up and walking around; use energizers
External participant	Participants want to engage when a professor or another professional is invited, it is more interesting or people want to be seen. Criticism has more impact when it comes from an external	Bring possibility and effect to the attention of client
Personality	People have a preference for either thinking, listening, watching, doing, talking. Elements have to be represented in the workshop. Also lack of curiosity hampers process.	Be aware of personality differences; incorporate different elements in the workshop that fit all types of personalities; give participant choices to discover preferences
Group		
Existing (hidden) conflicts	Conflicts will overshadow content of the workshop; people are not listening to each other which leads to disengagement	Address conflict, discuss until situation settles, turn mind-set, for example by changing room
Culture	Culture determines attitude of participants towards goal and workshop	Use methods and techniques for culture change
Cohesion	The more the group are at the same wavelength, the easier it is to get the group along; atmosphere spreads among participants	Break the ice at the start of the workshop, give some time for start-up and chit-chat to create safe and homely atmosphere; or use methods and techniques to increase cohesion
Speed in/of group	When the process is not adjusted to the speed appropriate for the participants, it is hard for them to follow or to stay alert	Sense the atmosphere among the participants and adjust process when necessary by speeding up or slowing down
Level of group reflection		
Psychological safety	When people are not afraid to make mistakes, they feel free to participate and engage	Lay down rules for communication, create familiar and open atmosphere, and encourage participants to speak up or use special methods/techniques

Determinants	How it influences participant engagement	What the facilitator can do about it
Hierarchy	People with lower status are less likely to feel free to actively participate and engage; superiors can express verbal *idea killers*	Show the participants that everyone is equal during the workshop
Composition group	When important stakeholders are missing, participants will see the result as less meaningful; a group in which everyone agrees can lead to groupthink and consequently to less engagement	Ask client during intake about the composition of the group
Level of being heard, appreciation	When the group members show appreciation to each other and people listen to each other, the participants are more willing to stay involved and engaged	Ask questions to group members to verify whether they listen to each other and ask for their opinion on those topics that are contributed
Workshop script		
Playfulness	When participants can win they are higher motivated, because something is on stake	Incorporate elements of playfulness
Collaboration	Individual tasks are likely to get boring sooner; small groups increase participant's ownership of problem and solution/outcome	Alternate group size during the workshop
Choice of methods and techniques	With a too complex, too creative or a too personal, scary method, the participants will be insecure and disengage	Thoroughly understand the methods and techniques to be used and anticipate on the group when they signal that the method does not fit them
Variety of methods and techniques	Too much time for one method makes the process tedious	Incorporate different methods and techniques to prevent the process from becoming tedious
Number of methods and techniques	Too many methods creates the feeling to hurry	Incorporate not too many or too little different methods and techniques
Reach sub-goals	Progress towards the goal is inspiring	Attend participants on sub-goals reached and celebrate them
Rhythm	When the process is too monotonous, the participants get bored and disengaged	Incorporate rhythm changes with the methods and techniques to make the process dynamic, e.g. changes in group size or environment
Clear goal	With a clear goal everyone is on the same page and collaboration gets more obvious which is inspiring	Explain goal and get understanding of goal confirmed; repeat the goal several times during the process

Determinants	How it influences participant engagement	What the facilitator can do about it
Technology	Use of e.g. GDR needs little interpretation so no distraction due to the method, GDR is engaging in itself. Analogue methods are more creative and are more distracting.	Understand the benefits and drawbacks from using technology compared to analogues methods and techniques and those with the highest fit to goal
External		
Location	A different environment helps people to inspire	Use a location like Het Buitenhuis where each room is styled differently; change room to create different settings
Arrangement room	The arrangement (of the seating) of the participants creates a certain mood	Adjust arrangement seats for the appropriate mood (a big circle or small groups, etc.)
Environmental variables	A too high temperature or too little oxygen reduces the participant activity level	When needed, open a window
Facilitator		
Technical preparation	Problems with techniques and methods agitates participants	Thoroughly prepare workshop
Experience	When signals from the group are not picked up, the participants will disconnect and disengage	Give space, sense when a topic should be skipped or incorporated despite of initial programme, asking the right amount of questions, allow a discussion to finish despite of time constraints, ask attention from the group, give attention to difficult participants
Courage to intervene	In a situation where someone holds the group back due to e.g. negative expressions, this has to be turned around	This is dependent on personality of facilitator
Sincere interest	When the facilitator is unmotivated, (s)he cannot inspire the participants to join the process and to engage in it	Set aside disinterest in subject or group and act professionally
Energy level	Facilitator inspires participants to get involved and engaged	Avoid speaking monotonous, set personal troubles aside
Flexibility	There are factors that have an impact on the match between the group and the predetermined programme	To facilitate the needs of the group, change programme, methods and techniques when necessary
Role	The facilitator needs to take on the right role for the workshop goal to support the group so that the group members can engage in the process	Be aware of the right role for the goal (team coach, moderator, inspirer, etc.)

Table 4.3: The factors that influence engagement identified during the interviews with facilitators distributed among the factors identified in the literature review

Factors Chapter 2 (literature review)	**Factors Chapter 3 (interviews)**	
Psychological safety	Existing (hidden) conflicts Culture Composition group Speed in/of group Choice of methods and techniques Number of methods and techniques Dominant personality Criticize method Knowledge on subject (participants) Level of being heard, appreciation	Future insecurity Hierarchy Complexity subject Clear goal Arrangement room Successfulness of group before Technology Cohesion Image client
Motivation	Voluntary vs. mandatory participation Complexity subject Criticize method Image client Interest in subject	Composition group Playfulness Individual/organizational interest in workshop
Commitment	Voluntary vs. mandatory participation	Interest in subject
Personality	Dominant personality Criticize method Level of self-reflection	Sense of responsibility Energy level participants
High goal setting	Expectations workshop Expectations result Complexity subject	Reach sub-goals Clear goal Degree of learning factor
Communication	Expectations workshop Expectations result Level of group reflection Communication within group beforehand	Existing (hidden) conflicts Collaboration Degree of learning factor
Interdependence	Sense of responsibility Composition group	Collaboration
Group-efficacy	Expectations workshop Expectations result	Reach sub-goals Successfulness of group before
Cohesion	Sense of responsibility Level of being heard, appreciation	Existing (hidden) conflicts Culture
Shared values and group norms	Sense of responsibility	Culture
Group leader	Hierarchy Choice of methods and techniques Variety of methods and techniques Number of methods and techniques Technical preparation Location Arrangement room Environmental variables	Rhythm Experience Courage to intervene Sincere interest Energy level leader Flexibility Role
Technology	Choice of methods and techniques	Technical preparation
-	Physical state of participants Price (monetary, time vs yield)	External factors during process

4.2.1 FACTORS ON THE INDIVIDUAL LEVEL

PSYCHOLOGICAL SAFETY

Psychological safety of workshop participants is partially determined before start of the workshop when the participants are familiar with each other. A group that knows each other has a more or less specified culture because of the composition of the group (hierarchy and the dominance personalities), previously obtained results, and conflicts. A participants will weigh everything that has happened in his/her judgement of his/her level of psychological safety in the group. In addition, the image of the client influences how the participants perceive the reason for the workshop. A more positive image will relax the participants to feel psychologically safe in a workshop.

The workshop itself can also influence the level of psychological safety of the participants. When the goal of the workshop is clear and the subject has the right level of complexity – in other words the workshop participants have the right knowledge to attain the goal – the participants will feel less insecure. However, when the result has implications for the job or position, (s)he will feel less psychologically safe.
The design of the workshop (amount and choice of steps, including technology or not) has to match the speed in the group and of the group, otherwise the participants will feel less psychological safe. The arrangement of the room can also influence this psychological safety. Furthermore, a high level of appreciation and being heard during the workshop will make the participants more comfortable in speaking up.

A participant feeling **psychologically safe**, dares to respond, ask questions or for help, admit mistakes, and reflect on his/her performance

MOTIVATION

The motivation for a workshop can be intrinsic or extrinsic. A participant intrinsically motivated for a workshop can be interested in the playfulness in the workshop or in the subject of the workshop. The workshop should have the right level of complexity and consequences and the right people should be present, so that goal attainment is in reach. The image of the client, whether the organization will seriously act on the workshop result, also influences the motivation of the participant. In case a person mandatorily has to participate, his/her motivation could be only extrinsic, which results in a lower level of motivation than when intrinsically motivated.

A **motivated** participant will actively take part in the workshop and, for instance, in the discussions

COMMITMENT

Commitment as such is not directly mentioned by the facilitators. However, when participants want to spend their resources to reach the workshop goal, they will voluntarily participate. When people have no choice in participating because their superior tells them to, it could be that the participant does not actually want to spend his recourses. This could lead to obstruction of the process, because no effort is put into the workshop. When a participant has an interest in the workshop, (s)he will be committed to goal attainment.

A **committed** participant 1) is and stays present during the workshop, 2) shares his/her knowledge, 3) does not give up easily

PERSONALITY

Because everyone is different, someone's personality determines how this person reacts in a group and how (s)he perceives the different steps in a workshop. Due to the diversity of personalities in a group, some will have a higher energy level, a stronger sense of responsibility, or a higher level of self-reflection. More dominant personalities have the propensity to lead the discussion or speak their mind when they do not see the benefits of a method used.

A participant's **personality** is perceptible in the way (s)he verbally and nonverbally expresses him/herself within the group

4.2.2 FACTORS ON THE GROUP LEVEL

HIGH GOAL SETTING

That the action of goal setting is important in a group came forward in the literature review. A clear goal and its sub-goals eases it for the participants to understand what to do and how much effort it takes for goal attainment. Reaching the sub-goals makes it understandable why different steps in the workshop are taken and shows the progress of the group.

Participants who have high expectations of the workshop and its result will realize more that they have to actively participate in the workshop to live up to their expectations. The expectations are nourished by the complexity of the subject and the expected degree of learning.

Goal setting and **its level** is not necessarily visible, but has to be recognized by pronouncements of the workshop participants (e.g. too easy, too difficult, or too ambiguous)

COMMUNICATION

Before the start of the workshop, at least some communication has taken place between the initiator of the workshop and its participants. When the participants know each other, more communication has taken place. There could be conflicts among the participants, known by others or hidden. Due to clear communication, all the participants should have realistic expectations about the workshop, its result and the degree of learning, which is later reflected in the appreciation for the workshop.
Because good communication is crucial for collaboration and reflection within the group, a facilitator has to lead the group in this process and needs to correct when, for example, hierarchy or dominance prevails.

The level of **communication** within the group is perceptible by everything that it said and expressed nonverbally the level of the communication is within the group

INTERDEPENDENCE

One of the most important feature of a workshop is interdependence, because otherwise there is no need for the group to work at the same time and place on the same problem. With other words, there would be no need for collaboration. The composition of the group determines together with the goal whether everyone can contribute in order to attain the goal.
Workshop participants should also feel responsible for the result and acknowledge the interdependence. When this is not the case, this will have a negative effect on the workshop outcome.

Interdependence is perceptible by participants collaborating towards the workshop goal

GROUP-EFFICACY

The successfulness of the group or the lack of it will shape the group-efficacy. Accomplished successes increase the expectations of future accomplishments. This sets the expectations of a workshop and its result higher than when the group achieved less. During a workshop it is important to reach sub-goals and let the participants celebrate their successes, because this raises the group-efficacy.

Group-efficacy is not really visible due to the fact that it is a belief, except when it is expressed

COHESION

The cohesion in a group depends on the group culture and the organizational culture, but also the relationships between the participants are very important. In a positive

environment, the participants will feel taken seriously and appreciated. In a cohesive group, everyone will feel responsible for reaching a high-quality result. A negative effect on cohesion could be conflicts between participants, because they will feel less connected to each other.

Cohesion is perceptible in the reactions of the participants indicating the level of cohesion among them, although this is susceptible for misinterpretations

SHARED VALUES AND GROUP NORMS

The values and norms in a group are again part of the group culture. When they are apparent, they prescribe how participants behave towards each other. This generally pronounces the responsibility everyone has towards goal attainment.

Shared values and group norms are not really visible, except when they are explicitly expressed, due to the fact that they are a belief

4.2.3 FACTORS ON THE EXTERNAL LEVEL

GROUP LEADER

The group leader in this research is the workshop facilitator. In the preparation of a workshop, (s)he chooses the methods and techniques to be used. This includes the amount of steps and the variety of methods. When a choice is made to incorporate technology, the technical preparation is important as well. The workshop design is intended to variate the workshop's rhythm to prevent it from getting boring. However, when the participants need something else than planned, a facilitator has to be flexible to turn the programme around. The location and the arrangement of the room together with environmental variables like the temperature are all important variable a facilitator can use to stimulate the participants.

During the workshop, a facilitator has to support and steer the group towards goal attainment. The role of the facilitator has to be transparent for the whole group. Experience helps the facilitator to reckon the processes in a group. For example, when the hierarchy in a group is too obviously present during a workshop, the facilitator has to have the courage to intervene. Furthermore, the energy level of the facilitator, which is partially influenced by his/her interest in the workshop, affects the energy level of the participants due to the enthusiasm.

The **group leader** factor is perceptible by the workshop design and his/her interventions

TECHNOLOGY

In workshops, technology can be seen in two ways. In a narrow way, technology is the use of software in a workshop, which can be diverse (for instance, GSS, simulation, visualization). In a more broad manner, technology can be seen as all the methods and techniques used in workshop. In this research, technology will represent the use of software. In the empirical research software is only used in the GDR; laptops with GSS software on it. When a facilitator chooses to use the GDR for a certain step, (s)he has to prepare it well to avoid technical failure during the workshop. This would draw the participants from their work flow. Because participants have different preferences for methods and techniques, the use of the GDR is likely to fit some groups better than others.

The **technology** is the software used in a workshop

4.3 CONCLUSIONS

From the interviews it can be concluded that they perceive the following characteristics;

- A high engagement of the facilitator positively influences the engagement of the participants
- High workshop participant engagement is important, except for some specific cases
- The responsibility for workshop participant engagement lies at the participants themselves and not at the facilitator
- Workshop participant engagement is expressed both verbally and nonverbally, but due to strategic behaviour interpretation is less straightforward
- Workshop participant engagement does not have to be high throughout the workshop, but overall it should be as high as possible
- There are many factors influencing workshop participant engagement

The most apparent difference between these results and those from the literature review is the need for engagement. Some facilitators have indicated that for some workshop goals, a high workshop participant engagement is not necessary or even desired (subsection 4.1.5). However, in the literature no notion of this variation in the level of engagement can be found. Scientific research on different types of engagement concludes that engagement and the quality of its result are linearly related. The interview results indicate that this relationship depends on the context.

The interviews with the eleven facilitators also have revealed that there are many aspects influencing workshop participant engagement. The way they influence workshop participant engagement is listed together with what a facilitator can do about it. These factors are discussed in relation to the twelve determinants of workshop participant engagement that came forth from the literature review. Accordingly, it can be concluded that the interviews did not produce completely new factors taking the literature review

result as basis. The factors are all made operational so that they can be observed during the empirical research at the facilitated workshops at Het Buitenhuis.

Not all of the factors will be easy to observe during a workshop because some of the factors have to be pronounced to prevent the observer from guessing. Especially high goal setting, group-efficacy, and shared values and group norms are not easily observable. From both the literature review and the interviews, the crucial role of psychological safety for workshop participant engagement has come up. If this factor is indeed the most important for workshop participants to engage, it is likely to be visible in the workshops. Including a scale for psychological safety in the self-report can reveal whether the connection is indeed present. However, other expressions of workshop participant engagement and its determinants should also be taken into account during observations.

CHAPTER 5 RESULTS OF MEASURING WORKSHOP PARTICIPANT ENGAGEMENT

With the help of literature on engagement, a conceptual model is built for the determinants of workshop participant engagement. The factors that come forth as determinants of engagement are:

- Psychological safety
- Motivation
- High goal setting
- Group leader
- Communication
- Interdependence
- Commitment
- Group-efficacy
- Cohesion
- Shared values and group norms
- Personality

Interviews with facilitators have confirmed that the twelve factors in the model are important factors for participant engagement. This confirmation is mainly driven by their experience. The next step in the investigation of participant engagement in facilitated workshops is to empirically test the conceptual model.

With the help of the self-report data and the observations, the workshop participant engagement is monitored. In this exploratory empirical research conclusions will be drawn based on these two data collection methods per case in this chapter (section 5.2 to 5.12). In Chapter 6 the cases are compared and the conceptual model of Figure 3.3 is evaluated based on the findings of this chapter.

5.1 EMPIRICAL RESEARCH DESIGN TO ASSESS WORKSHOP PARTICIPANT ENGAGEMENT

As was concluded in the last chapter, psychological safety is one of the most important factors for workshop participant engagement to take place. Nine of the twelve other factors have an influence on or are influenced by psychological safety. Also the results from the interviews with the facilitators indicate that psychological safety is an important factor. Therefore, the focus of the empirical research will be on expressions of workshop participant engagement and its determinants, with a specific focus on psychological safety.

The results so far are discussed with Het Buitenhuis. The interest of Het Buitenhuis lies mainly in the factor psychological safety in combination with the factor group leader. The reasons for Het Buitenhuis to be interested in psychological safety are twofold. On the one hand, literature on topics like goal setting and motivation are already widely available. On

the other hand, Het Buitenhuis claims to be distinctive in the fact that they offer a safe environment and therefore contribute to projects and processes in a way that cannot be realized in the regular workplace. Het Buitenhuis provides the environment and the facilitators. Therefore, the behaviour of the group leader or facilitator is of uttermost importance. The connection between psychological safety and a facilitator is that the latter can stimulate the safety during a workshop. Research to psychological safety is not only interesting in workshop settings, but also for a broader spectrum including managers who are leading groups. Because Het Buitenhuis is an organization where groups come together and there is generally no connection between the facilitators and the group members, factors that directly can be influenced by the facilitator are the most interesting.

Previously, instruments have been developed to observe workshop participants and facilitators and to let them report on their engagement level at the different steps of the workshop (subsection 2.3.2). Next to the engagement scale, the participants will be asked to assess their level of psychological safety within the group after each step in the workshop. This will be done with a 5-point scale running from 'I don't dare to say everything I feel and think' to 'I feel totally free to contribute new, innovative ideas'. For this reason, the self-report is extended (Appendix I).

During the workshop, observations are made focussing on expressions of workshop participant engagement and psychological safety. The roles of a facilitator are based on creating the best possible environment for the participants. An inventory will be made of facilitators' expressions during the workshops that might have a positive or negative effect on the psychological (e.g. leader inclusiveness and team leader coaching). Other expressions are also documented when they are thought to be influencing engagement. All observations will be made according the case study protocol (subsection 2.3.3).

When a choice has to be made on which workshop to observe, the selection will be based on the least occurring type of workshop to increase literal replication (see subsection 2.2.2). Because it is necessary to attain quite some data and the amount of workshops given at Het Buitenhuis are not that numerous, the selection of the workshops is primarily on availability. Consequently, theoretical replication will not be reached. Because different workshops are thought to give more insights compared to similar workshops, literal replication is preferred to theoretical replication.

The case study database in Appendix IV contains the digitalized, categorized and coded observation data. Eleven workshops were assessed, resulting in the same amount of cases.
In the next section the cases are analyzed one by one. First, the general characteristics are given for that workshop, which are needed to understand the context of that particular case. Specific information on the client, goal and facilitator are left out, because this research tries to make generalizations among the findings. Second, the progress of the workshop is described by the observations. Third, the results of the self-reports are put into a graph and are described (testing on significance was not possible due to the small data sets). With these data, the fourth step is the interpretation of the observations and the self-reports. Fourth, the highlights of the case are summarized.

5.2 CASE 1

Goal: risk analysis
Participants: 10
Relationship: Participants are part of one project group, but work for different departments within one ministry
Technology: GDR
Note: external facilitator, no facilitation professional

Appendix IV contains the observations made during this workshop and a description of the workshop. Figure 5.1 shows the changes in the workshop participant engagement reported on by the participants. A trend can be distinguished. Because the first measuring point was taken after the first brainstorm round, the initial level of engagement of the participants is not known. During the prioritizing and scoring steps the engagement level drops. Next, the group was split up in three small groups and they could discuss their work anywhere they wanted. Because of the nice weather, the groups positioned themselves in the garden. Lunch was taken as well during this step. Except for one person, the group experienced this step as engaging. The last step, explaining and discussing the solutions that came up in the group during the prior step is not experienced as engaging.

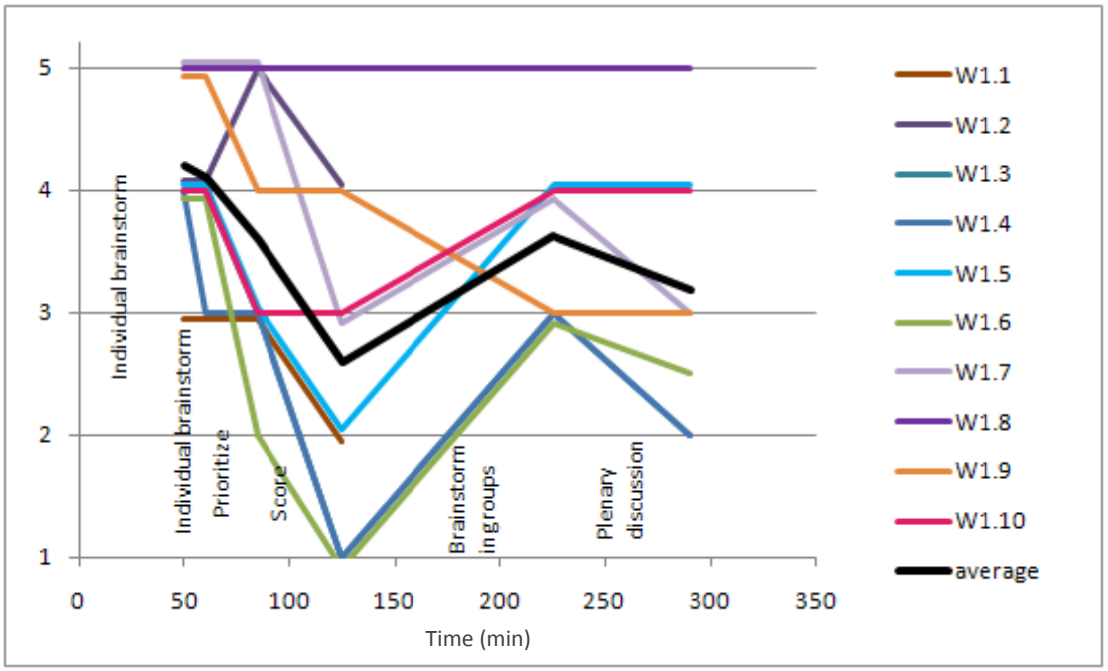


Figure 5.1: The engagement level of the participants during case 1

The workshop had a negative effect on the engagement level for six of the participants and no effect for the other four. Overall, the workshop has an overall effect of -1.0 on the workshop participant engagement (WPE). Table 5.1 summarizes the steps which had the most significant impact on the corresponding variables. This reveals that at the start of the workshop, the average workshop participant engagement, x_{wpe}, was the highest of the whole session and that the participants were the least divided on this (lowest standard

deviation, σ_{WPE}). After the scoring step, the lowest x_{wpe} was reported. This was also the step that had the largest negative influence on it, but also the largest WPE differences among participants were found (σ_{WPE} = 1.43). The step in which the participants brainstormed in small groups had the largest positive influence on WPE

Table 5.1: Data on the average (x_{WPE}), change (Δ_{WPE}), and standard deviation (σ_{WPE}) of workshop participant engagement of the workshop steps with the most impact on these variables in case 1

Step	x_{WPE}	Δ_{WPE}	σ_{WPE}
Start (after introduction)	4.2 (H)	-1.0 *	0.63 (L)
Scoring	2.6 (L)	-1.0 (#)	1.43 (H)
Brainstorm in groups	3.6	+1.0 (#)	0.74

L=lowest value, H=highest value, *=ΔWPE from start to end

5.2.1 Interpretation of Case 1

Due to missing data, no conclusions can be drawn about the changes in WPE due to the first step. The prioritizing and scoring steps are both individual tasks, time consuming, and are not in any way creative or challenging; the *motivation* of the participants is dropping. Therefore, it does not come as a surprise that the engagement level drops during those steps. Additionally, the *interdependence* during the individual scoring steps is not visible and there is no *communication* between the participants.

The *psychological safety* in this step should be high (this is not measured in this workshop), because the results are anonymously collected and averaged. However, due to the facilitator (*group leader*) the psychological safety was negatively affected. (S)he tried to reveal who made a mistake in a so-called anonymous environment (see text box below). Although one of the participants objected, the facilitator kept on searching. Luckily, the GDR is protected against actions that undermine the anonymity function. This negative impact on *psychological safety* could also be part of the reason that the WPE dropped in the scoring step.

> Facilitator tries to retrieve the names belonging to the votes: “Can’t we find out who voted on that topic? I said before not to do that!”
>
> A participant: “I would not do that... That is against the whole idea of anonymity!”

The increase in WPE during the brainstorm in subgroups can be due to the increase in *motivation* as a result of the change in environment; because of the nice weather, the groups positioned themselves in the garden, which creates a relaxing atmosphere. Another explanation can be that the participants enjoyed to work with other participants after the individual step behind the computer. The *interdependence* becomes apparent and in small group the participants *communicate*. The small groups are *cohesive* sooner and more *psychological safe*, because of less interpersonal risk taking due to the smaller amount of participants.

In the last step following the lunch break, people seem to start to suffer from the after lunch dip, because they look tired. When the participants are not asking questions to the last group that has to present their results, everyone seems tired (see text box below). Also the results from the self-report shows a decrease in engagement. The main reason is probably the fact that in this step, the participants return to the computer (use of *technology*), have to listen to others in a large group (less *psychological safe* due to the many interactions), and have to comment on it. The end of the workshop is also approaching and the participants realize this as well. Concluding, the *motivation* of the participants has dropped.

> When nobody asks questions at the end of the presentation in the last step, the facilitator says: "I think you were very convincing"
>
> A participant: "I guess the last one of the day always is"

Not much attention is given to the *psychological safety* of the participants, which is likely to be the result of the fact that the facilitator (*group leader*) is not a professional. Apart from trying to undermine the anonymity, his/her directions for the different steps were not comprehensible enough.

The observations and the data from the self-reports match very well. This leads to the conclusion that the observed engagement could explain the self-reports and that the participants did not behave strategically.

5.2.2 Highlights of Case 1

- There is not much variation in scoring; there is a clear WPE trend
- Individually scoring with the GDR reduced the engagement
- Brainstorming in subgroups increased the engagement
- The only step increasing engagement was the only analogous step
- An after lunch dip and/or a plenary discussion lowered the engagement
- The facilitator negatively influenced the psychological safety and thus the engagement of the participants
- The observations made during the workshop correspond with the data from the self-report

5.3 Case 2

Goal: create vision and create cohesion
Participants: 13
Relationship: one project group, people from different third parties
Technology: GDR as individual reporting tool

The 'talking stick' method:

Participants are seated in a circle. The facilitator introduces the 'talking stick' as the key to speak. The one holding the stick is the one who may speak while the others have to listen. The next person taking the stick at hand has to summarize what was previously said before telling their personal view.

Appendix IV holds, next to the observations and a description of the workshop, the graph with the individual WPE during the workshop (Figure IV.1). There is less of a WPE trend compared to case 1. The workshop steps that had the most impact on the WPE are listen in Table 5.2. At the start, x_{WPE} was the lowest and the spreading of the WPE was the highest of the workshop. The talking stick step (see text box above) reduced the x_{WPE} the most of all steps. The following step in which the participants describe their thoughts in the GDR brought the WPE of the participants the closest together with only a σ_{WPE} of 0.26. The creative step in which film scenarios were made had the largest positive impact on x_{WPE} and this resulted in the highest value of x_{WPE} in this workshop. Comparing the x_{WPE} at the start with that of the end of the workshop, it has increased with 0.8.

Table 5.2: Data on the average (x_{WPE}), change (Δ_{WPE}), and standard deviation (σ_{WPE}) of workshop participant engagement of the workshop steps with the most impact on these variables in case 2

Step	$\mathbf{x_{WPE}}$	$\mathbf{\Delta_{WPE}}$	$\mathbf{\sigma_{WPE}}$
Start	3.5 (L)	+0.8 *	1.31 (H)
Talking stick	3.5	-0.4 (#)	0.67
GDR 2rd round	3.9	+0.4	0.26 (L)
Make scenarios	4.4 (H)	+0.5 (#)	0.62

L=lowest, H=highest, *=ΔWPE from start to end

The overall engagement level at the end was higher for the majority (8 participants) compared to their starting level. The other 5 participants reported on the same level of engagement before and after.

5.3.1 Interpretation of Data

The portrait gallery (see text box on page x) has increased the engagement among the participants. This can be due to the fact that it is a relaxed conversation with only one other person where conflicts are not likely to arise; it is *psychologically safe*.

Using the computer as a reporting tool (*technology*) seems to have an effect on the engagement level that depends on personal preferences (*personality*), because it does not have the same effect on the engagement level for everyone; Some participants like technology and report a higher engagement after these steps. Others dislike it and report a lower engagement after these steps. The *psychological safety* aspect of the GDR is clear; participants contribute their ideas anonymously. Two out of the three GDR steps have a negative influence on the overall engagement, so no clear trend can be seen as a consequence of the use.

The method talking stick is difficult to analyse, but very interesting from a *psychological safety* point of view. People tend to feel less safe when there is no table in front of them. However, the facilitator lays down strict rules that create a psychological safer environment. The *group leader* increased the *psychological safety* in the group. The participants tell about their dreams, while the *communication* is seriously guided; the participants cannot react on each other to prevent them from feeling criticized.

The engagement during this step seemed to reduce, because the step takes very long in which the participants cannot move and start to yawn. On the other hand, everybody took the stick at hand at least once and two waves of quickly recurring contributions were observed. The time it took was therefore probably not too long. Although the WPE decreased (observations and average of self-report results), the participants were very enthusiastic about the result of the step. This indicates that a method does not have to be the most engaging to reach a positive result. The other three influential factors that were controlled during this step, *group leader*, *psychological safety, and communication*, would have expected to increase WPE. However, because of the time it took and restrictions, the *motivation* had probably dropped, indicating that *motivation* is more important for WPE.

The making of the film scenarios is a very creative step, although not everybody interpreted it with the same creativity. *Personality* would be the reason for the difference in interpretation. However, mistakes are not an issue in this step because there are no consequences for the result. It is likely that the participants feel free to contribute, that they feel *psychologically safe*. The only person reporting on a reduction in engagement has possibly a less creative personality, also because his/her positive judgement of the GDR steps.

The fact that there is an overall increase in engagement due to the workshop is probably because of the nature of the workshop. There was not a lot of trust among the group members, which all came from different organizations. The workshop focused on the similarities between the participants. The group got more familiar and it turned out that the participants have similar dreams and the same values and norms. The overall increase of WPE could be influenced by the awareness of these *shared values and group norms*. At the same time, the *cohesion* of the group grows, although it is difficult to say how these two factors are related.
It is nice to mention that, although this is out of this research's scope, the group has initiated more group sessions because of the positive energy they got from this workshop.

5.3.2 HIGHLIGHTS CASE 2

- The method portrait gallery increased the engagement
- Appreciating the use of the GDR (technology) depends on the participant
- The method talking stick had a negative effect on the workshop participant engagement, but the participants were very positive about the result
- Motivation seems to be an important influence on workshop participant engagement

- The creative step making film scenarios increased the engagement
- The observations made during the workshop correspond with the data from the self-report
- Awareness of shared values and group norms and cohesion increase workshop participant engagement

5.4 CASE 3

Goal: develop vision

Participants: 18

Relationship: participants have the same jobs, but do not all know each other. There is also some friction within the group due to stakes of the participants.

Technology: GDR

> The 'portrait gallery' method (variations are possible):
>
> First, each participant chooses a picture that represents his/her feelings about, for example, their dream (this topic differ per group). Then, two by two the participants explain their dreams. The conversation partner has to draw the other or the other's dream.

The data from the self-reports show that the participants do not respond similar on the various workshop steps (Appendix IV, Figures IV.2.1 and IV.2.2; the data are divided over two graphs, because otherwise it was not possible to make the different data visible). In the appendix also the observations and a description of the workshop can be found. The average workshop participant engagement, x_{WPE}, has increased over the whole workshop with 0.2 and the lowest x_{WPE} was reported at the start of the workshop (Table 5.3). The highest reported x_{WPE} was after the mind dump, a step in which the participants can 'dump' their thoughts and concerns in the GDR. The largest increase in x_{WPE} occurred due to the portrait gallery (see text box below).

Table 5.3: Data on the average (x_{WPE}), change (Δ_{WPE}), and standard deviation (σ_{WPE}) of workshop participant engagement of the workshop steps with the most impact on these variables in case 3

Step	$\mathbf{x_{WPE}}$	$\mathbf{\Delta_{WPE}}$	$\mathbf{\sigma_{WPE}}$
Start	3.0 (L)	+0.2 *	1.46
Portrait gallery	3.3	+0.29 (#)	1.10
Mind dump	3.6 (H)	+0.26	0.96 (L)
Propositions (1st round)	3.3	-0.28 (#)	1.15
Propositions and brainstorm (3rd round)	3.2	+0.28	1.77 (H)

L=lowest, H=highest, #=largest positive or negative change *=ΔWPE from start to end

9 participants were positively influenced on their engagement level by the workshop, 6 participants were negatively influenced and for three participants the workshop did not affect their overall engagement.

5.4.1 Interpretation of Data

There are some difficulties in the workshop which seem to be related to an error in the preparation. Due to the difficulties with the propositions in the workshop design, the participants did not feel that they could express themselves enough. On the one hand, this will reduce the participants' *motivation* and, on the other hand, this affects the participants' *psychological safety*. When it becomes clear that the relationships within the group are more difficult than assumed and that some participants are not familiar with each other, the facilitator asks the group to discuss the propositions among them. Nobody responds, indicating that *communication* needed to be improved. Collaboration between the participants did not happen until the facilitator repeatedly told them to do so. It seemed that the participants did not feel comfortable in the group. The atmosphere during the workshop felt unreceptive and it was clear that there was no *cohesion* among the participants.

> "The propositions are so lengthy that it is easy to agree with some parts but not with others"
>
> "It is necessary to discuss why people voted for or against the propositions"

The facilitators were not content about how the workshop followed its course, also because they felt that they could have done better. With their influence on the process and consequently on workshop participant engagement, the *group leader* could have focused on *communication* and *cohesion*. The workshop design consisted of many individual steps using the GDR, which makes the *interdependence* between the participants less visible. Increasing the interdependence and the cohesion could have positively influenced the participants' feelings.

The highest x_{WPE} was found after the mind dump. From this can be concluded that the participants wanted to contribute their thoughts about the subject in the group and that they were glad that the possibility was provided. It shows their *commitment* to the subject.

The data from the self-reports are very diverse, making it very difficult to conclude anything about the potential a step has to engage. Perhaps the *personalities* within the group vary a lot, which reflects in the WPE and how this is affected by the different workshop steps. The only similarity from the self-report data and the observations is that both are messy. The x_{WPE} is higher than expected based on the observations, because the atmosphere felt like there was a lot of resistance in the group. Therefore, no real conclusions can be drawn about the effect of the different steps. However, it seems that the individual use of the GDR

in this case is not the best way to use the *technology,* because the group is not familiar with each other while they should collaborate.

5.4.2 HIGHLIGHTS CASE 3

- The group was not cohesive and had difficulties communicating
- When interdependence is not apparent, collaboration seems difficult
- Individual GDR use provides shelter for communication, because it is psychological safe due to the anonymous inputs
- Group familiarity and relations are important for a facilitator to know in order to design the best possible workshop
- Voting on proposition with the GDR needs good preparation
- Appreciating the use of the GDR depends on the participant
- Appreciating the use of the workshop methods depends on the participant

5.5 CASE 4

Goal: risk analysis
Participants: 13
Relationship: Participants do not all know each other. They are all professionals on the same subject but from different organizations.
Technology: GDR
Note: external facilitator, no facilitation professional

5.5.1 INTERPRETATION OF DATA

The self-report used in this case contained the engagement scale as well as the psychological safety scale. However, the results show that only five out of the fourteen participants filled in the engagement scale (Figure IV.3, Appendix IV) as well as the psychological safety scale (Figure IV.4, Appendix IV). The reason for this is probably that the participants thought that the scales were coupled and that only one mark was needed at each measuring point. This is likely due to an explanation error by the observer. Because the scales are not coupled in this research, the results of the people who only reported on psychological safety cannot be taken into account. Furthermore, some other data are not complete or show no change in either one of the scales. Therefore, the remaining results are so few that no calculations can be made or conclusions can be drawn from the data gathered with the self-report during this case.

It shows that the facilitator is not a professional (see text boxes below). (S)he does not show leader inclusiveness behaviour, because (s)he gives no support for the more quiet participants. There are also obvious indications that the facilitator does not actually listens to what the participants have to say. Proposals for focus from participants are ignored; the facilitator stays strictly to his/her design. As the interviews with facilitators also brought forward, flexibility is a very important quality of a facilitator. In the evaluation, the rigidity of the facilitator was reported as well. This shows that the participants have noticed it and

it has probably negatively influenced their *motivation*, because the participants are not able to steer the focus of the workshop.

> When a participant who did not speak up earlier tries to speak up but cannot come through, he is not backed up or assisted by the facilitator

> Facilitator speaks without listening to the commentary of participants

> A participant asks: “Can we see the dispersion in the scores, so that we can have a discussion about what we think is important?”
>
> Facilitator answers: “We don’t need to go into that”

The facilitator also deliberately reads some of the participants’ computer screen. The GDR is used to remove the accountability of what is said to make people feel safe to say whatever they want without being scrutinized for it. The *technology* has a positive influence on the *psychological safety* in this case. However, when someone is looking over the participants’ shoulders, this will decrease.

Because of lack of self-report data, good explanations are hard to give, but from the observations can be concluded that the behaviour of the *group leader* is an important impact on workshop participant engagement.

5.5.2 Highlights Case 4

- Data from the self-report were incomprehensive and cannot be used
- Flexibility and professionalism are important characteristics of a facilitator
- The facilitator reduced the motivation of the participants
- The facilitator reduced the psychological safety of the participants

5.6 Case 5

Goal: risk analysis
Participants: 7
Relationship: Everybody works on the same file, but know little about the actual tasks of others. Everyone knows one another.
Technology: GDR
Note: External, professional facilitator

During this workshop, the self-report was not used. The external facilitator preferred not to use the instruments. Therefore, the participants were asked to fill in the engagement scale and the psychological safety scale before and after the workshop. Only the effect of the workshop on the participants’ engagement and psychological safety is measured. The plots are found in Appendix IV, Figure IV.5 and IV.6.

One person reported on a decrease in WPE and someone else reported on an increase, resulting in the same average WPE of 4. This means that the workshop overall did not have an effect on the x_{WPE}. The level of psychological safety shows a increase of 0.5 over the whole workshop; nobody reports on a lower level of psychological safety, while three participants have experienced a psychological safer environment.

5.6.1 Interpretation of Data

Client introduces goal very personally; "I had never thought that I would find it this interesting"

The atmosphere in the group is relaxed. Everybody knows each other, although they do not what everyone is working on. However, the group seems to be *cohesive* and to *communicate* fine.

During the introduction of the workshop, the client who initiated the session tells his personal story about the subject. He is very honest, but simultaneously he expresses his enthusiasm for his work (see text box above). It shows he is very *committed*. Because he is the manager of the group he is responsible for the end result and is very present in the discussions. The others in the group make jokes about that, but he is not dominant over others.
The other participants in the workshop seem also *committed* to the subject, because they spend all their time working on the goal. There is some laughter, but it does not interfere with the work atmosphere. Even in the break, participants keep talking on topic.

During the whole workshop, the facilitator is very clear about the goal and the sub-goals of the different steps. (S)he explains that every participant is responsible for the outcome and that the time in which the goal has to be attained is short; the facilitator stresses that a *high goal* is *set*.

The facilitator is supportive towards the participants. Two examples are given in the text boxes below. The facilitator also checked whether the whole group supported some views that came up. In addition, when (s)he states that silly comments are more than welcome, (s)he creates an environment where people can make silly comments and where they are not judged because of this.

Facilitator asks an introvert participant to repeat what she said while others were talking as well

Facilitator: "I hear you"

Once, the facilitator reduced the psychological safety for one of the participants by asking him directly about his opinion. This participant reacted with a defence ('I am just listening').

Although this participant probably feels too directly confronted, the facilitator chose to do this to increase the engagement of the group as a whole. The reason behind this is to show the group that everybody's opinion is valued and that everyone should pay attention, because they can be addressed at all times. In other words, an increase of x_{WPE} is forced by potentially reducing the WPE or the *psychological safety* of one participant.

Although the effects of the different steps cannot be evaluated, it seems that the participants took the workshop seriously, which is also reflected in the self-report data. Over the whole workshop, the average psychological safety, x_{ps}, has increased. The behaviour expressed by the *group leader* increased the *psychological safety*.

5.6.2 Highlights Case 5

- The workshop increased the psychological safety
- Leader inclusiveness and other behaviour of the facilitator had likely caused psychological safety to increase
- The facilitator stressed that the goal was high
- The group seemed committed and motivated, resulting in a high workshop participant engagement
- The workshop had no overall effect on the engagement
- The observations made during the workshop correspond with the data from the self-report
- Engagement and safety do not seem to be coupled nor the opposite

5.7 Case 6

Goal: listing task and responsibilities and increase cohesion (part of a series of workshops)
Participants: 9
Relationship: The participants belong to different business units, but have to work together. They are familiar with each other and grow in being a team.
Technology: none used

This case has full self-report data on WPE (Figure 5.2) and psychological safety (Figure 5.3). The observations and a description of the workshop can be found in Appendix IV. With the data the extremes are tabulated in Table 5.4. The portrait gallery step has the largest positive effect on x_{WPE}, it leads to the lowest difference in WPE (σ_{WPE} is 0.43), and x_{WPE} reached its highest level in the workshop at that point. The last step is the plenary brainstorm and this step had to complete opposite effect on WPE.
The results for psychological safety follow the same trend, excluding the highest x_{WPE} which is reached after the break.

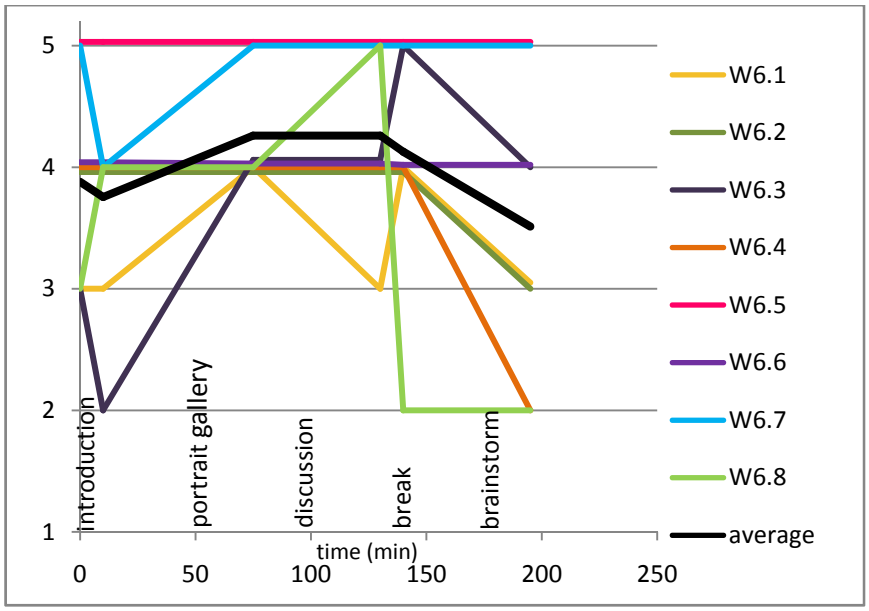


Figure 5.2: The engagement level of the participants during case 6

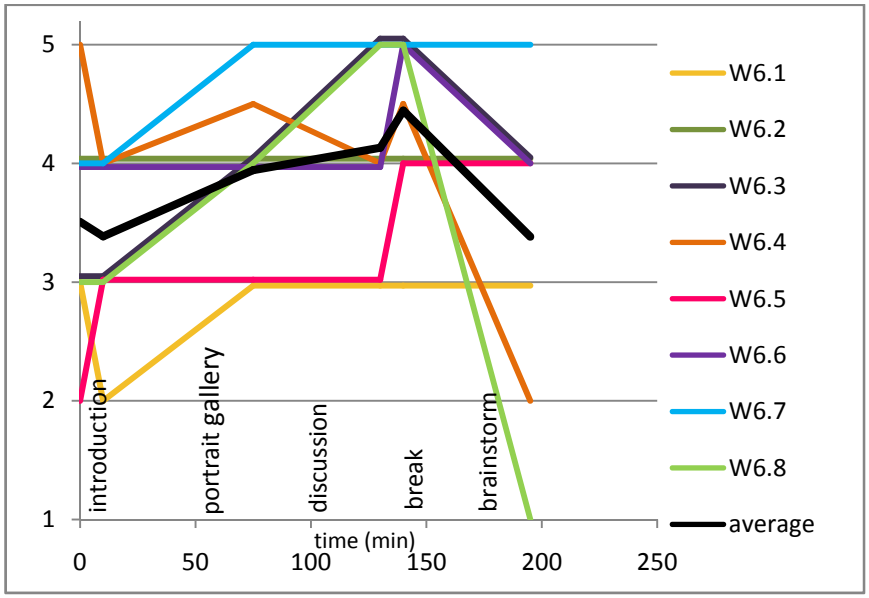


Figure 5.3: The psychological safety level of the participants during case 6

Table 5.4: Data on the average (x_{WPE}), change (Δ_{WPE}), and standard deviation (σ_{WPE}) of workshop participant engagement of the workshop steps with the most impact on these variables in case 6

Step	**x_{WPE}**	**Δ_{WPE}**	**σ_{WPE}**
Start	3.9	-0.4 *	0.78
Portrait gallery	4.3 (H)	+0.50 (#)	0.43 (L)
Brainstorm (plenary)	3.5 (L)	-0.63 (#)	1.12 (H)

L=lowest, H=highest, #=largest positive or negative change *=ΔWPE from start to end

5.7.1 Interpretation of Data

The participants all seem *committed*. When someone is invited the last moment, she turned up immediately. Everybody also pronounces the importance of success for them personally,

because the ambiguity in the organization uses a lot of the participants' energy. Jokes are made, but do not hinder the concentration or the progress of the workshop; *motivation* to proceed instead of to keep on laughing are present by everyone. By stressing the responsibility of the participants (see text box), the facilitator tries to increase their *motivation* to contribute during the workshop.

> Facilitator says to the participants: "You are the success factors"

The portrait gallery is used to express the feelings of the organizational change. It increases the engagement as well as the psychological safety (self-report data). Because respect for each other is stressed and the facilitator made sure that the participants started to do the assignment seriously, there is a certain amount of trust created. This step is about the personal feelings and does not involve any decisions, making it *psychological safe* as well.
One of the workshop's goals is for the participants to become a team. The participants state that since a half year the atmosphere is much improved. At the end of the portrait gallery, a joke is made in which everyone is helping each other. Although it is a joke, it is a representation of the increase in *cohesion*.

During the discussion (third step in the workshop), the facilitator pronounces his/her feeling twice that the group is capable in reaching their goals. This raises the *group-efficacy*. (S)he also helps a participant to speak up. These actions explain the increase in psychological safety reported by the participants. The *group leader* influences *psychological safety*, which is confirmed again in this case.

> Participant X to Y: "I don't like the way you react on me. You always do that and I am not the only one who thinks like this! I thought, I can keep this for myself or just say so"
>
> Participant Y: "Well, this is quite unexpected"

In the last step of the workshop, a major issue occurred between two participants (see text box). It seems that the workshop setting has provided such a psychological safe environment that previous frustrations are put out in the open. Because nobody expects to be attacked in this way, the psychological safety of participant Y drops immediately. She reacts very emotionally. Then, this probably reduced the psychological safety of participant X. Therefore, it is expected that participant X and Y are W6.4 and W6.8 of the self-reports. These two datasets show the largest decrease in WPE and psychological safety due to this step, although W6.8's engagement had dropped already after the break.
The other participants also report on a much lower level of WPE and psychological safety after this step. The fact that this collision happened creates the feeling that it can happen to others as well, which is an unsafe feeling.

Before the workshop ends, the facilitator explicitly states that what has happened and what was said during the workshop stays within the group and is not discussed with other colleagues. The facilitator tries to re-establish the psychological safety. However, it is not

clear how much impact this has had because of the negative impact on WPE and psychological safety. It only indicates that this stimulation cannot make up for conflicts.

When the data on workshop participant engagement and psychological safety are compared, it shows that they are very similar, expect for the break. This had a positive effect on the psychological safety of the participants, while it had a negative effect on the engagement of the participants. It is likely that talks were more personal and the possibility of being punished about something personal is smaller than when the subject matter of the workshop is discussed. On the other hand, the engagement for the workshop subject is lowered, because other things are on their mind.

Had the conflict not have happened, then WPE and psychological safety were probably both higher at the end of the workshop compared to the start. Not everyone was influenced by the conflict in the last step. People respond on their environment depending on their *personality*. This is a nice example of the difference in being influenced.

5.7.2 HIGHLIGHTS CASE 6

- The method individual portrait gallery has increase the engagement and the psychological safety
- Engagement and psychological safety seem to be coupled
- The observations made during the workshop correspond with the data from the self-report
- A conflict between two participants seriously reduced the engagement and the psychological safety
- An increase of psychological safety can result in actions based on safety which can subsequently make the situation less safe
- A facilitator cannot make psychological safety, but can contribute to it
- Some participants' engagement and psychological safety are not influenced by their environment while others are
- A facilitator can boost the group-efficacy

5.8 CASE 7

Goal: creating mission and vision
Participants: 6
Relationship: The participants belong to different business units, but have to work together. They are familiar with each other.
Technology: non used

Appendix IV-1 contains the pure observations made during this workshop, the description of the workshop, and the graphs with the self-report data (Figure IV.7 and Figure IV.8). Because the group only consists of six participants, one single change has an immediate effect on the average score. Therefore, it is hard to draw conclusions about the results. The results on WPE shows that four out of six participants report on changes during the workshop.

Although the course of the data is not for each participant the same, there is in both the WPE and the psychological safety a trend to be seen. There is a small overall increase of x_{WPE} due to the workshop (Figure 5.5). For psychological safety, the difference is much larger; the x_{ps} increased with 0.83 over the whole workshop. The highest x_{WPE} is reported after the first brainstorm round and the highest x_{PS} is reported after the second plenary discussion and is only lowered after the third plenary discussion to return to the same value afterwards.

Table 5.5: Data on the average (x_{WPE}), change (Δ_{WPE}), and standard deviation (σ_{WPE}) of workshop participant engagement of the workshop steps with the most impact on these variables in case 7

Step	$\mathbf{x_{WPE}}$	$\mathbf{\Delta_{WPE}}$	$\mathbf{\sigma_{WPE}}$	$\mathbf{X_{SP}}$	$\mathbf{\Delta_{SP}}$
Start	4.2	+0.17 *	0.69	3.5	+0.83*
Plenary discussion (1st)	4.2	0	0.37 (L)	3.4 (L)	-0.08
Brainstorm in groups	4.5 (H)	+0.33	0.50	4.2	+0.75 (#)
Plenary discussion (3nd)	3.92 (L)	-0.41 (#)	0.61	4.3 (H)	-0.33 (#)
2 by 2 interview	3.92	0	1.02 (H)	4.2	+0.17
Plenary discussion (4rd)	4.3	+0.42 (#)	0.75	4.3 (H)	+0.17

L=lowest, H=highest, #=largest positive or negative change *= over whole workshop

5.8.1 Interpretation of Data

This workshop consisted of three recurring cycles of a discussion in subgroups followed by a plenary discussion. The data on both engagement and psychological safety are not conclusive on how these are influenced by a plenary or subgroup discussion. In this case, the observations cannot really explain the data from the self-reports.

In the beginning, there were many interruptions. At the end, it was more relaxed and the facilitator regained grip on the group. Therefore, it was expected that the self-reports would show that the WPE and psychological safety would increase over time. However, the data show an increase in the first half and a drop in the second half. Differences between observations and self-reports are best to be explained by strategic behaviour of the participants.

The drop in engagement and in psychological safety in the third plenary discussions can be due to the manager among the participants, who pronounces that what is said is 'not important'. This could influence the *psychological safety* and the *motivation* of the participants who think it ís important. In addition, in the second half of the workshop the superior of the whole group walks in. His presence can reduce both the WPE and psychological safety, even though he tries to increase the *group-efficacy* (see text box).

A superior who dropped by:

"I know myself; If I stay here, I will participate in the discussion and I can be too dominant. This is a good first step and I trust you in this"

In the last step of the workshop, the participants seem to have become closer during the workshop (see text box). This reduces the possibility for everyone to feel insecure about the outcome. The qualities of the team are visualized for everyone increasing the feeling that the group knows what to expect from each other. This step raised the *group-efficacy*, when combining the results from the self-reports and the observed positive reactions, and probably also the *cohesion* within the group.

> "It is nice to see that we agree with each other"

5.8.2 HIGHLIGHTS CASE 7

- Engagement and psychological safety seem to be coupled
- The observations cannot unmistakably explain the data from the self-reports
- A superior can have a large influence on the engagement and psychological safety
- The psychological safety has increased a lot during the workshop, probably due to familiarity and an increased group-efficacy

5.9 CASE 8

Goal: dividing tasks and creating support
Participants: 11
Relationship: Everyone knows each other, but they are from different sections. Therefore, everyone has his or her own agenda.
Technology: non used

In this case, not all of the participants have scored on both scales. Therefore, the data of the participants who scored only once are discarded. The data obtained from the engagement scale shows a very clear trend (Figure 5.4). Appendix IV has the graph on the psychological safety (Figure IV.9) and the observations.

Table 5.6: Data on the average (x_{WPE}), change (Δ_{WPE}), and standard deviation (σ_{WPE}) of workshop participant engagement of the workshop steps with the most impact on these variables in case 8

Step	$\mathbf{x_{WPE}}$	$\mathbf{\Delta_{WPE}}$	$\mathbf{\sigma_{WPE}}$
Start	4.0	-0.25 *	2.04
Plenary discussion I	2.75 (L)	-1.25 (#)	1.87 (L)
Plenary discussion II	4.5 (H)	+1.75 (#)	2.26 (H)

L=lowest, H=highest, #=largest positive or negative change *=ΔWPE from start to end

Overall, the workshop had a negative effect on WPE. As the graph below and Table 5.6 show, the only step in the workshop that increased the WPE is the third discussion. The first plenary discussion reduced x_{WPE} the most. Because only four datasets are available, the data of psychological safety does not create a real trend. One participant scoring different from the others can have a large effect because it is 25% of the data.

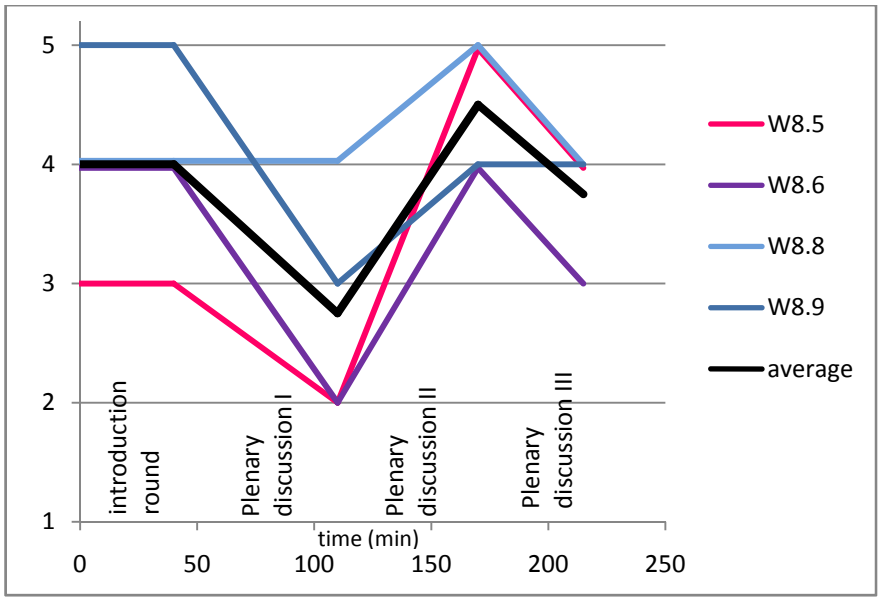


Figure 5.4: The engagement level of the participants during case 8

5.9.1 Interpretation of Data

The data from the introduction round show that people are not getting more engaged and people feel less safe afterwards. This can be because everybody has to speak about personal feelings in a group. Another workshop has shown an increase in psychological safety when a similar introduction round was incorporated. This difference can be due to *personalities*, but also to the group's *cohesiveness* or level of *communication*. However, from the participants' stories their *commitment* becomes perceptible (see first text box on the next page).

At the start of the second step (first discussion round), the method and terms used are put up for discussion and the workshop design was thrown overboard. This resulted in a non-guided phase with *communication* difficulties. The *goal* of the step was not clear and the step did not have a real result, which explains the drop in reported WPE.

The second discussion round started with individually prioritizing and although there was still a lot of discussion in this step, the *goal* was clear and a result was attained due to the prioritizing. The heavy discussions show that the participants are indeed *committed*; they put effort in the discussion because they want to defend their point of view. When one participant talks very negative about the group's results, the rest goes up against this vision (see text box). This shows that – except for this one person – the *group-efficacy* is quite high. Because of the defence of the group against the negativity, this group-efficacy is probably not affected. The x_{WPE} due to this step has increased a lot, which support these rationalizations.

In the last step, a superior has joined for a short while followed by a quite easy round of assigning names to projects. The x_{WPE} and x_{PS} go down due to this step. The expressions, verbally as well as non-verbally, indicate that the participants are tired. The *motivation* for

the workshop has disappeared. The reduction in *psychological safety* can be due to taking responsibility for projects with a low level of support.

> "I feel really committed although I am changing jobs"

> "We are working on this for a year and the result is sad! I really mean that"
>
> "I think we talk too negatively about it, because I don't feel it like that"

Because the workshop design was left behind and the participants only wanted to discuss among them, the facilitator/*group leader* decided to step back and interfere less than normal.

Although or because of the useful datasets are few, the trends in WPE and psychological safety are not similar. Therefore, they do not seem to be related.

5.9.2 Highlights Case 8

- The discussion step with a clear outcome raises the engagement
- Assigning responsibility to future projects lowers psychological safety
- Engagement and psychological safety do not seem to be coupled
- Group-efficacy does not seem to have a large impact on workshop participant engagement
- A clear goal seems to increase engagement, when there is no clear goal engagement is decreased
- When the motivation decreases, the engagement decreases as well

5.10 Case 9

Goal: self-assessment integrity
Participants: 14
Relationship: All participants are working for the same organisation, but at different departments.
Technology: GDR

The observations and the graphs with the data from the self-reports on workshop participant engagement (Figures IV.10.1 and IV.10.2) and psychological safety (Figures IV.11.1 and IV.11.2) can be found in Appendix IV. Figure 5.5 shows the course of the averages of workshop participant engagement and psychological safety.

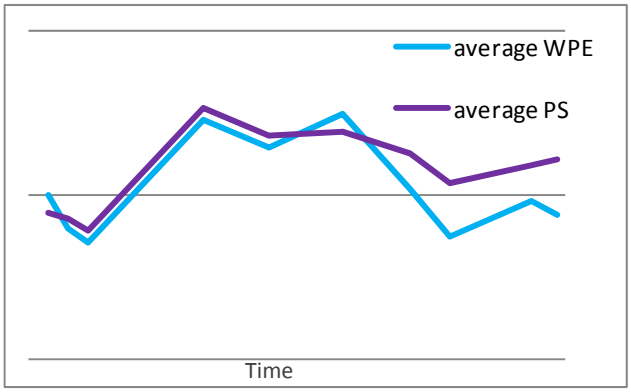


Figure 5.5: Average WPE and PS for case 9

The prioritizing step resulted in the overall lowest x_{WPE}. A similar step, scoring, later in the workshop had the largest negative effect on it. The brainstorm in small groups had the largest positive effect on the workshop participant engagement. This step resulted in the highest x_{WPE} of the workshop together with the lunch. The standard deviation represents the degree of scoring differences and is high for each step (Table 5.7). The results for x_{SP} are very similar to those of x_{WPE}, which can also be seen in Figure 5.5.

Table 5.7: Data on the average (x_{WPE}), change (Δ_{WPE}), and standard deviation (σ_{WPE}) of workshop participant engagement of the workshop steps with the most impact on these variables in case 9

Step	**x_{WPE}**	**Δ_{WPE}**	**σ_{WPE}**
Start	4.0	-0.13 *	1.76
Prioritizing	3.7 (L)	-0.08	1.72
Brainstorm (groups, 1st)	4.5 (H)	+0.75 (#)	1.87
Lunch	4.5 (H)	+0.21	1.89
Scoring (individual)	4.4	-0.46 (#)	1.74
Checkmarks (individual)	3.8	-0.29	1.71 (L)
Brainstorm (groups, 2nd)	4.0	+0.21	1.91 (H)

L=lowest, H=highest, #=largest positive or negative change *=ΔWPE from start to end

5.10.1 Interpretation of Data

In this workshop, the effect of individually scoring (including prioritizing and check marking) has the same effect as seen before in a workshop; it reduces WPE. The task is boring, there is no *communication* except with their own computer (*technology*) and therefore there is no real *interdependence*. *Motivation* seems to drop. The steps have the same effect on *psychological safety*, which can be due to the difficulty of the task. Participants can feel insecure about the choices they make, because they do not possess the right knowledge or think they do not have it. However, from the observations it cannot be concluded that it has such a negative influence, because everybody is seriously doing their task.

The steps increasing WPE and psychological safety are the brainstorm in small groups rounds. In these steps, the *interdependence* is more obvious, *cohesion* is established sooner, and *communication* is easier because there are less people to pay attention to. The

change from individually scoring to working in a small group eases communication, which increases the engagement. The *motivation* of the participants is also likely to go up, because the method is more intrinsically rewarding. Concerning psychological safety, it can be concluded that the participants have respected each other's opinion.

The plenary discussions had a small negative effect on the WPE. During these steps, many jokes are made and attention is more divided than directed. It seems that the *motivation* lessens. Although the facilitator shows leader inclusiveness behaviour, it does not really affect the psychological safety.

The subject of the workshop, integrity, asks for a high level of psychological safety. People should feel free to express themselves. From the observations is concluded that they do, because definitions are asked for words that are not understood (see text box). Others are supportive of this action (see text box).

> "What are actors?" ...
>
> "You are not the only one who doesn't understand everything"

From the data in this case, the workshop steps that do not involve *technology* seem to be the only steps that have a positive influence on WPE.

5.10.2 Highlights Case 9

- Workshop participant engagement and psychological safety follow the same trend
- Brainstorming in subgroups increased the workshop participant engagement the and psychological safety
- Individually scoring items on a computer reduced the engagement (lack of motivation) and psychological safety (knowledge gap)
- The steps increasing engagement were the steps where no technology was used
- The observations did not completely match the self-report data
- In steps were a lot of joking took place, workshop participant engagement went down

5.11 Case 10

Goal: optimizing work and collaboration
Participants: 9
Relationship: All the participants work in the same team
Technology: GDR used as a reporting tool in groups
Note: the workshop used is called the project house and consists of multiple steps

Appendix IV holds, next to the observations and a description of the workshop, the graphs with the individual WPE (Figure IV.12) and the psychological safety during the workshop (Figure IV.13). The x_{WPE} is the lowest at the end of the workshop and the highest after the

lunch (Table 5.8). The step in which the GDR is introduced had the most negative effect on the x_{WPE}. The brainstorms in small groups and the portrait gallery have had a positive effect on the x_{WPE}. The trend of the x_{PS} is quite similar as x_{WPE}, although the most negative effect on it had the first plenary discussion round and the most positive effect had the brainstorming in two groups.

Table 5.8: Data on the average (x_{WPE}), change (Δ_{WPE}), and standard deviation (σ_{WPE}) of workshop participant engagement of the workshop steps with the most impact on these variables in case 10

Step	x_{WPE}	Δ_{WPE}	σ_{WPE}
Start	3.8	-0.64 *	1.41
Portrait gallery	4.4	+0.63	1.52 (H)
Lunch	4.4 (H)	+0.01	0.66
GDR introduction	3.3	-1.11 (#)	1.51
Brainstorm	3.9	+0.67 (#)	0.60 (L)
Explanation exercise	3.1 (L)	-0.28	0.99

L=lowest, H=highest, #=largest positive or negative change *=ΔWPE from start to end

5.11.1 Interpretation of Data

In this case, the participants have scored very diverse. Three participants once scored their engagement level the lowest possible (*I am absent-minded, bored and there is no interaction*). Two of them did that after the introduction step with the GDR and the third did it after the last plenary discussion. These participants also had scored high on the same scale in an earlier step. The large spread in engagement is not understandable when the observations are taken into account. For example, time for the introduction of the GDR was extended by the facilitator because the participants were actively contributing. They seemed very engaged. Therefore, the drop in engagement due to that step is downright strange. Of course, it could be possible that a method is experienced as really boring to make the jump from passionate to bored without any interaction. However, everybody was definitely interacting. Therefore, this can only be explained with strategic behaviour; although the participants were acting engaged, some of them did not feel like that.
During the second plenary discussion signs of the participant being tired became apparent and this could explain the decrease in x_{WPE} due to the *motivation*. The steps in which GDR (*technology*) was used all had the negative influence on the engagement.

The data for psychological safety are even stranger. One participant scored 1 (*I do not dare to say everything I think and feel*) trice, but in between those measurement (s)he also scored 5 (*I feel completely free to contribute new and unconventional ideas*) twice. Is it really possible to feel so completely different in such a short time frame twice? One large shift can be understood in some cases due to a certain factor, but twice would be too much. From feeling completely psychologically unsafe to completely safe in a few minutes, and then later again feeling completely unsafe again. There are a few possible explanations for it. The first is that the participant did not understand the self-report. However, the introduction has not been different from the other cases and the complexity is rather low.

The second explanation would be that the mood changes are exaggerated. Because the pictures on the engagement scale are already exaggerated, this is also not plausible. The last reason could be that some of the participants deliberately have obstructed the research as a joke. What the real reason may be, the data are difficult to interpret. However, it seems that the participants' perception is influenced by small problems that are quickly resolved.

The following can be concluded from the data, also because other cases show the same trend. The first step, the portrait gallery had a positive influence on the engagement as well as on the psychological safety. The steps in which the participants brainstorm in subgroups increase the engagement and the psychological safety. The plenary discussions lower the engagement and the psychological safety.

5.11.2 Highlights Case 10

- The observations cannot explain the data from the self-reports; the participants are likely to have behaved strategically
- Brainstorming in subgroups increased the engagement and the psychological safety
- The method portrait gallery increased the engagement and the psychological safety
- The plenary discussions lowered the engagement and the psychological safety
- Engagement and psychological safety seems to be coupled

5.12 Case 11

Goal: formulating criteria

Participants: 10

Relationship: Participants are from different organizations

Technology: GDR

Table 5.9: Data on the average (x_{WPE}), change (Δ_{WPE}), and standard deviation (σ_{WPE}) of workshop participant engagement of the workshop steps with the most impact on these variables in case 11

Step	$\mathbf{x_{WPE}}$	$\mathbf{\Delta_{WPE}}$	$\mathbf{\sigma_{WPE}}$
Start	4.1	-0.2 *	1.35
Introduction	4.3 (H)	+0.17	1.38
Introduction GDR	3.6 (L)	-0.72 (#)	1.23 (L)
Brainstorm (groups)	4.1	+0.57 (#)	1.86 (H)
Mind dump (individual)	4.3 (H)	+0.56	1.38

L=lowest, H=highest, #=largest positive or negative change *=ΔWPE from start to end

The data from the observations and the self-reports of the last case are also to be found in Appendix IV. The participants in this workshop also scored within a large range (high standard deviations, Table 5.9), but a trend can be spotted for both WPE and psychological safety. The participants, number 9 and 10 cover the most contradictory data, because these datasets are often opposing to the other data. After the introduction and after the mind dump the x_{WPE} was the highest. The GDR introduction reduced it the most and resulted in

the lowest x_{WPE} of the workshop. The brainstorm in groups had the largest positive effect on x_{WPE}, but here the differences between the participants' scores was also the largest. An equal amount of participant report at the end a higher, a lower, and a same level of WPE than at the beginning of the workshop. Overall, the value of x_{WPE} has decreased.

5.12.1 Interpretation of Data

The engagement seems very high. The material is very difficult and straightforward, but the participants do not show that they are becoming tired after a while. They do not respond to the hint of the facilitator that the lunch is waiting (see text box). The participants are very *committed* to their work and stay *motivated*. This might also be the reason why the participants do not experience the lunch break as engaging. However, it could also be because the participants do not know each other well. The psychological safety drops too, which could be due to the fact that it is not a *cohesive* group and lunch forces the participants to become more personal.

> Facilitator has said that the lunch is waiting, but the participants keep on discussing

At the start of the workshop, a participant brings up that important stakeholders are missing. This can reduce the *psychological safety* of the group, because it is not sure how much support the outcome should have. In addition, the *group-efficacy* could also be negatively influenced. There is no decrease seen in the psychological safety seen after the introduction, but the participants could have anticipated on this before the first measurement. Because this is a fact which could not be changed during the workshop, its influence is constant over the workshop and is not influencing the course of either WPE or psychological safety.

The data from the self-reports show what has been observed in other workshops as well. The brainstorm in subgroups increases engagement and psychological safety. Use of the GDR and plenary discussion lower the engagement. The individual GDR brainstorm has a positive effect on the engagement and psychological safety. The anonymity of contributions in the GDR (*technology*) increases the psychological safety.
During the plenary discussion, participants object to the standpoints of others and everyone participates. This indicates that everyone dares to say what (s)he wants (see text box). The x_{PS} of constantly being between 4 and 4.5 emphasizes this finding.

> "I do not understand your reasoning completely"

An explanation for the two participants scoring against the trend is hard to give. One of the participants (nr. 9) seems to prefer interaction with the other participants. This can be due to his/her *personality* which is linked to certain preferences. Participant nr. 10 seems to

prefer steps in which (s)he can give his/her opinion to everyone, either by plenary discussions or the individual brainstorm which documents every input.

When the self-report data on engagement and psychological safety are compared, they do seem coupled for some steps and not for others. However, when the data are compared per participant, it rarely occurs that a step increases or decreases the engagement while simultaneously the psychological safety is affected the opposite way.

5.12.1 HIGHLIGHTS CASE 11

- Using the GDR reduced engagement
- The participants are all very committed and motivated
- Brainstorming in group increased engagement and psychological safety
- The plenary discussion reduced engagement
- The lunch break reduced engagement and psychological safety, perhaps because the group is not a cohesive group
- Engagement and psychological safety seem to be to some extent related
- Participants score differently on certain steps, which indicates different personalities

CHAPTER 6 DISCUSSION EMPIRICAL RESULTS

In this chapter the individual self-report results are combined and analysed to draw conclusions regarding workshop participant engagement and the relation with the conceptual model of Chapter 3. This model is built from literature on engagement and consists of twelve factors that influence workshop participant engagement. Because this is an exploratory research, the conceptual model is not tested completely, but the results from the cases in Chapter 5 are the basis for its discussion.

Firstly, the data from the self-reports are compared with the observations (section 6.1). From two different viewpoints the workshops are assessed and the correspondence between them is of importance. Secondly, the data from the self-reports are put together to see whether something can be said about the steps in a workshop (section 6.2). These steps differ in group size, in method, but also in the use of technology. Thirdly, an analysis is made on workshop level. Fourthly, the twelve influential factors on workshop participant engagement are discussed (section 6.4). The findings in the workshop are the basis for this generalization. Fifthly, the conceptual model is discussed (section 6.5). Together these discussions are the basis for the last chapter in which the research is concluded and recommendations are given. Last, an instrument is developed in which workshop participants can report on their engagement and other topics (section 6.6)

6.1 DATA COLLECTION SOURCE

Data is gathered with the help of the self-reports and simultaneously with observations of the group. In most of the cases from which the data of the self-reports could be interpreted, except for case 7 and 10, the observations could explain the general trend. However, the individual results are always quite surprising and from this can be concluded that many factors are playing a role which an observer or a facilitator cannot see or feel. Especially participants who score against the average trend are hard to explain. What caused the difference how the methods were experienced? Because the self-reports are anonymous and there is no possibility to ask for explanations, the reasons can only be guessed afterwards. The first possibility is a personal difference for certain work methods. A second possibility is strategic behaviour, which results in an incongruence between the participant's behaviour and his/her engagement report. However, strategic behaviours often seems – with the knowledge of the facilitator and the observer – not the most understandable action.

6.2 Analysis on the Individual Level; the Self-Reports

The methods and techniques used in workshops differ. However, many steps are recurring in workshops. The influence of a step can be averaged over multiple workshops with the data from the self-reports. For this purpose steps are aggregated when they could be grouped on the variable of investigation in the subsections below. Because the absolute levels of workshop participant engagement (WPE) and psychological safety (PS) depend on the group and the course of the workshop, only the difference between WPE and PS due to the step is tabulated. The higher the amount of datasets used, the higher its validity. Because the data are not normally distributed and the variances are not equal, it was not possible to perform statistical calculations. Therefore, nothing can be said about the significance of the differences. However, this is an exploratory research and future research projects can test hypotheses that originate from this research.

6.2.1 Methods and Techniques

Most of the methods and techniques used in the assessed workshops can be classified in one of the steps shown in Table 6.1. The most positive effect on the workshop participant engagement have the steps in which the participants brainstorm in subgroups and where the participants get to know each other during the portrait gallery. In workshops where the GDR is used, the brainstorm in subgroups normally follows an individual step behind the computer (case 1, 4, 9, 10, and 11). Because the use of GDR has an overall decreasing effect on the workshop participant engagement (see subsection 6.2.2), it could have amplified the positive influence of the brainstorm in groups. However, there also have been workshops without GDR in which the method was used and which are included in the calculations as well (case 7 and 8).

Table 6.1: The average difference in workshop participant engagement ($\Delta_{WPE\ step}$) and the average difference of psychological safety ($\Delta_{PS\ step}$) due to the step, together with the number of datasets used for the calculations and the standard deviations (σ_{WPE} and σ_{PS})

Method	**# Data$_{WPE}$**	**Δ_{WPE}**	**σ_{WPE}**	**# Data$_{PS}$**	**Δ_{PS}**	**σ_{PS}**
Brainstorm in groups	62	0.411	0.947	47	0.458	0.771
Portrait gallery	40	0.363	0.816	14	0.367	0.915
Plenary discussion	71	-0.197	0.749	85	-0.247	0.908
Plenary (no discussion)	65	-0.046	1.007	9	-0.125	0.641
Scoring	79	-0.266	0.896	51	-0.029	0.809
Lunch / break	36	0.014	0.906	30	0.167	0.686

The steps generally included some degree of freedom. The idea of brainstorming is to come up with new ideas, to think out-of-the-box. The portrait gallery is about to get to know each other on a level different from purely work. The focus is not on the work part, but more on the creativity.

The self-report data contains evidence that the two methods have an impact on psychological safety. Both the brainstorm in groups and the portrait gallery have a large

positive effect on it. As is mentioned a few times in the previous chapter, the change in group size reduces the interpersonal risk taking.

The most negative effect on workshop participant engagement are the steps in which participants have to score items. Here, scoring refers to the steps in the workshop, not to the scoring of the self-report. Generally, this is individually done with the GDR. This task involves a lot of reading, decisions have to be made, and there is no interaction with other participants what so ever. This decreases the motivation and therefore the engagement of the participants. The psychological safety does not seem affected by the scoring steps. On the one hand, it was expected that the GDR with its anonymity function increases psychological safety. On the other hand, the idea a participant has about his knowledge or the lack of it determines whether (s)he has a good feeling while executing the task. These two influences can have resulted in no apparent change in psychological safety.

The plenary discussion of the results from the brainstorm in subgroups negatively influences workshop participant engagement, especially in case 10 and 11. During this step, communication is complicated because more people are present. A larger group has more difficulties to become cohesive, it is more difficult to see whether values and norms are similar among the group members, and the psychological safety is smaller. Other plenary steps without a discussion reduce workshop participant engagement as well. The negative influence of these steps on psychological safety are even more evident (particularly case 10). This leads to the indication that plenary steps have a large impact on the psychological safety, which does not immediately reduce engagement with the same degree. This might come with the time.

Another step in each workshop is the break. Some have a lunch break, others have a small coffee break. It is not really a method or technique, although it is used by facilitators when the participants seem tired, distracted, or when the client has to be consulted. It has a minimal effect on the workshop participant engagement, but it increases psychological safety. A break is often used as a moment in which about something else than work is talked, which relaxes the atmosphere. It is thought to increase the energy level of the participants for the next workshop step due to the momentarily relaxation of the span of attention.

Furthermore, there were some other seemingly important results that could not be replicated. To these belong the method talking stick and the making of film scenarios. The first had a negative effect on the participant engagement, but the participants were very positive about the result (Case 2). The second was the most creative step in this database and increased the engagement (Case 2).

6.2.2 TECHNOLOGY

When technology was used in the workshops it was ThinkTank, a group support system (GSS), also known as GDR (Group Decision Room). Workshops in which the GDR is used normally also consist of steps that are not executed behind the computer. The analogous steps are often the only steps (case 1, 9, and 10) which have a positive effect on the engagement in these workshops. Overall, Table 6.2 shows the negative effect of the use of

the GDR on workshop participant engagement. It has a slightly positive effect (although perhaps too small to draw conclusions) on the psychological safety, which can be due to the anonymity of the GDR. The anonymity of the contributions makes it easier to write things which the participants would not say otherwise, because they cannot be personally scrutinized for it. In addition, it seems that appreciation of the use of GDR depends on the participant (case 2).

Table 6.2: The average difference in workshop participant engagement ($\Delta_{WPE\ step}$) and the average difference of psychological safety ($\Delta_{PS\ step}$) due to use of the GDR, together with the number of datasets used for the calculations and the standard deviations (σ_{WPE} and σ_{PS})

Technology	**# Data$_{WPE}$**	**Δ_{WPE}**	**σ_{WPE}**	**# Data$_{PS}$**	**Δ_{PS}**	**σ_{PS}**
GDR	208	-0.171	0.966	18	0.055	1.294

Comparing workshops where the GDR did not play any role (case 6, 7, and 8) with workshop where the GDR was used, the data do not differ much. The average levels of workshop participant engagement and psychological safety are about the same. The variation in the course of the workshops differs, but that is the case in both groups. Therefore, no conclusions can be drawn about the overall effect of GDR use on workshop participant engagement or psychological safety.

6.2.3 GROUP SIZE

In workshops, participants work either all together, alone, or in subgroups. In the analysis no division is made based on specific subgroup size, but it is clear that working in subgroups has a preference when workshop participant engagement and psychological safety are desired (Table 6.3). From the self-report data can be concluded that working in small groups is the only way that has a positive effect on the workshop participant engagement. It has a large positive effect on psychological safety as well. To this category belong, among others, the steps brainstorm in subgroups (case 1, 9, 10, and 11), the portrait gallery (case 2, 3, 6, and 10), and making a film scenario (case 2).

Table 6.3: The average difference in workshop participant engagement ($\Delta_{WPE\ step}$) and the average difference of psychological safety ($\Delta_{PS\ step}$) due to group size, together with the number of datasets used for the calculations and the standard deviations (σ_{WPE} and σ_{PS})

Group size	**# Data$_{WPE}$**	**Δ_{WPE}**	**σ_{WPE}**	**# Data$_{PS}$**	**Δ_{PS}**	**σ_{PS}**
Plenary steps	136	-0.125	0.881	85	-0.247	0.886
Small group work	176	0.241	1.004	73	0.336	0.972
Individual	178	-0.118	0.827	28	-0.054	0.515

Changing the group size has an effect on the psychological safety, the interdependence, the communication, the cohesion, and the motivation of the participants as described in Chapter 5. The advantages of a small over a large group are; people can easier communicate with each other; a group becomes cohesive faster, because there are less people to keep an eye on and it is easier to be heard; it is easier to sense what values and

norms everyone has; the psychological safety is higher, because there are less interpersonal risks involved. The latter is reflected as well in the increase in psychological safety.

Steps, in which tasks are executed individually or by the whole group, have a negative effect on workshop participant engagement and psychological safety. For the individual steps, the workshop participant engagement is reduced and the psychological safety slightly as well (although also here the change is perhaps too small to draw conclusions). The interdependence between the participants is not visible during the individual steps, which makes it difficult for the participants to assess their performance. Individual tasks are in general more straightforward and less fun, influencing the motivation of the participants. The data on plenary steps show a larger negative effect on psychological safety than on workshop participant engagement. This is likely due to the fact that there are many group members where a participant can face interpersonal risks. The more people in a group, the more difficult communicating and creating cohesion in the group is.

6.2.4 Convergence and Divergence

The data from the self-reports are divided based on divergence, like in the case of brainstorming, or convergence, for instance when choosing the most important issues (Table 6.4). The steps focusing on divergence have almost no effect on workshop participant engagement and a large positive effect on the psychological safety. Certainly in brainstorming or other creative steps, thinking out-of-the-box is needed and therefore saying something wrong or stupid is less of an issue. The effect on workshop participant engagement is smaller than expected, because creativity is likely to increase the motivation.

Table 6.4: The average difference in workshop participant engagement ($\Delta_{WPE\ step}$) and the average difference of psychological safety ($\Delta_{PS\ step}$) due to goal of the step, together with the number of datasets used for the calculations and the standard deviations (σ_{WPE} and σ_{PS})

Step	**# Data$_{WPE}$**	**Δ_{WPE}**	**σ_{WPE}**	**# Data$_{PS}$**	**Δ_{PS}**	**σ_{PS}**
Divergence	154	0.032	1.057	57	0.395	0.910
Convergence	42	-0.202	0.804	42	-0.052	0.872

The steps with a focus on convergence show a different trend. It only has a marginal negative effect on psychological safety, but a larger negative effect on workshop participant engagement. To these steps belong the plenary discussions and the individual scoring. Although the plenary discussions had a negative effect on the psychological safety, the individual scoring steps did less do so. The workshop participant engagement was affected by both methods, perhaps concluding that convergence steps are more boring because they are less creative.

6.2.5 Engagement and Psychological Safety

Figure 6.1 shows the course of the average workshop participant engagement and average psychological safety for all the workshops in which the data could be used. Only three

workshops had a positive effect on the overall workshop participant engagement (case 2, 3, and 7). Case 5 had only two measuring points and has the same level of workshop participant engagement before and after the workshop. However, had not a conflict happened during the last step of case 6, it is likely that also there the overall effect had been positive. Because the amount of participants is generally low in workshops, the effect of one person's score on the average is quite high.

The psychological safety (not measured in case 1, 2, and 3) has increased in case 5, 7, 9, and 11. Also here, it is likely that case 6 could have added to this list when the conflict had not occurred. The change in psychological safety in case 8 is only a small one and is more stable than the course of workshop participant engagement. Case 10 had strange results, which could not be explained by observations. Therefore, it seems that psychological safety is usually increased in a workshop.

The importance of an overall increase of workshop participant engagement at the end of the workshop can be discussed. At the end of a workshop, the participants have been working through a certain amount of steps to reach the workshop's goal. Participants are tired and generally glad that the day is to an end. The last step is often a plenary step and as is shown, this has a negative effect on workshop participant engagement. When the workshop's goal is attained, the engagement of the workshop participants with the day is not important any more. Of course, they should still be engaged in the subject and in the result itself, but because the engagement scale used in the self-reports focuses on how the participants experience the process, this is of less importance.
On the other hand, an increase in psychological safety due to the workshop is of more importance. When a group has to continue to work together, it is advantageous that the group members are more comfortable with expressing themselves. Future collaboration is therefore improved. The workshop has not only lead to goal attainment, but also to an improved working atmosphere.

The trends of workshop participant engagement and psychological safety look similar when the graphs are considered (Figure 6.1). This could indicate that psychological safety and workshop participant engagement are linked to each other, but an increase in psychological safety does not imply an increase in the workshop participant engagement. The most obvious example is found in case 8. Table 6.1 to 6.4 show that overall, the change in workshop participant engagement and psychological safety have the same direction. GDR usage is the exception, but this system is made for anonymous contribution, which indeed decreases the risk taking. At the same time, it reduces some creativity, and therefore motivation, which is reflected on the workshop participant engagement.

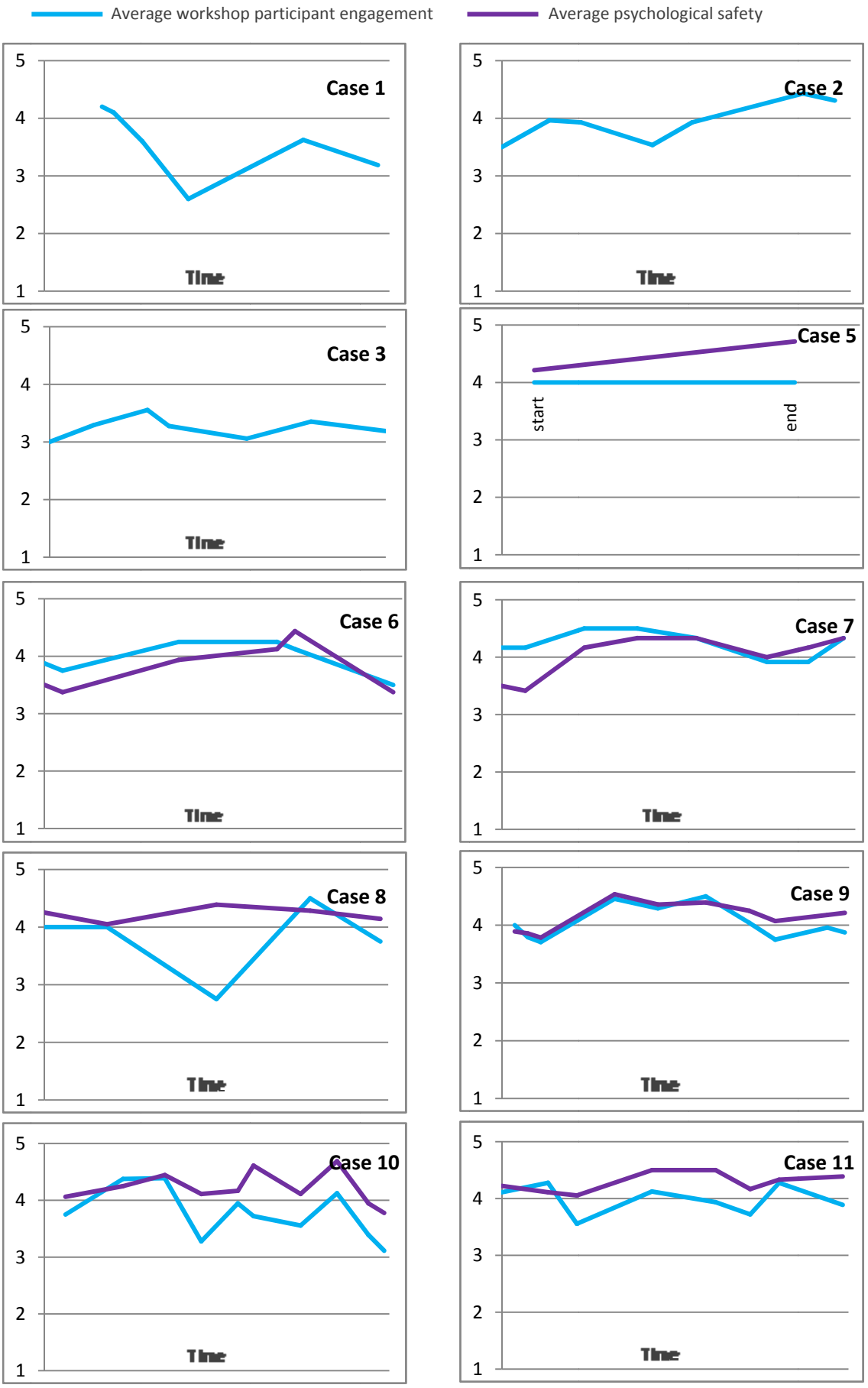


Figure 6.1: The average workshop participant engagement and psychological safety

6.3 Analysis on Workshop Level

When the results of the observations and the self-reports as given in Chapter 5 are combined, interesting things can be concluded about the effects on workshop participant engagement and psychological safety.

The average workshop participant engagement in the workshops was between 3.27 (case 3) and 4.26 (case 7) on a scale from 1 to 5 (Table 6.5). This means that the average workshop participant engagement was quite high. This high average is mostly due to the fact that the participants are engaged with the subject. Of course, the observations give a facilitator a sense of the workshop participant engagement. However, the differences between the self-report data of the workshops that did not feel that good (case 1, 3 and 8) and those that felt really good (case 2) are really small. Therefore, the insights in workshop participant engagement in this research are mostly helpful to understand the impacts of the different methods. Reporting straightforward on a level of engagement does not say much, especially because the gathered data are anonymous and no direct relation can be retrieved between the data and the individual participants.

The strongest increase in workshop participant engagement is shown in case 2, where there was a real change in the factors *cohesion*, *communication*, *shared values and group norms*. In case 7 there was a small increase, which could be ascribed to an increase in the *cohesion* and *group-efficacy*. Case 3 showed an increase, but cannot really be a ascribed to a specific reason because the observations did not correspond with the self-report data; the differences among the participants lead to the conclusion that there are factors which for some strongly influences their engagement level, while for others the effect is different. In this case, the workshop design could have been suiting the group better. Therefore, it is very difficult to say which of the factors (*communication, cohesion, interdependence*) are the most important.

Table 6.5: Data on the different cases

	# Participants	**# useful data sets**	**x_{WPE} over whole workshop**	**$\Delta_{WPE\ end - WPE\ start}$**	**Participants with an overall engagement level**		
					higher	**similar**	**lower**
Case 1	10	10	3.55	-1.01	0%	40%	60%
Case 2	14	13	3.94	+0.81	61%	38%	0%
Case 3	19	18	3.27	+0.46	50%	17%	33%
Case 4	13	5	3.82	-0.60	0%	40%	60%
Case 5	7	6	4.07	0	17%	66%	17%
Case 6	9	8	3.96	-0.38	13%	50%	37%
Case 7	6	6	4.26	0.17	33%	50%	17%
Case 8	11	4	3.80	-0.25	25%	25%	50%
Case 9	14	12	4.04	-0.13	17%	50%	33%
Case 10	9	9	3.76	-0.64	22%	22%	56%
Case 11	10	9	3.99	-0.22	33%	33%	33%

The largest decrease in workshop participant engagement was found in cases 1, 4, and 10 (Table 6.5). Case 10 has the same problems as case 3; the observations did not correspond with the self-report data, making it very hard to draw conclusions. The participants scored very diversely, which cannot be explained. Case 1 and 4 both have an inexperienced workshop facilitator. Therefore, the *group leader* did not perform well and affected the *psychological safety* negatively, although no self-report data on this variable is available.

As mentioned earlier, the range in some of the workshops is very high. Because the self-reports were anonymous, assigning names to the data afterwards is not possible. The facilitator assesses the group as a whole and when someone is not communicating his/her disengagement, it is not possible for someone else to see this. Assuming that people are doing this on purpose, this is considered strategic behaviour.

There were a few cases in which the engagement seemed to be relatively low. Case 3 felt like a workshop in which the participants were not communicating as they should. The facilitator tried to change the programme, but his/her conclusion was that this realization came too late to really change the atmosphere in the group. The adjustments involved the participants to work in small groups, but also this approach did not have the desirable effect.

Another intervention of a facilitator happened in case 6, where a conflict highly disturbed the engagement and the psychological safety. The facilitator stressed the integrity of the group members and the respect towards each other. (S)he did this to minimize the negative effect on both factors. The self-report data show that a facilitator can increase psychological safety but cannot mitigate the effect of a conflict.

6.4 Discussion per Workshop Participant Engagement Factor

From the analysis of the individual cases, the analysis of the workshop steps, and the analysis of workshops in their totality, something can be said about the different determinants of workshop participant engagement. This will be done below in the same classification as presented before.

6.4.1 Factors on the Individual Level

Psychological Safety

A few studies have indicated that psychological safety is a requirement for engagement. It is the belief of participants that interpersonal risk taking does not lead to negative personal consequences during and after the workshop. Recalling these findings from subsection 3.2.1, Van den Bossche *et al.* (2006) have shown it is critical for engagement in team learning behaviour, Kahn (1990) points to psychological safety as one of the three overarching factors for personal engagement, and Edmondson has shown that the learning behaviour is positively affected in a safe environment, which leads to a better team performance (Edmondson, 1999, 2002; Nembhard and Edmondson, 2006). It is

hypothesized that psychological safety in a workshop is needed for the participants to engage in the process. Because of the many connections it has with other factors, psychological safety is chosen as the factor to zoom into during the empirical research. A scale was incorporated in the self-report and earlier the findings were described.

Kahn (1990) categorized many factors under his dimension psychological safety. The connection with communication, interdependence, norms is explained below in the corresponding sections. Quigley (2007) found a relation between psychological safety and motivation. In workshops this is shown by people who felt less safe resulting in a lower state of motivation to contribute, because they had to watch what they were exactly saying.

In general, workshops increased the psychological safety. The increase in psychological safety due to the workshop steps in which participants work in small groups can be explained by the group size. Less people around means that less interpersonal risk taking is possible. It is easier to sound a few individuals that a large group; communicating is easier. However, that does not mean that one individual cannot be responsible for a low psychological safety in a group. The empirical research also shows that there is a connection between cohesion and psychological safety.

One of the things that was not mentioned in the literature was that a high level of psychological safety in a group can lead to an unexpected and undesirable result; in case 6, one of the participants expressed him/herself in such a way that the psychological safety dropped immediately. (S)he verbally attacked one of the other participants out of the blue. The whole group was stunned and workshop participant engagement and psychological safety went down significantly.

MOTIVATION

Commitment and motivation turned out to be very closely related in the observations. In the workshop setting, motivation seems to be more about the excitement and eager to contribute to the process due to the methods used. Participants can have an intrinsic motivation for them. Abuhamdeh and Csikszentmihalyi (2009) state that those who are highly intrinsically motivated for an activity are likely to participate more often and spend more time engaged in them. This is exactly what happened in the workshops. Not all of the methods are as motivating as others and this shows.

Quigley (2007) stated that creating norms, trust, and a positive atmosphere increases the motivation. Especially case 2 was a good example of this phenomenon; the participants did know each other but were a bit suspicious. When they heard each other's dreams they were very relieved that they have the same values and norms and the group became very positive and grew more as a group.

However, a reduction in motivation can also happen when the participants get tired because they have spend their energy, because the step is not creative enough or because it takes too much time. Therefore, motivation was certainly related to workshop participant

engagement. The note that has to be put here is that the difference between motivation and workshop participant engagement are very difficult to distinguish. In this research, the workshop participant engagement scale in the self-report was formulated as could have been motivation. The concepts of motivation and engagement are dissimilar, but further research could look into how to observe them as different concepts in workshops.

COMMITMENT

Comparing motivation and commitment, commitment is more about the willingness to invest to reach the workshop's goal based on its content. Commitment is therefore less visible than motivation, except when participants pronounce it or when they have to try really hard to get their ideas across. Of course, strategic behaviour can be the reason for participants to say less or things they do not mean. For a good workshop result assuming that every participants can truly positively contribute, it shows that participants should be committed to the goal, otherwise the participants leave or do not try hard. As was mentioned by Kolfschoten *et al.* (2010), commitment is needed for collaboration and this shows in the workshops. Without contributions of the participants the good end result is difficult to attain. Workshop participants that show commitment seemed indeed to be more engaged.

Some of the workshops were about organizational changes. For instance, case 8 was a very complicated session because the participants were heavily discussing everything. They showed a high level of commitment, but it seems that some of the participants did not want to change their current work. This can be related to Kahn's (1990) task and role characteristics which imply that people want to like their roles and tasks.

PERSONALITY

The composition of the personalities in a group during a workshop are determined by factors out of the facilitator's reach. It can be stimulated by a facilitator by proposing to invite other people, but the impact (s)he has is generally limited to check whether all the stakeholders are present. However, this research shows that participants sometimes score very differently on certain methods. Case 3, 6, and 11 confirm that some methods or incidents have a different effect on the workshop participant's engagement. Especially the use of the GDR is a good example of that. The effect of the personalities on psychological safety is shown in the varying data from the self-reports on the construct. Personality can include many aspects, but the complete representation decides whether someone is more secure and feels psychological safe or that this is not the case (Kahn, 1990). The relationship between personality and shared values and group norms did not come forwards in this research, as Berings *et al.* (2003, 2004) claim.

6.4.2 FACTORS ON THE GROUP LEVEL

HIGH GOAL SETTING

There was one workshop, case 8, where the connection between the clarity of the goal and the outcome seem to have a direct influence on the workshop participant engagement. This is in line with the literature; Edmondson (2002) found that setting a group goal can be more important than the actual goal itself, because it creates a shared understanding. It showed that the steps in which there was a clear goal, the engagement and the cohesion increased. The steps that had no specific goal in case 8 scored very low on engagement, supporting Edmondson further.

The height of the goal itself is less apparent in workshops. Sometimes the facilitator or the client states in the introduction that there is little amount of time or that the stakes are high. However, in all workshops facilitators say something about the goal, but not all with the same level of clarity. Further research is needed to see the relationship between high goal setting and the participant's motivation (Shepperd, 1993), cohesion (Bradley and Hebert, 1997; Kolfschoten *et al.*, 2010), and psychological safety (Edmondson, 2002).

In case 6, the facilitator stresses the capabilities of the group to increase their group-efficacy. This, among other things, is said to increase the level of goal setting (Locke and Latham, 2006a), but this cannot be substantiated with the workshop observations. Also, the effect the other way around as Shepperd (1993) introduced cannot be confirmed.

COMMUNICATION

The importance of a good communication structure for problem solving (Olivera and Straus, 2004) and knowledge transfer (Quigley, 2007), in short collaboration (Kolfschoten *et al.*, 2010), became apparent in case 3, where the participants did not know each other well. When the facilitator asked the participants to discuss the issues among them, they did not react. The right level of communication was not present to begin with and the first individual workshop steps behind the computer did not provide the proper channel to improve this.

The fact that the steps in which the GDR is used score low on engagement probably has to do with communication. During an individual brainstorm the participants see the contributions of others and can react on that. However, other steps in which participants have to score items are very individualistic and communication is not really perceptible. The lack of communication in these steps can be one of the reasons why the GDR is not scoring high on workshop participant engagement.

Case 8 was very chaotic and communication seemed to be a problem; participants did not properly talk over their points of discussion, making the process ambiguous. This reflected on the workshop participant engagement. In many other cases an increase or decrease in engagement is linked to an increase or a decrease in communication; Communicating in a small group is easier. Concluding, it is important to choose the right group size and use of technology or not.

INTERDEPENDENCE

Individual workshop steps scored lower on engagement than small group work, probably because there is no obvious interdependence in these steps. A note here has to be that the GDR provides individual brainstorm rounds where interaction between other participants occurs, but that these steps are not assessed enough in this research. Quigley (2007) said that interdependencies are motivators to engage when the workshop's goal is linked to an incentive. The link to the incentive is not researched, but that they are motivators to engage is shown, as long as other more important factors are not dominating; in plenary workshop steps interdependence is obvious, but workshop participant engagement is negatively changed. Again case 3 is illustrative for the effect that when interdependence is not apparent collaboration seems difficult. Van den Bossche *et al.* (2006) (interdependence is key for engagement in team learning behaviour) is therefore also supported.
No evidence was found for the connection between interdependence and group-efficacy as mentioned by Katz-Navon and Erez (2005), although it is a logical prerequisite for group-efficacy to occur.

GROUP-EFFICACY

Real evidence for group-efficacy to be present to engage in group learning (Van den Bossche *et al.,* 2006) was not found. However, in case 8 where there was a lot of discussion and one participant pronounced that (s)he had lost his/her belief in the group to reach their final goal (of which the workshop goal was part). The rest of the group objected against that view and an effect on the workshop participant engagement was not seen. This shows that one person is not always capable of affecting the group-efficacy by him/herself.
The last step in case 7 focused on the group-efficacy by making the qualities of the group members visible. This step increased the psychological safety, which indicates the connection between the two factors. This goes further than Kahn (2010) found, because he showed that interaction leads to self-appreciation.

COHESION

In many of the cases an increase or decrease in engagement and psychological safety is linked to an increase or a decrease in cohesion. The group in case 11 was not cohesive. In that group, the lunch break had a negative effect on the engagement and the psychological safety. A reason could be that because the bonds between the participants were not close, they did not feel comfortable to talk about more personal matters as is usual in breaks. The group in case 8 was not cohesive as well. The lack of wanting to solve their problems together instead of going for personal gain could have lead to the problems in that group (Bradley and Hebert, 1997).

Case 2 showed that workshop participant engagement was increased by the awareness that there is a level of cohesion within the group. The participants also became aware that they shared values and norms. Whether cohesion increased the values and norms (Bradley and Hebert, 1997) or that is was the other way around, is unclear. However, their interrelation became apparent together with their influence on engagement.

Task cohesion is always present in a workshop, because the participants all work on the same goal, but its relation to engagement (Van den Bossche *et al.,* 2006) is not found. The interdependence between the participants in executing the tasks is described in its corresponding section. However, in many cases working in small groups increased the engagement. Here, task cohesion is more obvious and group cohesion is created faster in small groups.

Both factors cohesion and communication have been related to the increase in workshop participant engagement in small groups. When a group becomes more cohesive, the communication channels become better (Forsyth, 2009), because people will probably listen better to each other among other things.

SHARED VALUES AND GROUP NORMS

Case 2 enclosed the most prominent understanding of the importance of shared values and norms in a group. The group realized that they have a lot in common, which increased the workshop participant engagement immensely. This group showed the largest increase in workshop participant engagement over the whole workshop. Therefore, the literature is supported of the view that shared values and group norms are important for engagement (Kahn, 1990) and thus collaboration (Quigley, 2007). Other clear observations concerning values and norms did not become apparent in the workshops. For instance, no example was found about the influence on psychological safety, but when everyone shares values and norms, ideas are more likely to be similar. This belief will increase psychological safety. The influence as predicted by Cohen (2007) and Glazer *et al.* (2004) that values are related to commitment did not become visible in this research as well.

6.4.3 FACTORS ON THE EXTERNAL LEVEL

GROUP LEADER

Because of the small amount of cases, it is very difficult to draw conclusions on the influence of facilitators. The same workshops have to be observed multiple times with each time another facilitator. However, each facilitator has its own area of expertise, preventing this from happening.

Nembhard and Edmondson (2006) identified leader inclusiveness, which positively affects psychological safety. Leader inclusiveness describes behaviour of the group leader trying to include group members in discussions and decisions in which their voices and perspectives might otherwise be absent. Earlier, Edmondson (1999) defined team leader coaching, the behaviour of team leaders that facilitates the group process and provides clarification and feedback, which also has an effect on psychological safety of the group members. The empirical research has indicated that the actions of the group leader can indeed influence the psychological safety. In case 1 and 4 the facilitator shows the opposite of supporting behaviour, reducing the motivation, psychological safety, and engagement. Case 5 and 7 show that supporting behaviour of the group leader, including stressing the height of the goal, increases psychological safety and engagement. That a facilitator cannot personally make psychological safety is demonstrated case 6, in which a conflict caused a reduction in

participants' psychological safety level. The facilitator tried to mitigate the effect but could not prevent a large decline.

Other behaviour of group leaders showed that engagement or other factors were increased. The direct relation between the behaviour and the factors can only be presumed, because no in-depth research is done on that. As Locke and Latham (2004) state, it seems that a facilitator can boost the group-efficacy (case 6). (S)he articulated his/her trust in the group to reach their goal. That flexibility and professionalism are important characters of facilitators showed case 4, where a non-professional had a negative influence on workshop participant engagement and psychological safety.

TECHNOLOGY

The technology used in the assessed workshops was the GDR. Summarizing subsection 6.2.2, the GDR reduces workshop participant engagement and has a marginal effect on the psychological safety. Although the literature found that technology and computers are engaging (Chapman *et al.*, 1999) or augment learning due to an increase in motivation (Habgood, 2007; Serva and Fuller, 1999), this is not shown in this research. The advantages of GDR for group processes (Nunamaker *et al*., 1997) are not part of this discussion, but its effect on engagement is negative. Participants do not seem motivated for the use of the computer compared to the other methods. However, this might be due to the other factors discussed above, like an simultaneous lack of interdependence and communication during some of the steps. The effect on psychological safety was predicted to be higher due to the anonymous contributions with the GDR (Nunamaker *et al*., 1997).

Arrow *et al.* (1996) wrote that technology cannot be used for all purposes. There has to be a certain fit. This is certainly shown in the workshops, because the GDR did not score high on engagement. It is helpful for certain tasks, but if engagement is important, GDR usage should not be the first choice.

6.5 DISCUSSION CONCEPTUAL MODEL WORKSHOP PARTICIPANT ENGAGEMENT

Not all of the factors and their relationships that are part of the conceptual model in Figure 3.3 can be found back in the empirical research. When no evidence was found for a hypothesized relation this does not imply that it does not exist. Further research should focus on these relations. It seems that some factors have a larger influence on workshop participant engagement than others. Psychological safety, cohesion, communication, interdependence, and motivation seem to be the very important influential factors. This is mostly derived from the self-report data which made clear that working in small groups increased the workshop participant engagement, while individual work and plenary work decreased workshop participant engagement. The observations support this result. However, motivation seems to be the most important factor. When participants are highly motivated they think less about the group and its dynamics. Commitment is important for the overall contributions of the participants as well. Personality seems to determine whether the use of certain methods is enjoyed. Furthermore, the behaviour of the group

leader seemed to affect the group and therefore some of other the factors, like psychological safety, high goal setting, and the communication. Although the group-efficacy also seemed to be affected by the group leader, the effect of group-efficacy on engagement was less clear.

A facilitator, who is the group leader in workshops, can influence much more than depicted in the conceptual model. Therefore, a good adjustment would be to connect group leader with the other factors except for personality and commitment. The influence is sometimes only stressing the aspect itself, but making the participants realize that they can progress is already a positive contribution to the atmosphere. The use of technology determines the factors communication and the interdependence. A link between personality and technology was found, because not everybody is motivated by it. The group leader chooses the technology and has to handle it correctly. The prominent position of shared values and group norms seems wrong because no strong evidence of this relation to workshop participant engagement is found. With this information, a new version of the conceptual model of determinant of workshop participant engagement is constructed (Figure 6.2).

Determinants of Workshop Participant Engagement

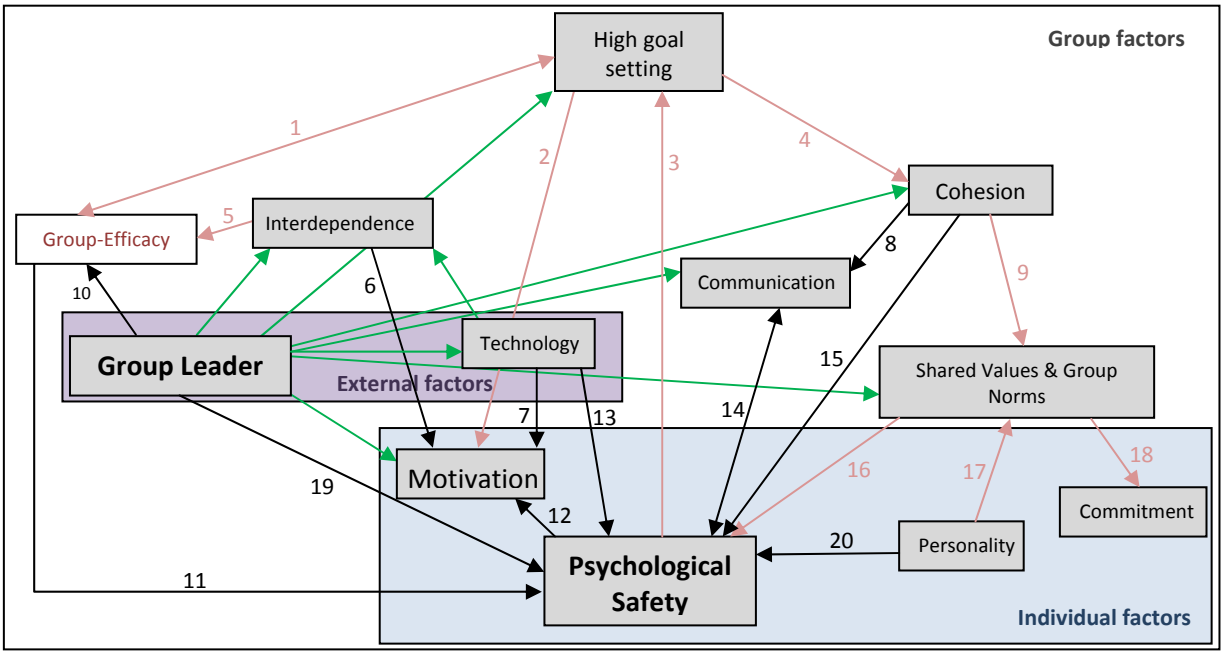


Figure 6.2: Adjusted conceptual model after empirical research. Red lines are relationships that were not found. Green lines are relationships that were not part of the conceptual model of Figure 3.3, but for which enough data is found to hypothesize these relationships.

The adjusted conceptual model of workshop participant engagement has become too difficult to understand. Therefore, a simplified version is made which does not show all the interrelations between the factors, but does incorporates all twelve influential factors (Figure 6.3). Because of the large influence of the facilitator, the factor group leader is

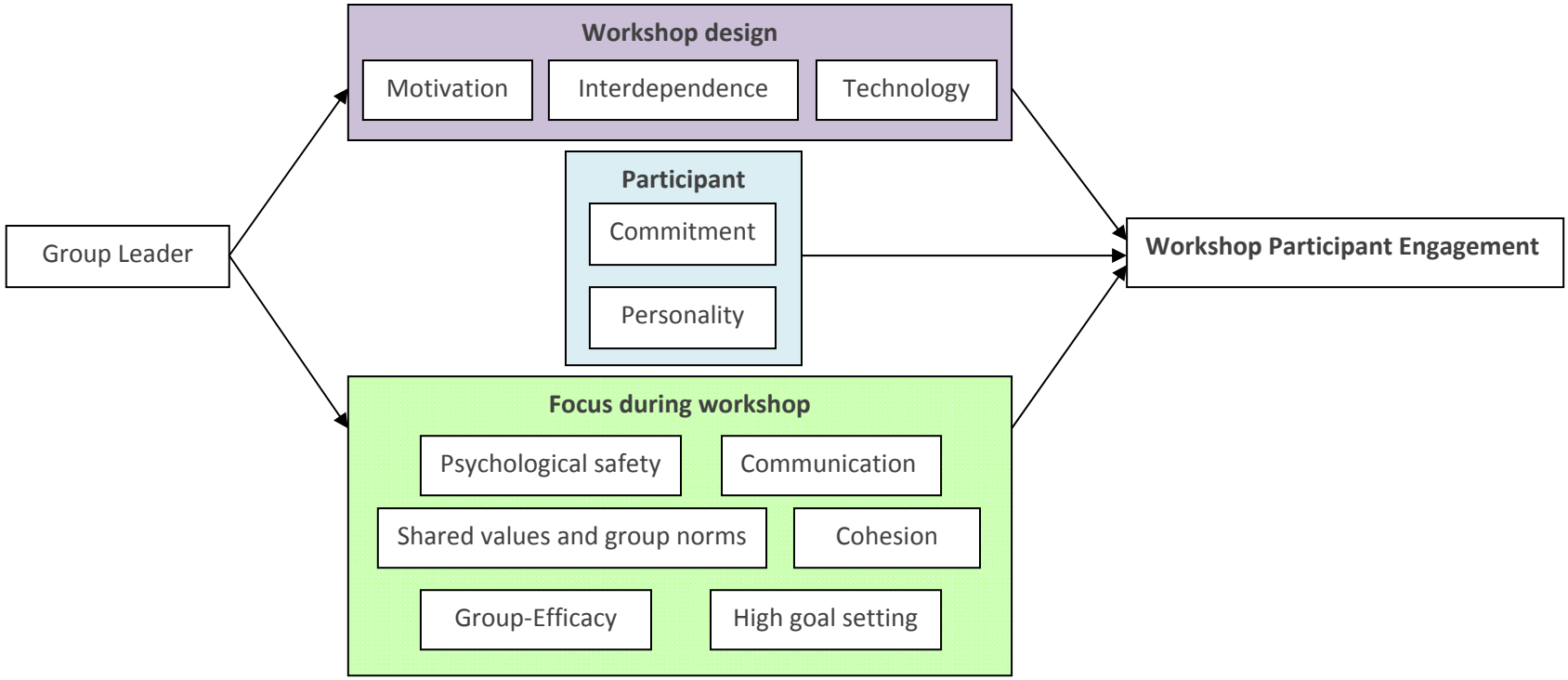


Figure 6.3: Simplified conceptual model of workshop participant engagement and the twelve factors influencing it

positioned at the beginning of the model. (S)he makes to research design and influences the factors motivation, interdependence and technology through the choice of methods. The participants bring their commitment and personality, which the group leader cannot influence. During the workshop the participant engagement is influenced by the psychological safety, the communication, the shared values and group norms, the group's cohesion, the group-efficacy, and the level of the goal. The group leader has an influence on these factors as well, although limited.

6.6 Workshop Participant Feedback Instrument

An instrument for facilitators to let workshop participants give feedback on their engagement, psychological safety, and other concepts would make it possible to evaluate the workshop with the input of the participants. The self-report used in this research results in quantitative data. Because deeper insights will be obtained with qualitative data, a new instrument is developed. Together with the facilitators of Het Buitenhuis a few conditions for such a measuring instrument are listed; 1. the instrument should not be interrupting the participants or be as little interrupting as possible; 2. the participants should be able to give their feedback without the possibility that other participants can see to prevent judging and influencing; 3. the participants are free to report their state of mind when the feel like it; 4. the instrument should make it possible for participants to give feedback during the workshop.

These four conditions are difficult to incorporate in one measuring instrument, because a participant is likely to give feedback when (s)he feels the need to do so. When a participant is engaged, (s)he is perhaps in a state of flow, in which aspects as reporting on your state of mind will be automatically be switched off. However, a state of flow is not necessarily the reason that participants do not report on their engagement. Other reasons, like forgetting the instrument or finding it too much of a annoyance, could as well be reasons not to give feedback.

The following possibility for a measuring instrument would be a straightforward option. A computer is put in the coffee room accessible for everybody. On this screen a form with the input fields of different variables are pictured, for example like Figure 6.2. Before the start of the workshop, the facilitator enters the name and date of the workshop to ensure that the participants give feedback on the correct workshop. The participant can report on those items (s)he wants and by ending the feedback sends the result to the inbox of the facilitator. The program returns to its initial state; a form with blank fields. The system is ready for the next participant to contribute his/her feelings and ideas. In this design, the term engagement is not used with the purpose to keep the feedback broad, because not only engagement is important.

An advantage for GDR workshops is that every participant can have this same program on their own screen. This probably lowers the threshold for contributing. For participants who are not fond of computers, an analogue version can be made; empty forms printed out next

to a box in which they can deposit their feedback. At the end of a workshop the facilitator opens the box and collects the feedback.

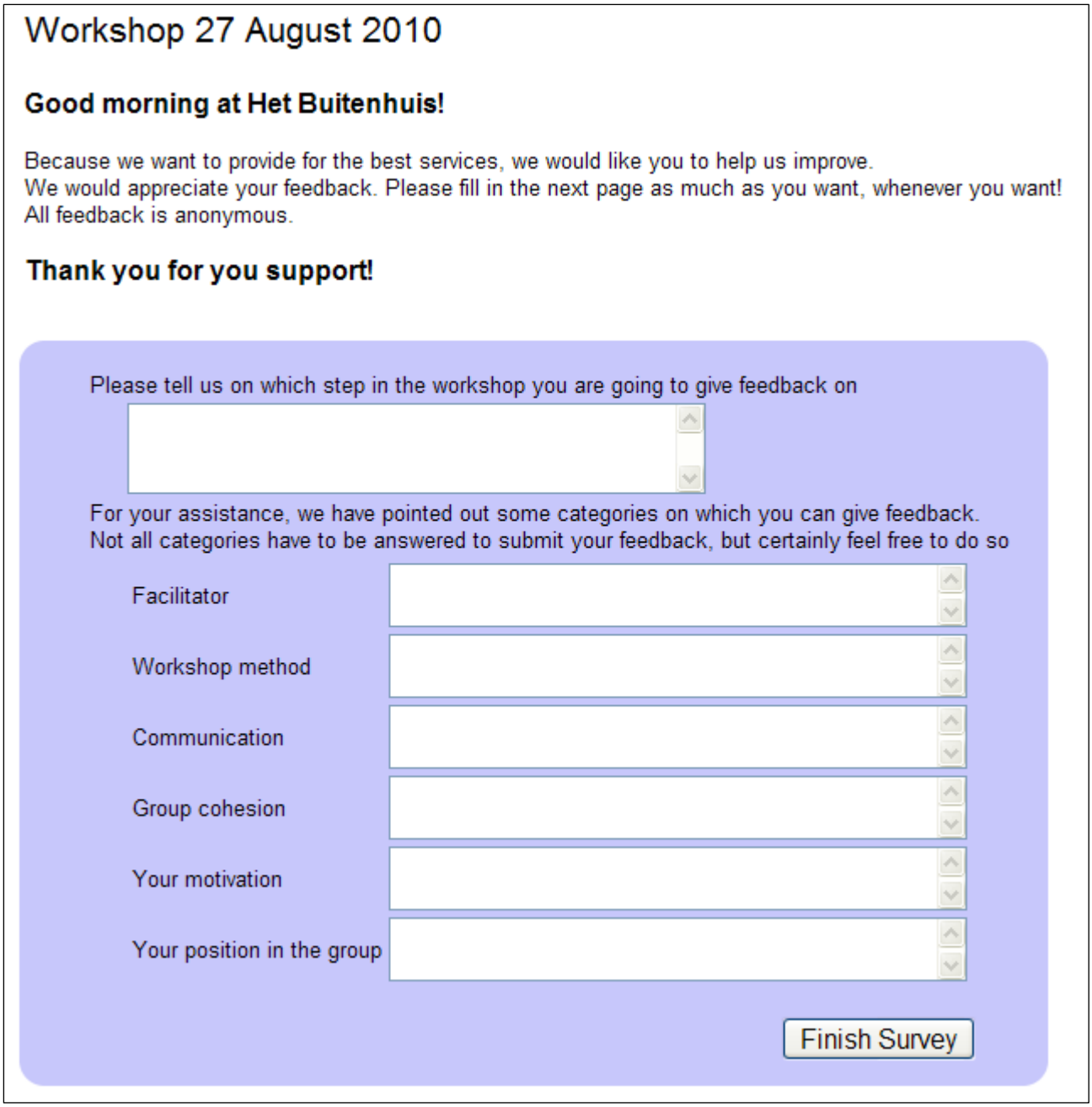


Figure 6.4: Example of the digital version of a workshop participant engagement measuring instrument. This survey is made with FreeOnlineSurveys.com

CHAPTER 7 RECOMMENDATIONS AND CONCLUSIONS

In this final chapter, the results of the previous chapters are used for recommendations. Section 7.1 holds the specific recommendations for facilitators. Because the results of this research can also be transferred to situations other than workshops, section 7.2 gives some recommendations for organizations and their managers. Looking back at the whole research, section 7.3 draws the conclusions for this report. The final section looks back at the limitations of this research and simultaneously looks forward for future research possibilities (section 7.4).

7.1 RECOMMENDATIONS FOR WORKSHOP FACILITATORS

In this exploratory research, some important issues came up especially for facilitators to improve their performance. The easiest thing to implement is to be very clear about what the goal of the workshop is. It has to be clear to everyone so that a shared understanding is created. Also at the beginning of each step it should be apparent what the goal of that particular step is and what is needed to attain it.

The self-report data showed that working in small groups is positive for workshop participant engagement. The reason behind this is that in small groups cohesion is easily created, communication is straightforward, and the psychological safety is high because of the limited amount of personal risk taking. Furthermore, the motivation seems to be higher because of the apparent interdependence. Individual or plenary steps have less of these characteristics.

In workshops where no technology is used, individual steps are not abundant. In GDR workshop they are and these steps will be discussed below. Back to plenary steps; it is not possible to completely remove plenary steps from a workshop. The start and concluding round at the end are always plenary. Assuming that everyone pays attention, the advantage of those steps is that every participant is present. Therefore, the facilitator can focus in those steps on factors like cohesion, group-efficacy, interdependence, shared values and norms, high goal setting, and psychological safety. When at the beginning of the workshop everyone feels extra motivated due to the good feeling about the group and the workshop itself, the workshop participant engagement is likely to be high. At the end of the workshop, workshop participant engagement is not important anymore, but that does not count for the other factors just mentioned. Generally the group will meet again and will need to collaborate in the future. A good, solid basis is not only important for workshops but for all kind of collaborations. When a workshop can help a group taking their

collaboration to the next level, this will not only help the group but will also have an effect on how the participants look back at the workshop.

Practical recommendations for a facilitator in plenary steps, especially at the beginning and end, are:

- Stress the importance of the goal and ensure that every participants envisions the same goal so that the group knows what she has to do and what efforts are needed
- Emphasize the psychological safe environment and how essential it is that the participants should dare to ask questions or to ask for help, to admit their mistakes, and reflect on their performance; ask the participants to be open and open-minded about the things that are said, ask them to respect one another
- Indicate that to attain the workshop's goal, everybody has to contribute, because there is a high level of interdependence between the participants during the workshop and when they do so the workshop's goal is within their reach
- Point out that communication is crucial for understanding each other; this means listening to each other, respecting and appreciating each other's contributions, reacting on what is said, and providing the space for everyone to talk even though some will be more dominant or introvert
- Suggest that because of the interdependence in the workshop and (perhaps) afterwards, forming a close group eases communication and future collaboration
- Keep plenary steps short, to prevent participants from losing their engagement

Although the preferences for workshop methods depend on the participant's personality, which cannot be influenced by the facilitator, it seems that creative steps, like the portrait gallery or making a film scenario, increase the workshop participant engagement. It is likely that because participants take a step back from their regular work, they get motivated and are less afraid to say something they should not, because it almost inherent in the method. However, a facilitator should take the workshop's goal together with the participants' backgrounds into consideration; the methods should fit the context.

The workshops at Het Buitenhuis are all coupled to a certain goal. To reach this goal, the participants cannot only work in small groups and do creative tasks. The workshop design consists of other elements. However, it would be a good idea to try to make the last step an engaging one. When this is not possible, because plenary feedback is needed in the last step, try to keep the last round as short as possible and make the step before engaging.

At Het Buitenhuis GDR workshops are often requested because of its advantages. However, the participants report low on their engagement during these steps and the effect of the anonymity function on the participants' psychological safety was not significant. It is therefore really important to find out if there is a fit between the task and the GDR. When anonymity is important or when voting is needed, GDR could be a good option. However,

individual scoring steps reduce the engagement significantly. In these steps, there is almost no communication between the participants and it gets a solitary step. Therefore, it should be as short as possible. A lot of alternations between sitting behind a computer and doing something else could reduce the negative effect on the engagement. Currently, people stay behind their computer, also when there is a discussion in which the computer itself is not needed. Perhaps it would be a good idea to try to keep the participants away from their computer until they have to use it again.

In short, the workshop design has to entail mostly steps in small groups, keep other steps short, let the participants do something creative and use the GDR when appropriate for the goal. The facilitator should focus– apart from goal attainment – on the group and the dynamics in it. Guessing the overall workshop participant engagement is doable when the average is good enough. When a deeper understanding is needed, ask the participants to report on these factors, for example with the setup of the tool in the section 6.6.

7.3 General Recommendations

This research has focused on workshops. However, it is believed that the results can also be transferred to other settings in which collaboration is important. In the recommendations for facilitators it is made clear how important the determinants of workshop participant engagement are. Most of them provide a solid basis for collaboration when present in a group. Therefore, in every organization it is advisable to keep those factors in mind. In an organization it is possible to choose the personalities who will form a team, which is a benefit a workshop facilitator does not have. The group leader is also appointed. When the group leader realizes that (s)he can influence factors as communication, interdependence, cohesion, shared values and norms, psychological safety, high goal setting, group-efficacy, and motivation, this could enhance the solidness of the group's basis. Especially at the start of collaboration in a new team, some attention to the determinants are likely to increase the engagement. Not only with a direct effect on quality, but probably also in the pleasure of collaboration for the team member. This has subsequently an effect on the commitment of the team, consequently increasing the engagement. It becomes some kind of an intensified cycle, which – in theory discussed here – can only be very positive for the end result.

7.4 Conclusion

The goal of this research is to discover how workshop participants get and stay engaged. This goal is largely attained, although due to the low number of workshops no conclusive statements can be made. Nevertheless, this is an exploratory research in which provisional definitions are given and possible relations are hypothesized on basis of reasoning.

This research into workshop participant engagement has three sub-research questions. The first is '*How can the concept of workshop participants engagement be deconstructed and subsequently constructed with the knowledge from gaming, group dynamics, organizational behaviour, and learning?*' This question is answered by a literature research into the

concept of engagement in these scientific fields. The concept of engagement is used as in student engagement, employee engagement, game engagement, group engagement, and many other forms. Next to a straightforward definition of workshop participant engagement and its implications, the concept is best illustrated with the statement:

> A **highly engaged workshop participant** is passionately interacting with his group members, while being concentrated on a clear goal, using his skills because he believe he can exercise control on the goal, while perhaps even losing track of time

The recurring factors in the literature that seem to have an influence on engagement are listed. It is hypothesized that these factors are also of influence on workshop participant engagement. This has lead to twelve factors which influence workshop participant engagement; psychological safety, motivation, high goal setting, group leader, communication, interdependence, commitment, group-efficacy, cohesion, shared values and group norms, personality, and technology. Most of these factors are interrelated as well and, therefore, they are put altogether in a conceptual model (Figure 3.3). Especially psychological safety has many relations, being connected to nine other factors. Because workshop participant engagement has not been extensively explored before, this model has to be interpreted as a conceptual model needing empirical testing.

The second sub question of this investigation is '*What are factors influencing workshop participant engagement, how do workshop participants experience their engagement, and how do facilitators experience workshop participant engagement?*' First, professional facilitators are interviewed on their perception of workshop participant engagement. One of the results goes against the literature; in some situations a too high participant engagement can obstruct the process in the workshop. No notion of a too high engagement was found in the scientific literature on engagement.
The interviews revealed numerous influences on workshop participant engagement. The results from these interviews show that almost all of them can be categorized under one or more of the thirteen factors of the conceptual model, except for a few factors that are out of reach for a facilitator to influence. Therefore, the interview results support the conceptual model.

Second, data are acquired in empirical research performed at Het Buitenhuis. To conduct this part, a self-reporting instrument and a case study protocol are designed. The self-report allows workshop participants to report on their level of engagement and their level of psychological safety during the workshop after each step. The reason to add the psychological safety scale in the self-report was the high interconnectedness of this factor with the other factors in the conceptual model and the link it has with many of the interview results. The engagement scale used in this self-report is made based on literature on different types of engagement. The case study protocol ensured that the observations made during the workshop to be as unambiguous as possible. Of course, one observer cannot monitor everything that happens in a group and the observations are therefore

never completely objective. Eleven cases all facilitated at Het Buitenhuis, although three of them are not facilitated by a facilitator from Het Buitenhuis, were used for data collection.

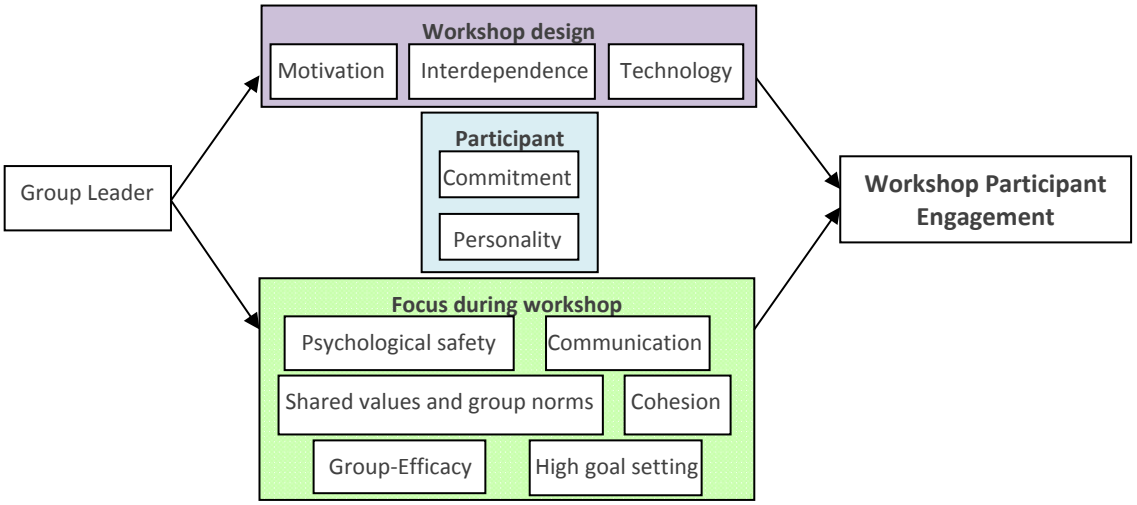
The data of the self-reports are combined with the observations and after the analysis of the individual cases, the steps in the workshops and the workshops together are analysed. Because only eleven workshops were used as cases in this research, the conclusions of this research are not based on grounded theory. The external validity of this research is not as high as preferred due to the limited amount and difference in workshops. However, from the empirical findings it is possible to cautiously make inferences. The findings are put in the following text box. These results are subject to further investigation to indentify whether these propositions are indeed true when replication logic is used in the case selection.

- The average workshop participant engagement in a group can be grasped by the facilitator, but individual differences not always visible
- Workshop methods that increase workshop participant engagement and psychological safety are: 1) brainstorm in small groups, 2) the portrait gallery
- Scoring decreases workshop participant engagement
- Creative methods are generally engaging
- Using the GDR decreases workshop participant engagement and surprisingly does not significantly increase psychological safety
- Workshop methods in which participants work in small groups increase workshop participant engagement and psychological safety. Both are decreased during steps in which people work individually or with the whole group together
- Workshop steps with a diverging goal increase psychological safety and steps with a converging goal decrease workshop participant engagement
- The factors psychological safety, cohesion, communication, and interdependence usually explained the differences in workshop participant engagement
- A workshop normally increases the overall psychological safety, which contributes to better future collaboration between the group members
- Motivation seems to be the most important influence on workshop participant engagement, because motivated participants tend to forget the other factors because they are absorbed in their task
- The group leader can influence the many of the influences on workshop participant engagement and plays therefore an important role

Before start of this research, there was no scientific literature available into workshop participant engagement, a connection to the current views on this topic is not possible to make. The data from the workshops contain proof that the factors in the conceptual model are of influence on workshop participant engagement, except for group-efficacy. Not all of the interrelations between the factors have presented themselves, but this does not mean they are not there. The group leader seems to play a crucial role in making the factors and the amount in which they are present visible. Hence, this factor is likely to be connected to other determinants as well.

The results of both the literature review on engagement and the empirical research into workshop participant engagement and the factors influencing this provide an answer to the last sub question *'How can workshop facilitators use the knowledge on participant engagement to increase the effectiveness of their workshops?'* First, workshop facilitators should be aware of the factors influencing participant engagement, then they can act on these factors and in that way increase the engagement of the participants in their workshops. The recommendations for facilitators focus on stressing the influential factors of workshop participant engagement to support the group's culture, which also leads to an increase in quality of the group results. Concerning the workshop design, the used methods should fit the goal, but when possible create methods and those where participants work in small groups should be preferred.

For evaluation purposes, it is also possible to let the participants report on their level of engagement or on other aspects during the workshop, using a digital or analogue reporting instrument. This instrument has to be anonymous with the option of participant identification, it has to be private to prevent influencing among the participants, and it should be as least intrusive as possible. The last option is guaranteed the most when the participants can report when they feel like it. A drawback from this option is that they can also forget it or do not do it at all for reasons that can only be guessed.



With this information, an answer is given to the main research question '*What does the concept of workshop participant engagement contain and how can it be influenced?'* for as

much this is possible in this exploratory research. Figure 6.3, which shows the proposed simplified conceptual mode of workshop participant engagement, is repeated below. Further research is needed to change the provisional definitions is definite ones and test the hypothesized relations of the workshop participant engagement model.

7.5 LIMITATIONS AND FURTHER RESEARCH

The first limitation in this research is the testing of the conceptual model of factors influencing workshop participant engagement. This model consists of twelve factors which could not all be researched more in-depth. For that reason, psychological safety is chosen to investigate more in detail and is added to the self-report. Future research could focus on one or more of the other factors in the model, to further validate the model. From this research hypotheses can be drafted which can be tested in a future research. For example, the relationship between high goal setting and the participant's motivation, cohesion, and psychological safety could be analysed.
The difference between motivation and engagement in theory is clear. However, when these variables are observed, they seem very much alike. Further research to how these variables can be distinctively observed will hopefully result in a decisive answer.

The use of two scales, one for engagement and one for psychological safety, in the self-reporting instrument caused confusion occasionally. Often, one or more participants did not understand that the scales were not connected. Partially, this can probably be solved by a more distinctive layout in the self-report. However, because the instructions became more clear over time while the mistake was made over and over again, it can be concluded that people need to be persuaded to listen carefully. They give their own interpretation to what they see. Therefore, double checking is crucial. In this research, this problem has lead to many data that could not be used for interpretation.

The individual data from the self-report could sometimes not be explained by the observations. It would be nice to see whether there are participants who are willing to participate in a research setup where their contribution is not anonymous and where a facilitator can ask for the reasons behind the scores. Another possibility is to expand the self-report with an open question asking for clarification on the score. This option will increase the invasiveness of the measuring.

Time constraints are mentioned a few times in this report before. The empirical research is done in the months May till August 2010. From the beginning of July on, Het Buitenhuis faces a summer break. During these months, the requests for workshops drop to approximately zero after a busy June, in which clients want to quickly do a workshop before the summer break. This has lead to many workshops scheduled simultaneously in June from which a selection had to be made. The amount of workshops is therefore limited. This subsequently has an impact on the validity of the research. Literal replication is reached when the cases are as diverse as possible. Many methods and techniques, especially analogues methods, are not tested here. On the other hand, the existing analogues methods are numerous and testing them all would not be possible except perhaps in an experimental testing. Next to literal replication, replication logic consists of theoretical

replication. Theoretical replication is done when a similar situation is used to see whether the results are the same. Also this is not attained in this research because of time and workshop availability. Future research can focus on confirming or refuting the proposed hypotheses in this research.

Future research would best be scheduled over a longer period of time, taking workshop availability constraints into consideration. A small addition to this research could be replicating the steps making a film scenario, the talking stick, and the individual brainstorming with the GDR. To improve the generalization of the results, workshops facilitated by non-governmental organizations would also be good data sources.

Because the empirical research was done at Het Buitenhuis, the facilitated workshops have to be of good quality. For further research it might be interesting to set up an experiment when specific situations are to be tested. In an experimental situation, for example with students, methods and techniques are easier to choose. Especially when a negative effect of a method in a certain context is tested, an experimental setting would be interesting.
An interesting question would be what happens when there is no psychological safety at all. To which extent do the workshop participants get engaged?

The fact that only one observer was used is also a limitation. When more observers are present, more signals from the group will be picked up and the validity of the signals will increase. This could also be an improvement in future research, especially when someone with a psychology background is present.

To further understand the concept of workshop participant engagement, in depth interviews with workshop participants can be held. Comparing their ideas before and after the workshop could give new insights in this mechanism. Here also the influential factors of workshop participant engagement can be topic of discussion. Another research design could include a questionnaire on workshop participant engagement that can be send to previous workshop participants. The workshop participant feedback instrument proposed in this research is likely to provide further insight in how participants experience workshops. Although this instrument does not only measure engagement, new viewpoints could improve the understanding of it.

From the interviews with the facilitators it became apparent that there are workshops in which a too high workshop participant engagement can be disruptive of the process. This raises the question how large the role of workshop participant engagement is in the success of a workshop. Out of scope in this research was how workshop participant engagement affect the group and the implementation of the workshop result afterwards. How important is it to have a high workshop participant engagement for these factors. Howe important is it to have high workshop participant engagement? Psychological safety seems to increase due to a workshop, but does it really have a positive influence on the group afterwards? Concluding, the results of this exploratory research raises a lot of questions that could be subject of future research. There will be much to study about workshop participant engagement.

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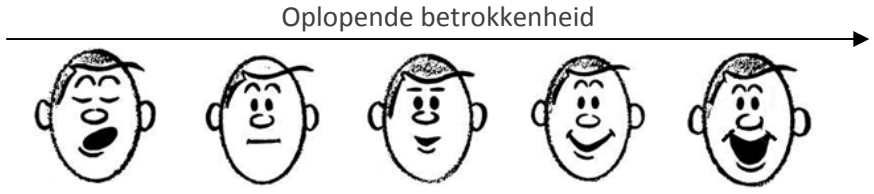
APPENDIX I: SELF-REPORT

For this research two different versions of the self-reports are used. In the first phase the focus lies on engagement alone. In the second phase, the self-report was extended with a scale to measure psychological safety.

First phase of research

The self-reports are distributed in Dutch. The first page shows the engagement scale.



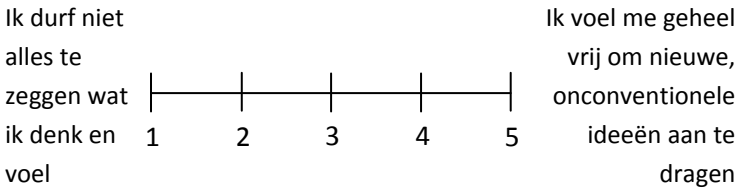
The second page is the explanation of the different the engagement scale.

I am absent-minded, bored and there is no interaction		Ik ben afwezig, verveeld en er is geen interactie
I am listening, but I am not actively contributing		Ik luister, maar ik doe niet actief mee
I am participating and I am contributing to the process		Ik doe mee en draag bij aan het proces
I am participating enthusiastically and I am engaged in the topic		Ik doe enthousiast mee en voel me betrokken bij het onderwerp
I am passionate and I am completely engaged in the process!		Ik ben gepassioneerd en ik zit helemaal in het proces!

The following pages differ in colour and on each page the engagement scale is shown.

Second Phase of Research

The pages with the engagement scales are extended with a 5-point scale assessing psychological safety, running from '*I do not dare to say everything I think and feel*' (Ik durf niet alles te zeggen wat ik denk en voel) to '*I feel completely free to contribute new and unconventional ideas*' (Ik voel me geheel vrij om nieuwe, onconventionele ideeën aan te dragen).



The following pages differ in colour and on each page the engagement scale and the psychological safety scale are shown. Additionally to the changing colours of the pages each has a letter to make the distinction between the measuring points easier.

APPENDIX II: CASE STUDY PROTOCOL

Page 2 and 3 of the case study protocol are repeated for each step. A new page 3 is taken when the observations do not fit on one page.

DATE: FACILITATOR:

WORKSHOP: CLIENT:

GOAL:

N^{o} PARTICIPANTS:

RELATIONSHIP PARTICIPANTS:

SIMILARITIES PARTICIPANTS:

DIFFERENCES PARTICIPANTS:

- ☐ Introduction myself and research
- ☐ Explanation protection anonymity
- ☐ Explanation self-reporting instrument

START WORKSHOP: ..... : …….

SEQUENTIAL STEPS:

1)_____ ☐ observations (*check when ready*)
2)_____ ☐ observations
3)_____ ☐ observations
4)_____ ☐ observations
5)_____ ☐ observations
6) _____ ☐ observations

END WORKSHOP: ..... : …….

- ☐ Retrieve self-reports
- ☐ Hand out questionnaires
- ☐ Retrieve questionnaires
- ☐ Interview facilitator

Step/Method: _____

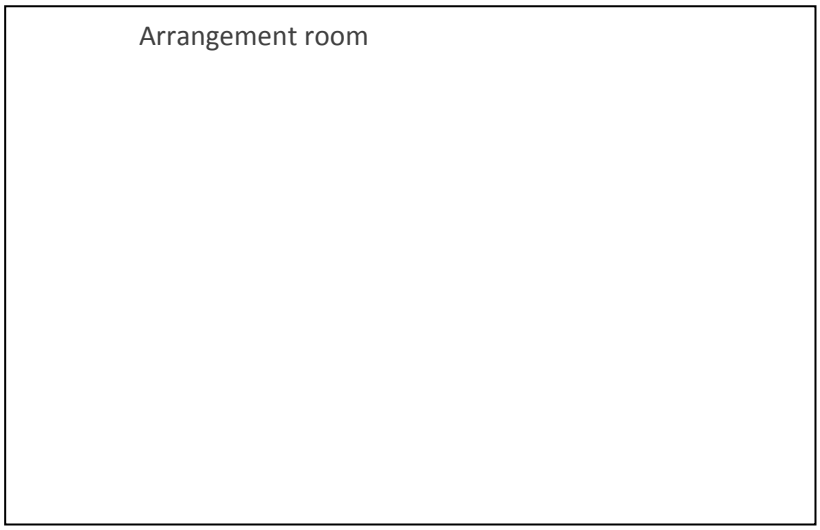
Goal: _____

Deliverable: _____

Start __:__

End __:__

Notes:



External / facilitator influences	Actions	Verbal responses	Body-language responses

Interview questions for facilitator

1) What is your opinion on the level of participant engagement during the workshop?

2) What did you experience as a negative influence on the level of participant engagement?

3) What did you experience as a positive influence on the level of participant engagement?

4) What did you do to influence the level of participant engagement?

5) Where do you see possibilities to increase the level of participant engagement during the workshop?

APPENDIX III: OVERVIEW OF THE TWELVE IDENTIFIED FACTORS INFLUENCING WORKSHOP PARTICIPANT ENGAGEMENT AND THEIR CHARACTERISTICS (CHAPTER 3)

Factor	Definition	Relationship engagement	Perceptibility
Psychological safety	the participants' belief that interpersonal risk taking does not lead to negative personal consequences during and after the workshop	participants need to feel psychologically safe to be able to contribute and express themselves, which is part of engagement	A participant feeling psychologically safe, dares to respond, ask questions or for help, admit mistakes, and reflect on his/her performance
Motivation	the drive to participate and contribute to the workshop's goal which can be intrinsic (enjoy the content or the work forms) or extrinsic (rewards for participating)	Motivation is needed to get engaged, because otherwise other stimuli will get the participant's attention	A motivated participant will actively take part in the workshop and, for instance, in the discussions
Commitment	the force that binds a participant to spend resources like time, knowledge, and effort to reach the workshop goal	When a participant is committed to the (goal of the) workshop, (s)he will desire to spend resources needed and is likely to stay present and contribute, which is part of engagement	First, a participant is and stays present during the workshop; second, a participant shares his knowledge; third, a participant does not give up easily
Personality	the combination of characteristics that form a workshop participant's distinctive character	the participant's personality influences which methods and techniques, but also which setting, (s)he feels most comfortable with, leading to engagement	The way someone verbally and nonverbally expresses him/herself within the group
High goal setting	the group agrees on a workshop goal that requires an effort	When a high goal is unambiguously set by a group, the group knows that they should put an effort in attaining the workshop goal, which leads to engagement	Goal setting and its level is not necessarily visible, but has to be recognized by pronouncements of the workshop participants (e.g. too easy, too difficult, or too ambiguous)
Communication	the way information and ideas are verbally and nonverbally shared among the participants in the workshop	When a participant's ideas and information are not heard, (s)he can think that his/her ideas and information are not appreciated, resulting in a negative influence on engagement	The level of communication within the group is perceptible by everything that it said and expressed nonverbally the level of the communication is within the group

Factor	Definition	Relationship engagement	Perceptibility
Interdependence	the necessary dependency of the participants on each other to reach the workshop goal and to create support for the outcome	A participant has to see that his/her contribution is needed and therefore valued. If not, (s)he does not feel the need to participate which results in disengagement	Participants collaborate towards the workshop goal
Group-efficacy	the collective belief of the participants in their ability as a group to attain the workshop goal	When a group is determined they can reach the goal, its participants want to put energy in it which positively influences engagement	Group-efficacy is not really visible due to the fact that it is a belief, except when it is expressed
Cohesion	the strength of the bonds linking the participants to the workshop group	A strong cohesion means that participants feel responsible for the workshop result and are easier engaged	The reactions of the participants indicate the level of cohesion among them, although this is susceptible for misinterpretations
Shared values and group norms	the shared ideas among the workshop participants about what to strive for and how to behave among each other	When a participant understands what is valued by the others and knows the rules of conduct, one can expect how the group will react. This form of predictability increases engagement	Shared values and group norms are not really visible, except when they are explicitly expressed, due to the fact that they are a belief
Group leader	the facilitator who guides the participants through the workshop to reach the predetermined goal	a good workshop design is a step-by-step approach to reach the goal recognized by the participants. The interventions can redirect the group, equalling the participants (e.g. contributions, hierarchy, atmosphere), which influences engagement	the design of the workshop and his/her interventions
Technology	the use of software like GDR to help collaboration in a workshop (in this context)	Technology like GDR offers anonymity, which eases sharing ideas. Some, however, do not like technology and this can have a negative effect on participant engagement	The software used in a workshop

APPENDIX IV: CASE STUDY DATABASE

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Case 1

Observations

Step	Goal	Safety	Engagement
GDR brainstorm – risk analysis	"First we are going to brainstorm, then another phase" (f)	"You can combine two similar items" (f) "But maybe someone else does not agree?" (p) Grouping of participants make them insecure, because it is not clear who should do what "Who removed my ideas? They were really good!" (p)	"When I see an example, I will come lose" (p) Everybody is busy typing and has an active posture People continue typing while talking and laughing
GDR Brainstorm – chance analysis			Laughing about a joke made, followed by a discussion on it, when finished everyone returns to work "Is it possible to proceed to the next step?" (f) No reaction
Prioritize	Additional clarification needed	"Do we also save everything that did not get enough votes?" (p) Quality problem during clustering; some clusters are too general, which results in biased weights	Active and relaxed reading postures, many participants have their hand before their mouth and their elbow on the table (signs of concentration) Participants start talking when finished
Scoring	"How to interpret X? How to score it?" (p)	"You will get all the information" (f) "Can't we find out who voted on that topic? I said before not to do that!" (f) Facilitator tries to retrieve the names belonging to the votes "I would not do that... That is against the whole idea of anonymity!" (p)	"Where did you park your car?" (p) "I feel the need to compare this with that" (p) Because this was not planned a break is given. Participants continue talking on topic
Deliberate in small groups			While awaiting printed material and relaxing in the garden, participants are discussing on topic
Plenary discussion			Red eyes, suppressed yawns, red cheeks People start to get les talkative, but clarity is immediately asked for when needed "I think you were very convincing" (f; when nobody asks questions at the end of the presentation) "I guess the last one of the day always is" (p)

Narrative course of workshop

In the first brainstorming round, the assignment of the facilitator to make groups does not happen by itself causing people to act insecure. Also, the message to combine items that are the same causes problems in the group, because some ideas have been replaced or removed. Later in the process, the effects of this clustering is causing problems for the group to fully support the outcome. After the prioritizing step, it turned out that someone scored an item which was a container item and should therefore not be scored. This was communicated to the group, but in the next step, the same mistake was made again. The reaction of the facilitator creates an unstable environment. He gets a bit angry and tries to discover who made the mistake. The use of the GDR is all about contributing anonymously and the facilitator tries to undo this halfway. Even when a participant objects to this, the facilitator proceeds his search (the system is protected against such actions).

Participants ask what will be done with the results that are not discussed any further during the workshop. The facilitator answers that all the information will be preserved and added in the final report. The engagement of the participants seem high, because everybody is actively participating. There is room for a joke, but it does not hinders the assignment. When the participants are ready they start talking, but mostly this is on topic. However, during the scoring step, someone starts talking about his car. During the last step, the participants have red eyes and cheeks and yawns are suppressed. During the first two presentations in the last step, others ask for clarifications when needed. The third group, however, does not get any questions.

Case 2

Observations

Step	Goal	Safety	Engagement
Portrait gallery			A lot of laughter, much gestures, cosy atmosphere
GDR documentation			Everybody is quiet, working active behind computer "Quickly answer the questions" (f) "Quickly? But we have so many ideas!" (p)
Talking stick		Facilitator shows strong presence, firm language about the rules of the method Everyone is sitting on a chair in a circle (no tables in between) Everyone takes the stick at least once and talks about his/her dream Summaries had to be made to show understanding what was said	Everyone is relaxed, but alert on their chair, people look at the one who speaks After a while participants grab the stick quickly after each other, then slower, then quicker again Participants start yawning secretly, observer starts to feel sleepy as well
GDR documentation			Everybody is typing, many positive reactions concerning listening to each other
Make scenarios	Group 1: discussion about interpretation assignment	Group 1: "So this is the mismatch in our communication!" (p) Group 2: When two facilitators are present in the room "This is a lot of control!" (p)	Group 1: participant gets phone call and walks away, rest actively working For everything an interpretation is sought Group 2: every quiet group, a lot of discussion, active postures, not much visualizing on the table Group 3: "This is fun!" (p1) "This is even better!" (p2)
GDR documentation		"A lot of similarities in the group" (p) "Everybody is looking in the same direction" (p) "I got a lot of energy and have trust in the intentions of the different partners" (p)	

Narrative course of workshop

The observations indicate that the atmosphere in the group became more positive during the workshop. Especially the steps in the GDR where the participants report on the previous steps show that; during the first round, people are quiet and active, the second round the participants are more positive about what they have heard, and in the third round participants report on their positive view of collaboration in the future.

The anonymous contribution due to the GDR is explained. Throughout the method talking stick everybody is sitting in a circle. The participants cannot hide behind a table or anything else. The facilitator is very strict in explaining the rules (e.g. only talking with the stick at hand, do not judge each other, turn mobile phones off). The participants tell about their dreams and nobody can react. The GDR results show that the step was very effective to let the participants realize that they have the same dreams. The engagement during this step seemed to reduce, because the step takes a very long time in which the participants cannot move and start to yawn. However, everybody tool the stick at hand at least once and two waves of quickly recurring contributions were observed. The making of the film scenarios is not executed with the same creativity in all three groups. The group that was most serious (group 2) said that felt a bit threatened when two facilitators entered the room, because they felt judged (the facilitators left the room).

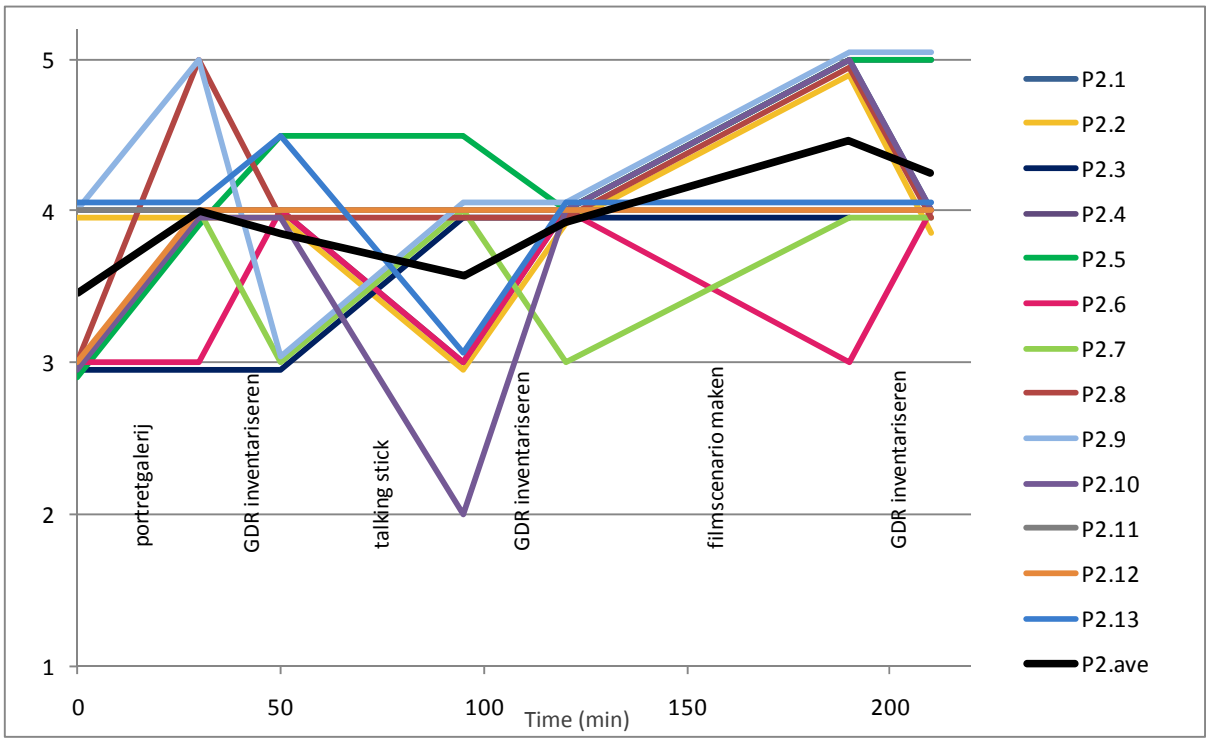

Figure IV.1: The engagement level of the participants during case 2

Case 3

Observations

Step	Goal	Safety	Engagement
Portrait gallery			It is very quiet, participants walk around, a bit of laughter
Mind dump	"Who is meant by *we*?"(p; unclear questions)	"Did you write something negative?" (p; laughing)	"How do you do that?" (p; was not listening because it was explained before) "Can you explain it?" (p)
Agree/disagree propositions I	"The propositions are so lengthy that it is easy to agree with some parts and not with others" (p)	"It is necessary to discuss why people voted for or against the propositions" (p; not done due to time constraints)	Participants work concentrated
Brainstorm I	"What is the goal?"	"You can discuss them among each other" (f; nobody interacts, everybody works individually)	"Are the questions relevant? Do you miss certain questions?" (f) Nobody responds "This is an autistic way of communication" (p; laughing) "I am still typing myself, so I have no time to raid other contributions and to react on that" (p) Interaction between participants is hard to start. Later they are forced to work in groups
Agree/disagree II & brainstorm II	Some participants vote immediately, while other participants comment on each proposition, which leads to out-of-balance	Difficulties with colours as results "What means what?" (p) "It all seems disorganized" (p)	Everybody is quiet, sits behind their computer, low input
Agree/disagree III & brainstorm III	The propositions contain words that are so distinct that it is easy to disagree, but that says very little about nuances	"The propositions are unclear!" (p) Participants do not know each other very well, which inhibits process	Participants had gotten the propositions before the session, so the conclusion is kind of late; they did not read it.

Narrative course of workshop

During the session it becomes clear that the preparation of the propositions has not been done properly. Different steps contained propositions on which the participants had to state whether they agree or disagree on it. A few participants complained that the propositions contain too much information to easily agree or disagree on. However,

everybody had gotten the propositions beforehand, so their complaint should have been communicated in their preparation for the workshop. Because of time constraints, the outcome of the voting is not discussed and therefore it is arguable what the result means when no fine-tuning is done. This is solved by letting the participants write comments on the propositions, causing another problem of individuals who are writing so much that they delay the progress of the group. Another result of this process is that participants do not feel heard, because the reason of their vote cannot be illustrated. When the facilitator asks the group to discuss the propositions among them, nobody reacts. The participants tend to stay behind their computer with a low amount of verbal input. To the encouragement of the facilitator to form groups and discuss the issues is not responded until it is said multiple times.

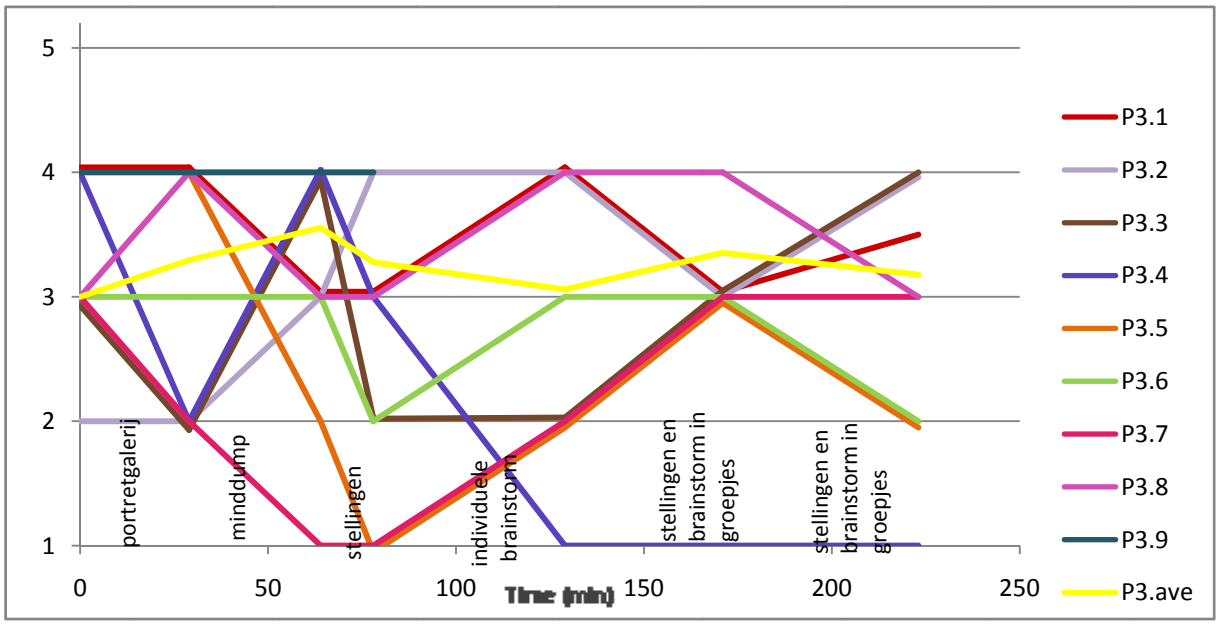

Figure IV.2.1: The engagement level of the first half of the participants during case 3

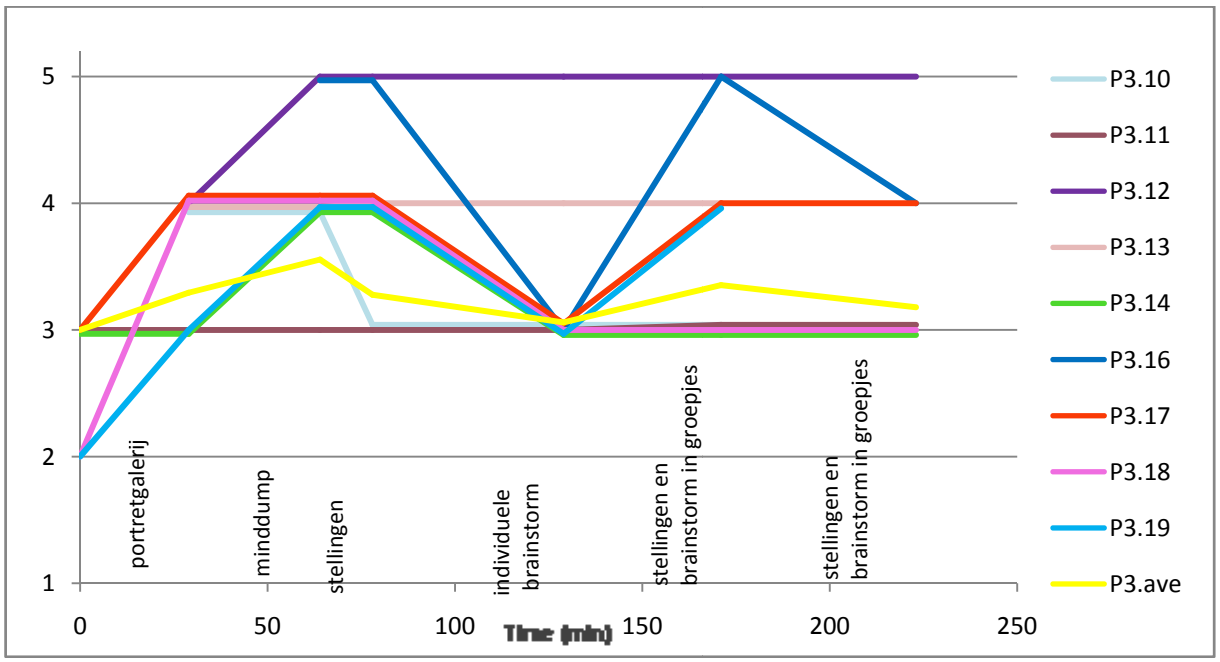

Figure IV.2.2: The engagement level of the second half of the participants during case 3

Case 4

Observations

	Goal	Safety	Engagement
Introduction	In the introduction, transparency and trust are stressed Clear explanation goal and method		Participants seem to be engaged
Brainstorm risks		"I see a name tag, but this method should be anonymous!" (f) "We have 20 minutes to complete this step" (f) "This overwhelms me" (p) If you've filled it out incorrectly, this contribution does not count anymore" (f; sarcastic) followed by "Don't worry, everything will be taken into account" (f)	Participant checks his phone
clustering			Two participants are getting coffee, are talking together and do not participate in this step
prioritizing	Clear explanation about the method	Facilitator extensively reads the screen of several participants while standing behind that person	Participants start working, when ready they start getting coffee and talking together
scoring		"What happens with the risks that are left behind in this step?" (p) "Those will be incorporated in the report" (f) "Maybe it is a stupid question, because I arrived late..." (p) "Can we see the dispersion in the scores, so that we can have a discussion about what we think is important?"(p) later: "We don't need to go into that" (f) and proceeds with next step Facilitator speaks without listening to the commentary of participants Facilitator does not consider a proposition concerning the process made by the group	A participant is phoned and walks out of the room When the task is finished, participants start talking

discussing in small		"You are now questioning the process, which is better to discuss at the end" (f) "Than I will shut up for now" (p; smiling)	It seems that everyone is getting a turn during this step
Discuss plenary		Participants are posing critical questions, almost everyone responds Facilitator asks general questions. Participants, who are more introvert, are not specifically asked for their opinion. When a participant who did not speak up earlier, speaks up, he is not backed up by the facilitator	The participants are listening attentively When the presentations progress, more participants start to look the other side, but later there are more discussions Later; less reactions on the presented material
evaluation		"Sometimes the facilitator was too determined about the rightness of the process" (p)	

Narrative course of workshop

In the introduction the facilitator stresses trust and transparency. At another point in the workshop, the facilitator looks over the shoulder of several participants obviously reading what that person is writing. The fact that all the contributions will be incorporated in the report is stated. The participants feel the need to discuss the dispersion in voting results, because they are interested in the reasoning of people. The facilitator decides that that is not necessary and continues the process. In the evaluation, the rigidity of the facilitator is given as a negative feedback. The participants are also not heard later in the process, because the facilitator does not respond to what is said. The facilitator gives room for the more dominant personalities to respond, but does not create space for those who are less extravert. When a quiet participants tries to be heard, the facilitator ignores him and the attempt of speaking fails.

The engagement of the participants seems to be good at the beginning. However, almost during every step, someone leaves the room for a phone call or coffee. In the presentation round, people are starting to lose their attention, because they are starting to look away from the speaker and discussions occur less frequently. The general idea of the engagement in the group is that it is reduced during the progression of the workshop.

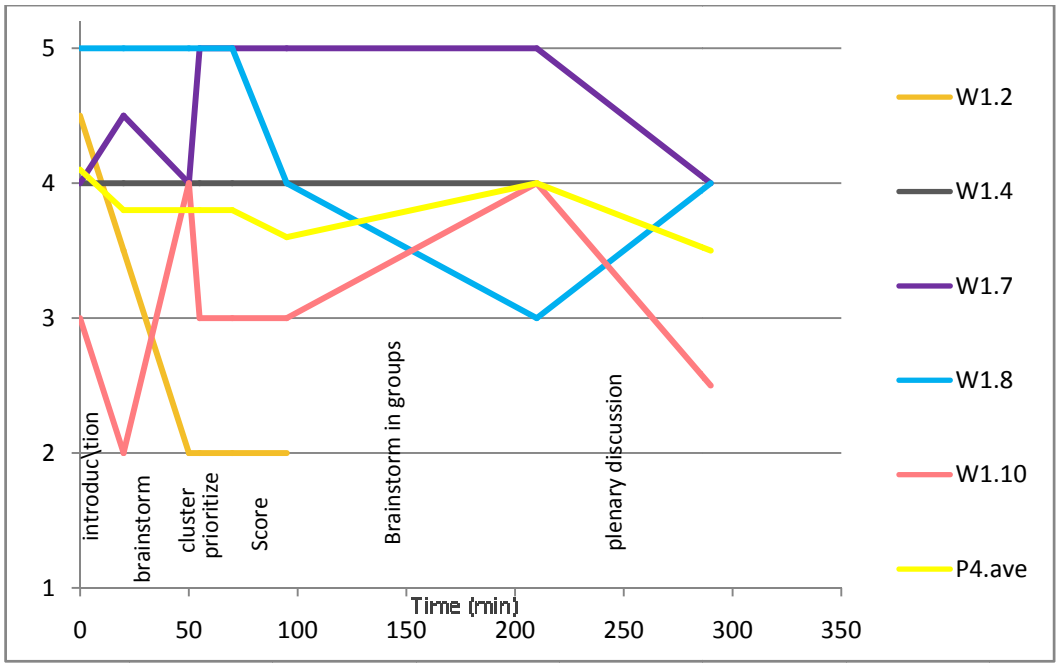

Figure IV.3: The engagement level of the participants during case 4

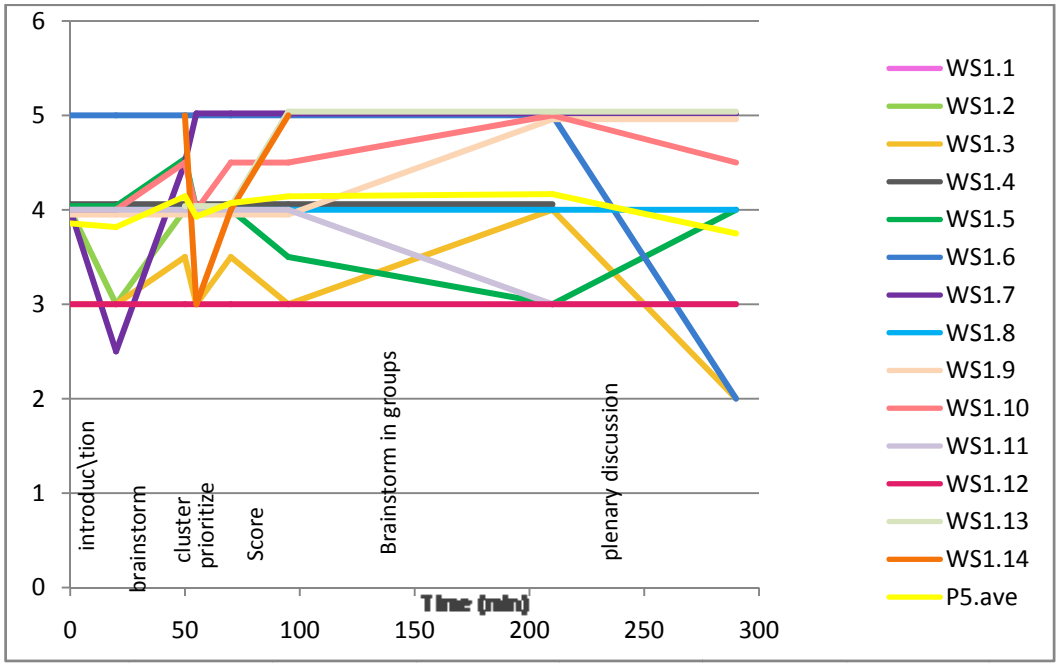

Figure IV.4: The psychological safety level presumably coupled to the engagement level of the participants during case 4

Case 5

Observations

WS	Goal	Safety	Engagement
introduction	Explanation on what the workshop will bring Facilitator asks the participants whether everyone's responsibilities clear "I think we have to make some considerable steps" (p)	"I would like to invite you to..." (f) "The system is anonymous, so go ahead enjoy" (f) "I look at X, what do you think of this?" (f) → "I am just listening" (pX) "I often do not have an idea what my colleagues are doing" (p)	Everyone listens attentively Jokes: "Glami? When I heard that for the first time I thought that was an illness!" → laughing An example from today's newspaper is brought up → laughing Client introduces goal very personally and shows his commitment "I had never thought that I would find it this interesting"
Brainstorm risks	Very clear explanation about the process; what, why and how	"Try to make silly comments" (f) "How much time are we going to spend on this step?" (p) Project leader is most active in data entry instead of reading the contributions of others, while it was asked by the facilitator	Everyone starts working seriously Participants only go to the toilet when it is announced that there are 5 minutes remaining for the step
prioritizing		"I hear you" (f) "I find it very difficult" (p)	"Do you all agree? I see X and Y nodding" (f) Everybody works concentrated
Discussing in small groups			In the break, the discussion about the subject continues
Plenary discussion	A lot is summarized and clarified	Project leader is very present, takes the lead in the discussion Facilitator asks an introvert participant to repeat what she said while others were talking as well	Participants laugh on a funny typo Participants are challenged to look critically at what the other group has done Participants seem relaxed, but engaged

Narrative course of workshop

The facilitator extensively explains the goal of the workshop and the use of the GDR system. The engagement of the participants is triggered by the use of an example from today's newspaper. The client shows his/her commitment and engagement to the rest of the group. Everybody is listening to this introduction and seems appreciating the story of the client. Participants seem also engaged because they visit the toilet when the beginning of

the next step is announced, indicating that they are working hard. The concentration level seems to stay high and during breaks the discussion on topic continues.

The psychological safety is stimulated by the facilitator because (s)he shows aspects of leader inclusiveness; (s)he invites everyone to participate and to critically assess the contributions of others. When a quiet person tries to mingle in the discussion, (s)he explicitly gives him/her a turn to speak. (S)he also asked the participants to make silly comments, because that triggers others. The facilitator also literally informs the participants that (s)he hears what they are saying. At one point, the psychological safety of one of the participants is negatively affected. The facilitator turned to this person asking for his/her opinion, because (s)he was not saying anything. This participant reacted attacked and responded that (s)he was just listening. This was the one and only time the facilitator explicitly asked something to a participant.

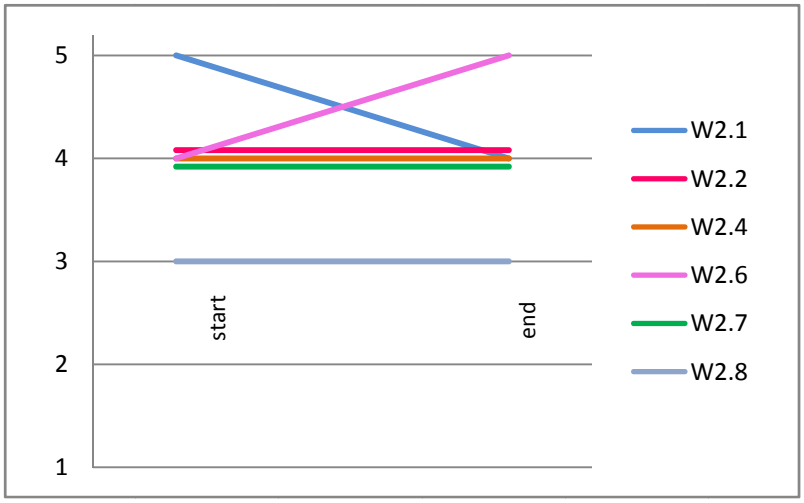

Figure IV.5: The engagement level of the participants during case 5

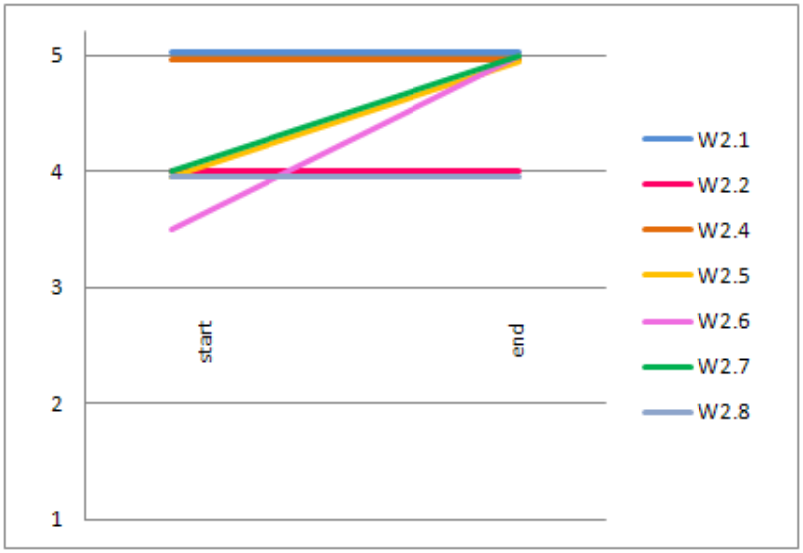

Figure IV.6: The psychological safety of the participants during case 5

Case 6

Observations

Step	Goal	Safety	Engagement
Introduction	Agenda of the workshop is shown on flip-over sand discussed "I don't have the illusion to make a team of you immediately" (f)	"If I write my name on it, people will of course look at my answers!" (p) "Often, the facilitator ask what we expect of this workshop" (p) "Respect towards each other is very important" (f)	"Shouldn't we invite X (manager)? It concerns her and our goal is to connect among each other" (f) "You are the success factors" (f) "You have to be able to say what you want, because of the engagement among you. There is flexibility in the program" (f)
Portrait gallery	"You will get 15 minutes" (f) "Can you explain it again?" (p) "It is unclear and this costs energy to understand the tasks of my function" (p)	"I will ask you to openly receive everyone's input without judging" (f) "I think the atmosphere is very good, a lot is improving, which is nice" (p) "Negative remarks do not give me energy. People should know how that affects people" (pX)	Participants are walking around, laugh some, but take task serious. Not the first image is chosen; they are really trying to find an image that fits their feelings "I'm asking you to work in silence so everyone can think for himself" "ssssssh" (f) Everyone starts working in silence. Until end of assignment everyone is serious During round, everyone sits relaxed on the couch, but with attention "There is a lot of engagement at the organizational changes" (p) Someone talks a call twice and walks away A joke is made, participants laugh and then seriously continue "Because we have to share, you can have my picture" (p1) "Than I will hold it" (p2) "Than I will do that too" (p3)

Discussion	Because program is not running as planned, the client is consulted how to proceed with the workshop "What is your goal to bring this up?" (f) "I am curious what the others think about it" (p) "I still want to have a list of tasks and themes at the end of the day" (client)	Facilitator communicates her believe in the capabilities of the group When a silent person is not heard "What did you want to say?" (f) "I think you together have a lot of potential" (f) "I have concerns about..." (p)	"I immediately feel an allergy coming up when the hierarchy is brought up!" (p) Often small jokes are made, everyone laughs followed by the serious attitude again. Participants continue talking and many participants nod confirming
brainstorm	"This session had to take place and was useful, although we did not reach the initial goal" (client)	"I don't like the way you react on me. You always do that and I am not the only one who thinks like this. I thought, I can keep this for myself or just say so" (pX) "Well, this is quite unexpected" (pY) pY is crying. "I want to stop the process because we can see that pY is having difficulties with what was said just now. Can I or the group mean something for you?" (f) "I want to talk about integrity. What is said within this group today stays in this group and is not discussed with the other colleagues" (f)	Everybody contributes. A lot of hands for their mouth (expression of thinking) "Does the group that comes here Thursday have to be extended in numbers?" (f) "Is there a need for in this group?" (client)

<u>Narrative course of workshop</u>

One of the goals of the group is to increase the cohesiveness in the group. The other goal concerns the content. Before the start of the workshop, the facilitator, who is familiar with the group, asks why one of the project leaders is not present. The group agrees that his/her presence is desired, because she is an important person in the group. The facilitator also stresses that the participants are the success factors of the workshop. (S)he also states that the program is flexible if the group wants to discuss something important which is not planned. During the second step of the workshop, the individual portrait gallery, the participants are first laughing and talking. However, the facilitator intervenes that everyone should do the assignment in silence. After this intervention, everybody is more serious.

During the plenary round about the choices made by everyone, the participants follow their laughter always immediately by continuing the task seriously. One of the participants says that there is a lot of engagement in the group for the main topic. The third round was not planned beforehand and the facilitator checks with the client whether he agrees to change the program and to focus on the newly brought up topic. The client agrees and the step turns into a discussion round in which everyone looks very engaged. The participants all seem to listen to what is said. The last step is used for a plenary brainstorming where everyone contributes ideas and most of the participants hold their hand in front of their mouth as an expression of thinking. At the end of the day, the initial goal is not accomplished, but the client and the other participants agree that the workshop as it turned out to be had to take place. An extension of the workshop is planned and the group is consulted whether all parties are represented to have full support of the outcome of that session.

The psychological safety among the group members seems initially not very large. One of the participants says that (s)he suspects the others of checking his/her answers in the self-report when (s)he writes his/her name on it. The facilitator states in the first phase of the workshop that respect towards each other is very important. In the second step, the facilitator explicitly tells the participants not to judge what someone else says. To increase the group-efficacy, the facilitator also mentions twice that she believes that the team has the capabilities to bring the ultimate task to a good end. One of the group members reports that the atmosphere in the group has improved a lot since the beginning. Another participant indicates that negative remarks are made within the team, which (s)he does not like at all. In the final discussion, the same person repeats his/her feeling, but this time pointed at his/her colleague. (S)he states that (s)he has it on his/her mind for a while and that (s)he now dares to pronounce it. However, (s)he makes the feedback very negative, attacking the person directly and bringing other people in (“you always do it and I am not the only one who is of that opinion”). Because this incident seems to be coming out of nowhere, the attacked person reacts very emotionally. The rest of the group seems affected as well. The facilitator provides the opportunity for the attacked person to indicate what the group can do to make her feel better. Finally, before the workshop has ended, the facilitator explicitly says that what has happened and what was said during the workshop stays within the group and is not discussed with other colleagues.

Case 7

Observations

Step	Goal	Safety	Engagement
Discussion	Facilitator clearly explains difference vision and mission	Someone raises his hand and does not naturally get a turn to speak; someone else offers a helping hand Someone who is less dominant has to get the turn to speak by himself	Facilitator gives an example to stimulate out-of-the-box thinking Everybody leans forward in an active position A lot of discussion about what the goal of the day should be
Brainstorm on mission		"How much time do we have for this step?" (p) Group 1: "If I say too much…" (p3) "Not at all!" (p4)	Forming groups is very messy. "Perhaps you [facilitator] should make the groups" (p) Facilitator does not react Group 1: Everyone is contributing; they ask each other questions and brainstorm together Group 2: Everyone joins the deliberations
Plenary discussion mission	Little or no interference of the facilitator; makes summary, but does not verify whether it is correct, there is not much room to intervene	Someone makes the gesture that (s)he cannot follow what everyone is saying because of the noise "In this way, you also see each other's qualities"	Participants are interrupting each other, but do leave space for each other Everyone leans backwards
Brainstorm on vision			"I want to walk outside" (p; repeating this several times also interrupting the facilitator)
Plenary discussion vision	Facilitator is much more in control and steer the group Verifies whether there is support at each addition	The client dominates the conversations, but not too much "That is not important" (client)	Everyone is contributing, also when formulating is more difficult than foreseen
Two by two talk		"I know myself; If I stay here, I will participate in the discussion and I can be too dominant. This is a good first step and I trust you in this" (superior)	"How are we going to create support with the rank and file? What are you communicating about trust, the atmosphere etc?" (superior)
Plenary discussion		"It is nice to see that we agree with each other" (p)	While reading out loud, some participants start their own discussion Everybody is a bit dazed, but step takes long and there is little discussion

Narrative course of workshop

The facilitator introduced the goal of the workshop well and tried to increase the engagement with a compelling example. The group, however, is discussing what they want to reach in the workshop. This puts the facilitator in a difficult situation and this is reflected in the first phases of the workshop. The group is very busy with their selves and there is little room to intervene. When the participants ask for help forming subgroups, the facilitator does not respond to this signal, which makes the process a bit messy. Approaching the end of the workshop, the facilitator has gained control again and the participants react more natural.

The engagement of the participants seems high, because a lot of discussion takes place. Everybody is contributing and an active stance is taken. They interrupt each other, while still leaving room for everyone to react. As the workshop continues the engagement seems to decrease. During the second plenary discussion, the group has a lot of trouble finding the right formulation of their mission. This makes the group fragmented. Especially during the last step where there is little discussion, people look dazed and some start a private discussion.

The observations concerning psychological safety indicate that the facilitator does not show signals of leader inclusiveness. When a more quiet person tries to give input for the discussion, the facilitator does not offer a helping hand. Because of the interruptions during the plenary discussions, it is not possible to follow everything what is said. In the third plenary discussions, the client and leader of the group pronounces once that what is said is 'not important'. When also the superior of the project walks in, (s)he states that (s)he trust the group. (S)he also chooses not to participate in the discussion because of his/her dominance. In the last step of the workshop, the participants conclude that they agree with each other.

Results Self-Reports

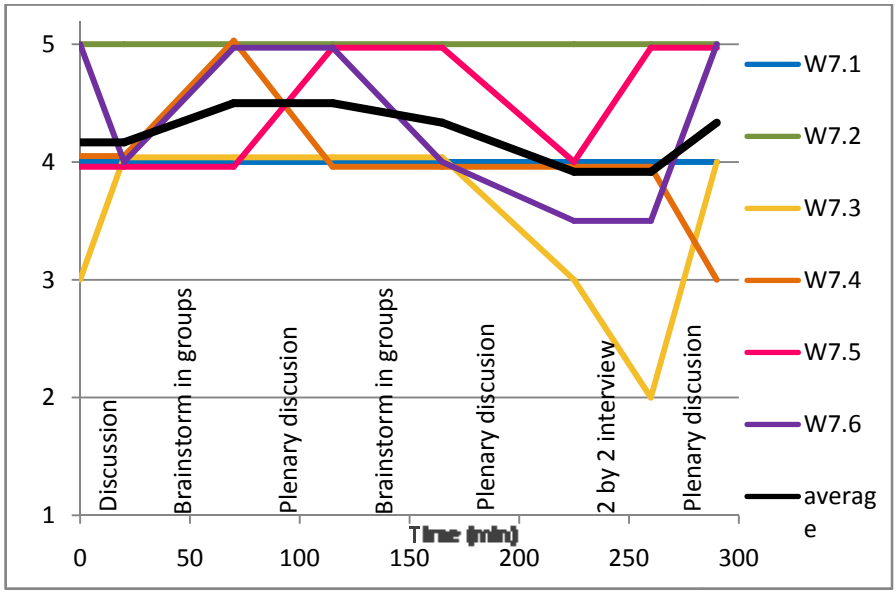

Figure IV.7: The engagement level of the participants during case 7

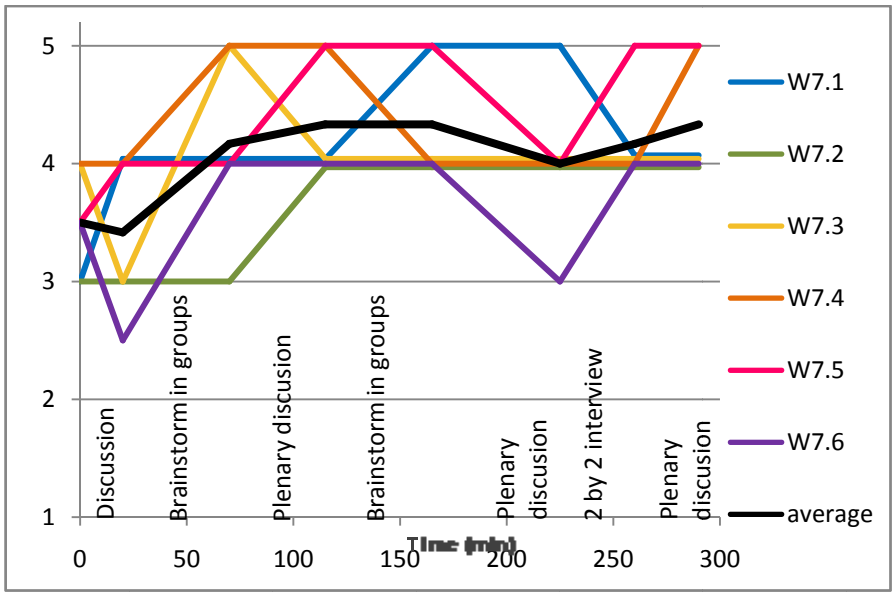

Figure IV.8: The psychological safety level of the participants during case 7

Case 8

Observations

Step	Goal	Safety	Engagement
Introduction round	"The assignment we have now is very clear in contrast to a few months ago" (p) "It is important to know what it entails, being responsible" (p)	"Before we are starting about the content, I would like to know shortly how everyone feels" (f) "Can you explain that? I don't understand it" (f) "Does everyone recognize that?" (f) "No, not completely" (p)	Everybody sits leaning back on the couch, many with arms crossed "I have a bit of headache, so I hope it goes away, but I am glad to be here" (p) "I feel really committed although I am changing jobs" (p) "I feel that I want to discuss it, because I do not understand where that is coming from" (p) "I had planned a sailing trip with my wife, but I am here because I am excited to be here" (p)
Discussion round I	The step is put up for discussion. What does the concept x means? There is a lot of discussion about the meaning of the themes	"There is no consensus in the group what each term means. As long as that is the case, it will become very difficult to proceed" (f) "No!" (pX) "In my vision it does!" (pY) "I think we do not know what it means and I get the feeling that some things are pushed forward" (p1) "I would like to confirm to you that nothing is pushed forward" (p2) "I also hear the issue of trust" (p)	Many people are leaning forward Someone starts talking while the facilitator is still talking. "Excuse me, but I am still talking!" (f)
Discussion round II	Everyone keeps interrupting each other and therefore no substantive steps are taken A very long discussion about what the problem is and how everyone sees it	"Can I ask something?" (p) "Yes, but the thing is that it's different" (p)	For a short while, the facilitator has a closed attitude with arms crossed Everyone is standing in a circle around the flip-over "We are working on this for a year and the result is sad! I really mean that" (p) "I do not agree with the picture that is sketched here" (p) "I think we talk too negatively about it, because I don't feel it like that" (p)

Discussion round III		"Finally you'll have to let go and trust on your colleagues" (superior) "I do have difficulty with what is said; that there is no trust, because that is not the issue" (p) "We are talking each other down" (p) "I feel my energy draining away, while last session my energy level was very high (p) "I reacted very blunt just now and I would like to nuance that , because I do appreciate your observations" (p)	When someone proposes to give an explanation about the themes, somebody starts rolling the eyes

Narrative course of workshop

During the first step of the workshop, many of the participants have a closed posture. They are sitting with their arms crossed. However, the articulated feelings about the project are very positive, because people are pronouncing their commitment. From the second step on, there are a lot of discussions about the meaning of terms used. Everybody wants to have a say and the participants start to interrupt the facilitator. There is a lot of friction in the group. Although the facilitator stresses that consensus will have to be reached before progress can be booked, consensus is very hard to reach. The effect of the progress being very slow and difficult is noticeable at the facilitator, who takes on a hostile attitude for a short moment by crossing his/her arms. One of the participants pronounces his/her feelings on the project very negatively, which causes resistance at other participants to that point of view. They do not acknowledge that and see it in a more positive way. In the last step, the interpretation of the terms is brought up again and others non-verbally signal that they find it annoying.

The level of psychological safety within the group seems high, because the participants seem to say what is on their mind. They are willing to go against each other's ideas and they dare to admit when they feel pushed aside. However, it also becomes clear that some have difficulties with trusting each other. In the last step, the superior stresses the fact that trust is crucial in the process. Others go against the impression that the problem is trust. In the group there is no leader making decisions and the superior agrees to take on this role to help the group progress. This also implies that the group will have less to say in the final decision. Someone brings up the fact that his/her plan has never been discussed and that therefore a decision seems made by the group without formal decision making. Finally, a decision is made to dismiss this issue any further. People are recognizing that they are creating a hostile environment and pronounce that to the group. Apologies are made for a sneer made earlier.

Results Self-Reports

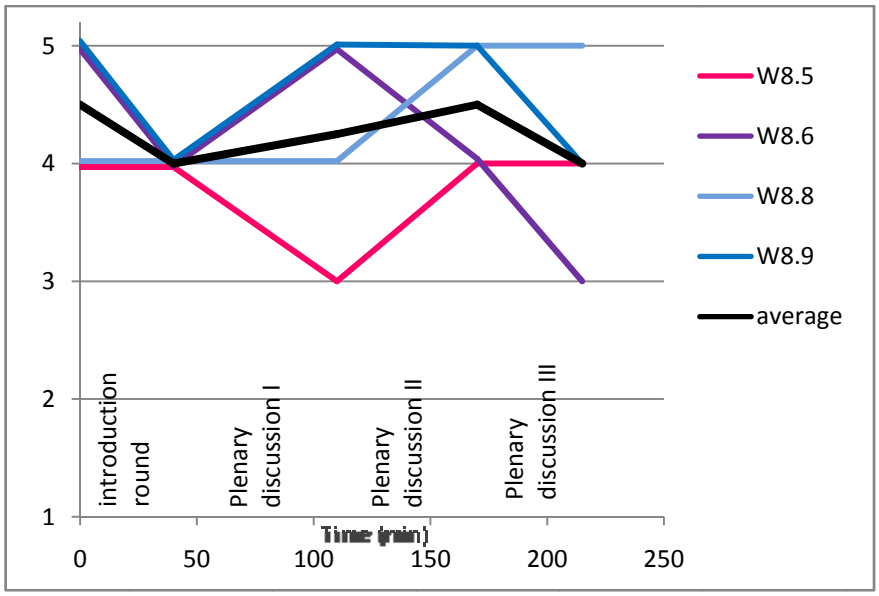

Figure IV.9: The psychological safety level of the participants during case 8

Case 9

Observations

Step	Goal	Safety	engagement
Introduc-tion	Facilitator gives a clear explanation of the system		
Warm up	Difference between employee and employer integrity is explained		Everyone is listening and watching attentively "Does everyone agree to this?" (f) No reaction from the participants
prioritizing		The result of the poll is shown on the large screen, while not everyone has voted yet	"Does this surprise you?" (f) "Yes, it does" (p) "If not everybody interprets the terms in the same way, we should discuss it" (f) "I do want everyone to agree" (f)
Risk brainstorm	Facilitator clarifies what a term means	"What do we do with the other processes? Do we just forget about them?" (p) "For me it feels like a risk to decide here intimately that these three processes are the most vulnerable or our organization" (pX) "Can I ask something" (P) Facilitator affirms with gestures "I get the idea that you take it personally" (f) "No, that was already suggested by someone else, but that is not the case" (pX)	"If that is decided on, then I will do that, but not heartfelt" (pX) "It is annoying when someone is obstructing the process, but it is over now" (pX)
Plenary discussion		"I hope that what is said here stays in this room" (p) "He is an easy talker, let him do it!" (p1) "No, I'm not!" (p2)	Not everybody can do something, so a lot of talking, also off topic People start socializing People are laughing when a joke is made

			"I did not act upright, because I didn't discuss it, but I just inserted another issue" (p) A note is passed through the audience at which people are paying attention Sometimes participants talk very quietly, so that it cannot he heard by everyone Everybody is looking at the person speaking and everyone participates at the discussion
Scoring		"What are actors?" (p) "You are not the only one who doesn't understand everything" (p) "Does anyone want to react on that? You do not have to come clean who wrote that" (f)	Everyone starts working hard until the task is finished Participants who are finished stay quiet, start staring at the ceiling Jokes are made about the scoring results
Checkmarks			The participants start working seriously Participants have an active posture, leaning forward
Brainstorm (groups)			Everyone starts working seriously
Plenary discussion			Jokes are made, while people have to wait for others During the discussion, everyone looks at the big screen on which it is presented Some participants start talking privately "What is meant by that?" (f)

Narrative course of workshop

The group seems engaged, because at the start everybody is listening and watching at the facilitator. However, when (s)he asks if everyone agrees, nobody answers. In a later step, the facilitator repeats that (s)he want everyone to agree. Support is needed to keep everybody engaged. During the first plenary discussion, every group has to type their answers, so not everybody has a task at that point. Therefore, the participants start talking with each other off topic. The atmosphere is good and jokes are made. In general, the person who is speaking gets full attention, except when a note passes among some of the participants. Some talk very softly, so not everyone can hear them. After the lunch, the participants all perform their individual scoring tasks seriously. The brainstorming in subgroups is also performed seriously. In the last plenary discussion the facilitator takes the group through the solutions to keep it short and finishes the workshop quickly. People stay focussed on the big screen, and in this step the results are only shown on the large screen and not on the laptops.

The psychological safety in the group is important because the integrity of the organization is discussed. The vulnerable processes in the organization have to be listed and should of course not become public information. This is also stressed by one of the participants during the first plenary discussion. After the prioritizing step, a participant wants to know what is done with the processes that were not chosen for further investigation. The facilitator ensures that these will be included in the report. One participant acts as if he is personally attacked by the result of the prioritizing step. It takes a while before one of the other participants asks him whether he is. When the answer is negative, but his/her complaint continues, the facilitator asks him/her the same. After a while, the participant let the topic rest.

The facilitator makes sure that everyone is able to react in the discussion. When terms are used that the participants do not understand, this is plenary asked at the facilitator. Someone else reacts immediately, saying that he also does not understand every word. The facilitator leaves room for the participants to react on the inconsistencies in the outcome of the scoring step, but stresses that it is not necessary to identify which standpoint everyone has taken.

Results Self-Reports

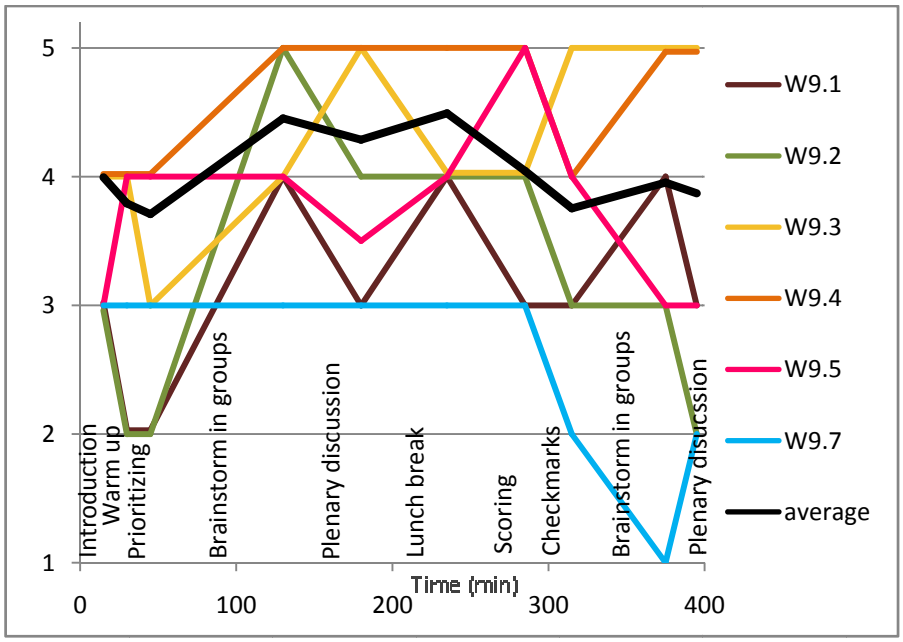

Figure IV.10.1: The engagement level of the first six participants during case 9, forms one data set with Figure IV.11

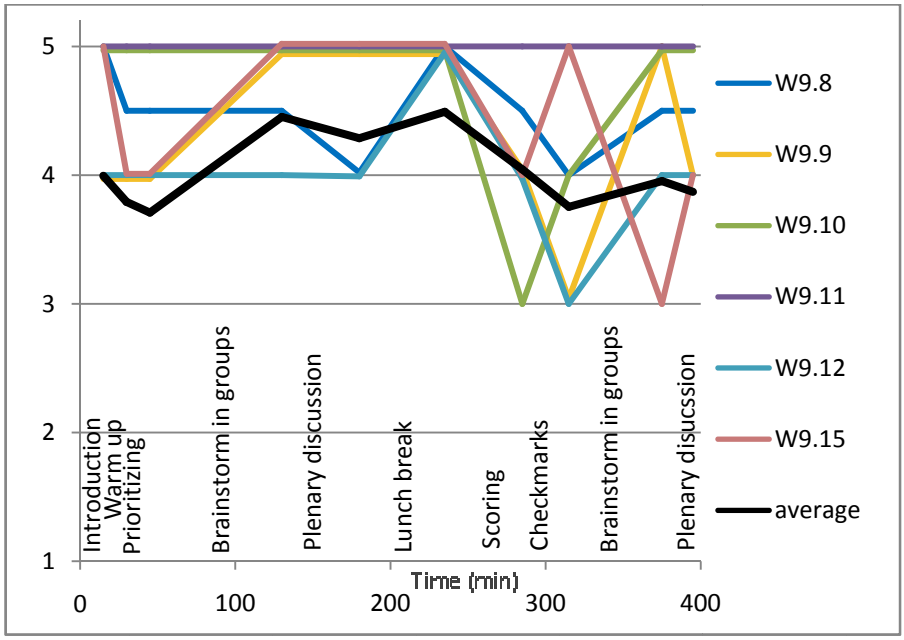

Figure IV.10.1: The engagement level of the other six participants during case 9, forms one data set with Figure IV.10.

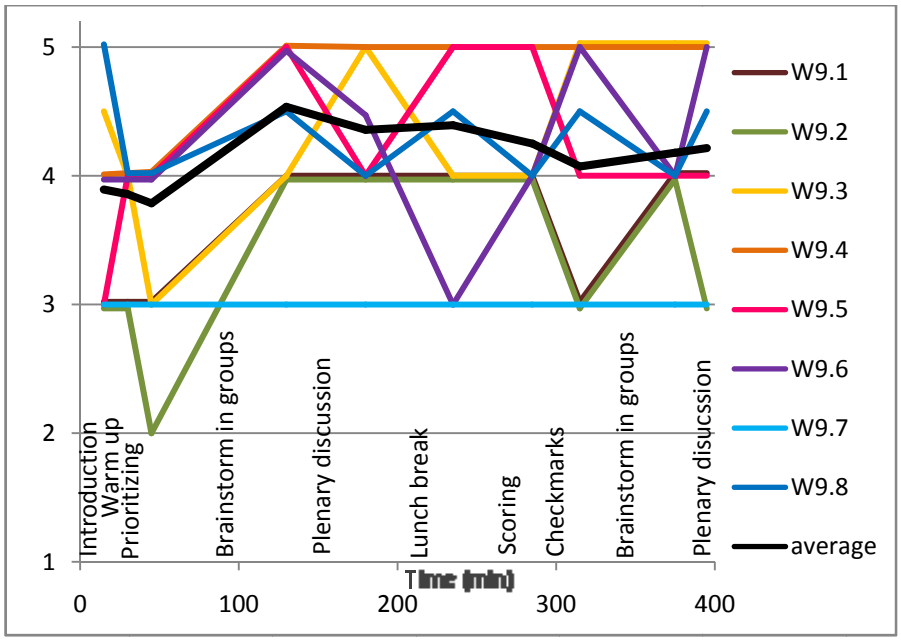

Figure IV.11.1: The psychological safety level of the first six participants during case 9, forms one data set with Figure 4.9.4.

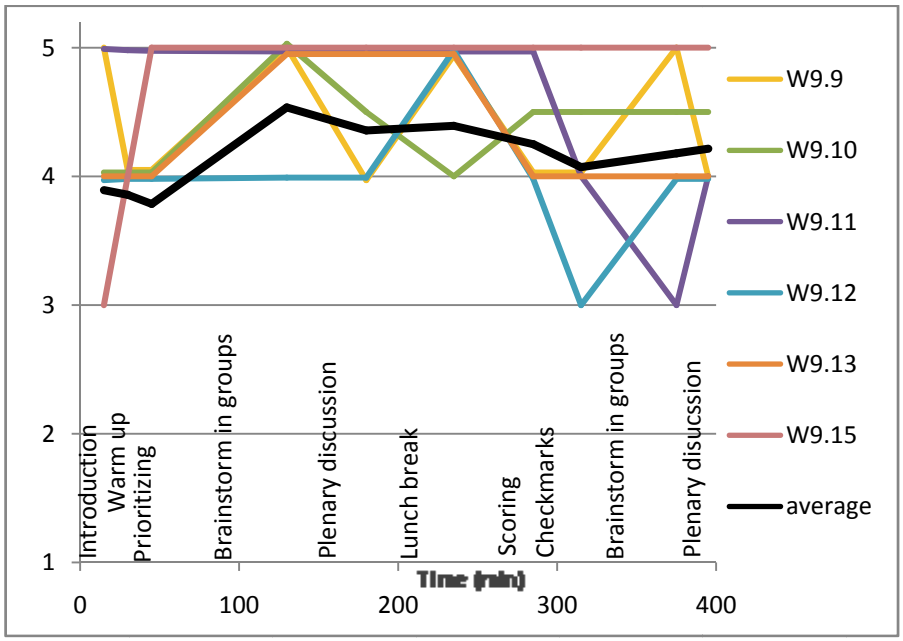

Figure IV.11.2: The psychological safety level of the other six participants during case 9, forms one data set with Figure 4.9.3.

Case 10

Observations

Step	Goal	Safety	Engagement
Introduction		"This environment is very open, so feel free to do what you want" (f)	"I would like to make it a party today and for that to happen, I need all of you" (f) "Please tell me when you want to discuss something that is not incorporated in the program. I would feel very disappointed when you report back to me that you've enjoyed the day, but that you've missed certain topics" (f)
Portrait gallery	"Surprise the other" (f)		Participants are seriously doing the exercise, not much laughing All of the participants state that they enjoined the conversation because they learned something new about the other
GDR introduction (groups)	Facilitator gives a clear explanation on the GDR	"All the contributions are anonymous" (f) "The results will be sent to you by email" (f)	Facilitator makes jokes to relax the atmosphere Someone answers a phone call and when returning discusses it with another participant Participants bend over to the computer and laugh Participants are busy typing and they are discussing in their groups Participants interrupt the facilitator "Does everybody understand it? ... I do not hear a yes" (f)
Brainstorm factors	Facilitator makes good summaries of what is said	"What do you mean with that?" (p)	"I sometimes yell for attention. I would appreciate it if you would give me that, please" (f) Participants keep on talking The facilitator is very active Participants keep on talking with their group members
prioritizing			

Plenary discussion		"Excuse me, can you repeat that?" (p) "I feel a bit threatened by you" (p1; laughing) "I even stayed calm!" (p2)	Everyone participates in the discussion, they all talk about the logic of the steps except for one participant, but (s)he has a supporting function Many participants take a seat after a while
Discuss (groups)			Everybody participates
Plenary discussion		"You were standing up before, so do you want to present the result?" (f) "I looked away on purpose" (p) "Okay, can someone else do it" (f)	Participants seem tired, because they stay seated and do not approach the table, they are leaning backwards in their chair Participants look away, seem absent, and yawn "Your phone is ringing" (pX) "Yes, just leave it" (pY) Participants kindly gesture to each other (patting shoulders)
Explanation tool		"I would like to take your tip in consideration" (client to p)	The step is put up for discussion by the participants, because the program takes longer than was communicated to them beforehand; it becomes a messy process and many questions are asked

Narrative course of workshop

The facilitator tries to increase the engagement of the participants by asking them to help making a party of the workshop. (S)he also explains that the program of the workshop is flexible and that issues that the participants want to discuss can be brought in. During the step portrait gallery, the participants are doing their assignment very serious and not much laughter can be spotted. During the feedback of this step, the participants react very positive about the fact that they have learnt something personal about their discussion partner. The step where the GDR is introduced takes longer than planned. The participants are discussing much in their groups and are busy typing. When the facilitator tries to say something, (s)he is interrupted and when a question is posed, nobody answers. Therefore, it seems that the participants are very engaged in the warm-up assignment.

The following step is the step in which the groups brainstorm. The facilitator is very active, but the participants are as well, making it hard for the facilitator to get their attention. The

first plenary discussion, everyone is standing around the table and taking part in it. However, after a while some of the participants take a seat. The second plenary discussion, everybody seems more tired, because everybody chooses a chair immediately. The participants seem absent and start yawning. One person, however, does not answers his/her phone when it is ringing, suggesting that (s)he is still engaged enough in the workshop. psychological safety. When the last step of the workshop is started, it turns out that there was some miscommunication about the ending time of the workshop. Because the participants do not want to feel rushed and are of the opinion that the last step is important enough to seriously execute it, it is decided that they will do it by themselves. The facilitator uses the time to explain the step in more detail so that they can use it to their benefit. Due to some doubt within the group about the step and its interpretation, the atmosphere is turning a bit messy.

At the start, the facilitator communicates that the environment during the workshop is open and that they should feel free to say and do whatever they want. During the explanation of the GDR, it is mentioned that everything that is contributed will be incorporated in a report. When the facilitator in one of the later steps asks whether someone wants to represent his/her group, (s)he indicates that she does not want to do that. The facilitator immediately asks somebody else to do it without any hesitation. The psychological safety in the group seems good, because clarifications are asked and people pronounce their feelings.

Results Self-Reports

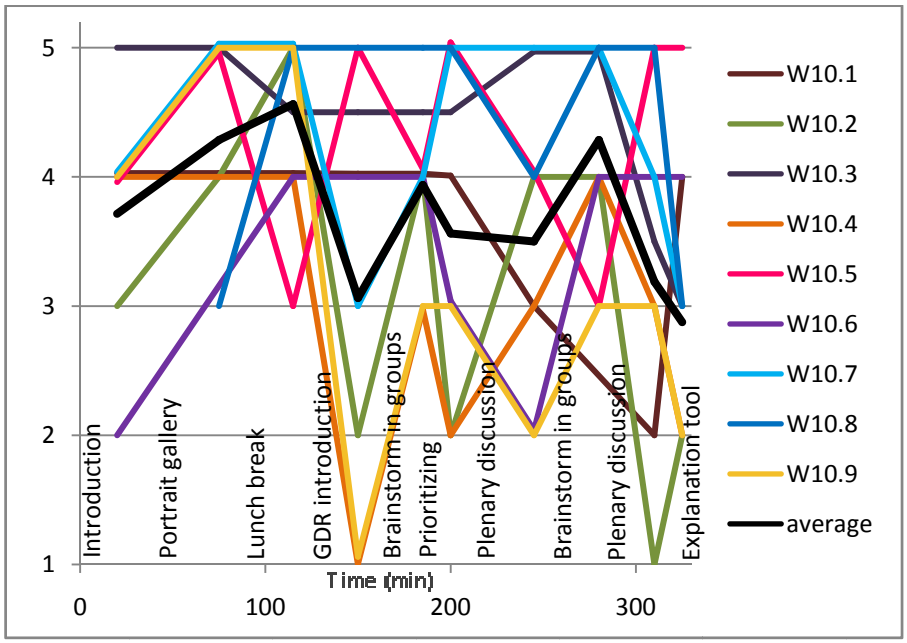

Figure IV.12: The engagement level of the participants during case 10

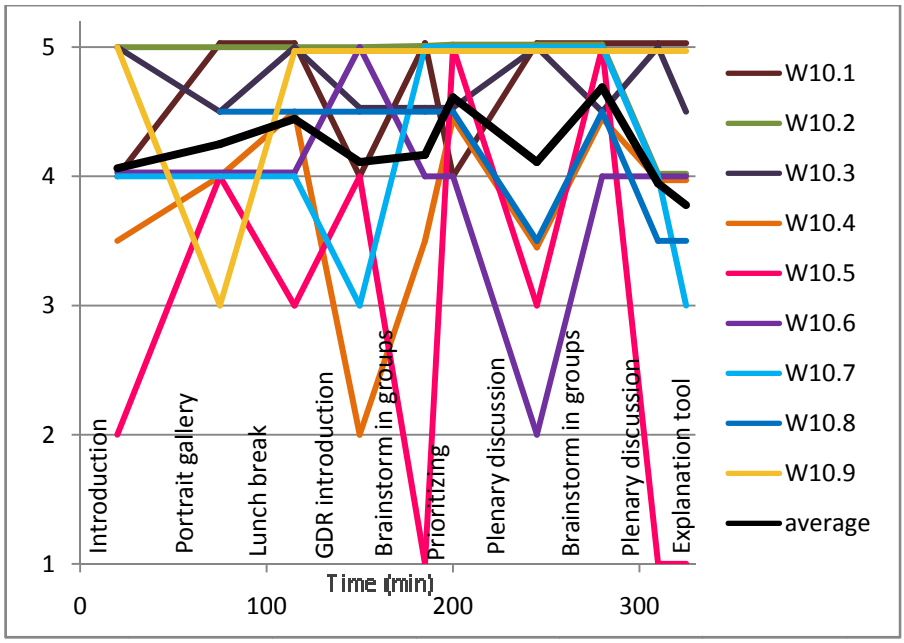

Figure IV.13: The psychological safety level of the participants during case 10

Case 11

Observations

Step	Goal	Safety	Engagement
Introduction	The client explains goal of the workshop and gives a presentation	"Everything typed in is anonymous" (f) "Important stakeholders are missing today. This has already been indicated before" (p) The client responds other stakeholders have been approached, but they decided not to come	Everyone listens and some make notes during the presentation. The participants ask questions about the content of the presentation One participants is using his phone behind the computer
Introduction GDR	The client explains the method that will be used The facilitator clearly explains the use of the GDR	An important issue is that new ideas should not go against current policy One of the participants want to know how many other working groups are installed who also have a say in the final decision The client, while laughing, repeats that they are using the GDR to remove the negative effect of hierarchy	The participants are all watching their computer screen One person types is that (s)he expects the day to be 'moderately uplifting'
Brainstorm in groups			The groups are quiet, but everybody seems to articulate what (s)he wants Notes are made
Plenary discussion	"Are the items typed in clear enough for everyone?" (f) The topic is very difficult and contains many numbers and legislation	"I do not understand your reasoning completely" (p) "Please talk a bit louder" (p) "I do not understand that sentence" (p) "I am against this suggestion" (p) When a participants does not get the support, (s)he tries to proceed to the next point, but the facilitator steps in	"Does anyone want to react on this?" (f) No direct reaction, but slowly the discussion starts The participants start to interrupt each other Everyone is looking at the large screen, their computer, or to the one who is speaking Facilitator has said that the lunch is waiting, but the participants keep on discussing
Individual mind dump		"Because some of you indicated that it was not possible to completely spill your ideas, now is the time to type them" (f) "5 minutes left" (f)	Everybody starts working All watch their screen concentrated

Plenary discussion			A participant interrupts someone else Somebody takes a phone call Everyone stays discussing the topic

Narrative course of workshop

The engagement level of the participants seems high, because everybody is listening and listening to the presenter. They make notes and ask questions. During the steps behind the computer, the participants are focused on their screen. When the participants are divided in groups, the groups are calm, but it seems that everybody is contributing. During the plenary discussions, participants do not show an energy dip after a while. When the facilitator indicates that the lunch is waiting, the participants do not give any signal to end the discussion. Therefore, the facilitator has to stop the group a bit later. The same happens at the end of the workshop. The participants seem not to be finished with their discussion when the workshop came to an end.

The participants also seem to feel psychologically safe. The facilitator indicates that all the contributions in the GDR are anonymous. In a joke it becomes clear that the influence of hierarchy is diminished by using the GDR as well. The subject matter is very difficult because there are many stakeholders involved. One of the participants indicates that important stakeholders are missing and asks the coordinator of the project group why they are not present. The coordinator responds that they were all invited, but that they were not interested enough to participate. Questions are also asked about important other aspects are other work groups working on closely related subjects and legislation that could interfere with the criteria the participants want to establish. During the plenary discussions everyone participates and contradicting standpoints are defended.

Results Self-Reports

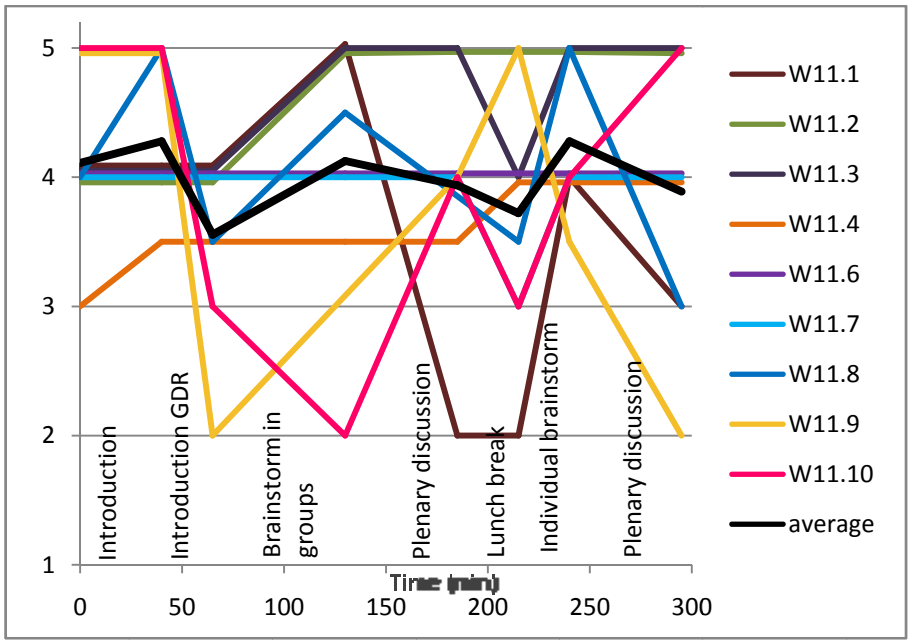

Figure IV.14: The engagement level of the participants during case 11

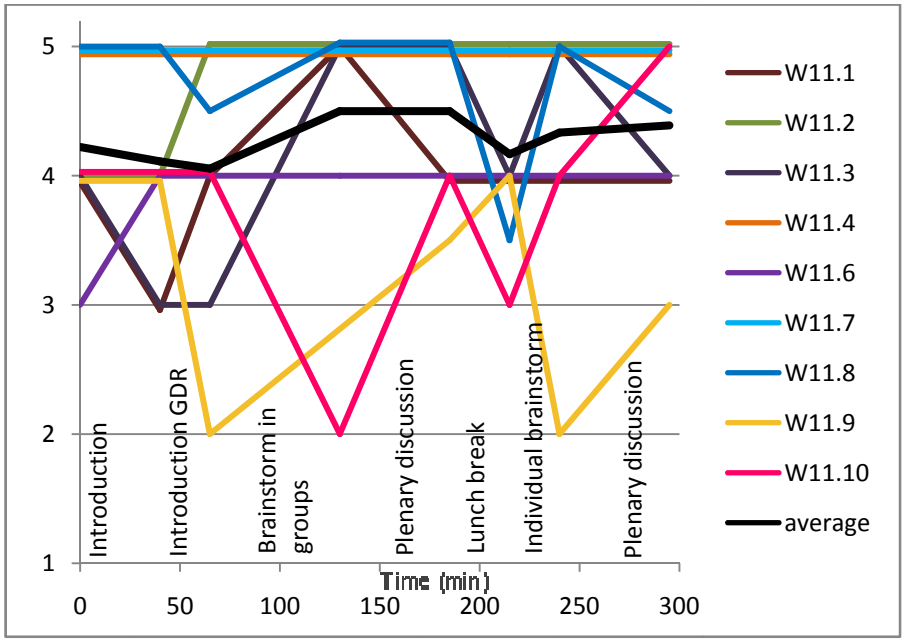

Figure IV.15: The psychological safety level of the participants during case 11